

## **MIT Commencement**

Honoring the graduates of 2022

Friday, May 27, 2022



Massachusetts Institute of Technology



## WELCOME

As we celebrate the graduation of MIT's Class of 2022, we could not be happier to join their families and friends in honoring their accomplishments.

The Class of 2022 will join a global family of more than 143,000 MIT alumni around the world. Across time and across distance, our community is connected by fundamental values and shared ideals: Excellence, integrity, curiosity, openness and a passion for solving tough problems. Together we possess uncommon strengths—and the drive and aspiration to apply them in countless ways to serve humanity.

As we congratulate our new graduates, we dream of the wiser and kinder world they can help create.

L. Rafael Reif President

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Photos Cover and above: Christopher Harting Back cover: Andy Ryan

## SCHOOL OF ARCHITECTURE AND PLANNING

Bachelor of Science in **Architecture** 

Course IV

Department of Architecture

Ai Bui

Seif N. Eses

Minor in Computer Science

Nina Huttemann

Ji Min Lee

Minor in Brain and Cognitive Sciences Minor in Women's and Gender Studies

Stephanie Li

Erica C. Liu

Minor in Computer Science

Huanshuo Rao

Also with a Major in Course VI-2

Elliott Samantha Lee Seaman Also with a Major in Course XVI

Nicole Alexandra Teichner

Minor in Environment and Sustainability

Bachelor of Science in Art and Design

Course IV-B

Department of Architecture

Hamilton J. Forsythe (February, 2022)

Ibuki Iwasaki

Also with a Major in Course VI-9

James Quash Stevens IV

(February, 2022)

**Bachelor of Science in Planning** 

Course XI

Department of Urban Studies and

Planning

Alexander J. Boccon-Gibod Also with a Major in Course IV-B

Jennifer Jeongwon Choi

Also with a Major in Course XVIII

Alena J. Culbertson

Minor in Mathematics

Moctar Ndjido Fall

Jennifer Fox

Also with a Major in Course XIV-1

(February, 2022)

**Emily Levenson** Minor in Writing

**Cristian Rios** 

Alia Husain Rizvi

Also with a Major in Comparative Media

Studies

Amelia C. Seabold

Minor in Biology

Bachelor of Science in Urban Science and Planning with

**Computer Science** 

Course XI-6

Department of Urban Studies and Planning in conjunction with the Schwarzman College of Computing

Luis Eduardo Becerra Solis

**Tanner Lucine Bonner** 

Grace A. Bryant

(February, 2022)

Yu Jing Chen

Ana Cristina Fiallo Van Eenenaam

Minor in Energy Studies

Sarah P. Lohmar

Minor in Energy Studies

## **SCHOOL OF ENGINEERING**

Bachelor of Science in
Engineering as recommended
by the Department of Civil and
Environmental Engineering

Course 1-ENG
Department of Civil and
Environmental Engineering

**Stephanie Michel Baez** Minor in Architecture

**Meriah Jolie Gannon**Minor in Urban Studies and Planning

**Nebyu Samuel Haile** Minor in Architecture

Marcin Hajduczek Also with a Major in Course XV-1

Jade Kuuleialoha Ishii

**Anna Kea Landler** Also with a Major in Course VI-3

Margaret R. Libby Also with a Major in Course XXI-L Minor in Biology

**Diego R. Monroy**Also with a Major in Course XIV-1
Minor in Computer Science

**Isabel A. Munoz** Also with a Major in Course XIV-1

Natalie A. Northrup Also with a Major in Course XIV-1 Minor in Environment and Sustainability

Rovi Chung Porter Minor in Economics Minor in Energy Studies (See also M.Eng., Course I-P)

**Selma Sharaf** Minor in Management

Carene T. Umubyeyi Minor in Design **Athikom Wanichkul** Also with a Major in Course VI-2

Bachelor of Science in Mechanical Engineering Course II

Department of Mechanical Engineering

Gabriela Alvarez Perez Minor in Environment and Sustainability Minor in Energy Studies

**Pablo Francisco Ampudia** (February, 2022)

**Eva W. Anderson**Minor in Energy Studies (February, 2022)

Cathleen Arase

Mariana Sofia Avila Minor in Design (February, 2022)

**Nathan Lloyd Basinger** Minor in Design

Amber Sui Bick

Joseph E. Bonavia

Stefan Borjan

**Everett M. Brandyberry**Minor in Computer Science

Ruben Castro Ornelas

**Ceylan Ceylan**Minor in Economics

**Karen Chen** Minor in Theater Arts Minor in Design

Eric Anthony Cora

**Greyson C. D'Aloisio**Minor in Computer Science

Annemarie Dapoz

**Anita Dey Barsukova** Minor in Computer Science

**Makita F. Erni** Minor in Political Science

**Emily Genevriere** Minor in Design

**Averitt A. Johns**Minor in Economics

**Allison F. King** Minor in Design

Sarah M. Lam

Nathaniel J. Lee (February, 2022)

**Yehoon Lee** Minor in Design

**Sofia Eva Leon** Minor in Economics Minor in Finance

**Ethan A. Lietch** Minor in Energy Studies

Lydia Gaulding Light (February, 2022)

Alejandro Moises Martinez

**Kai Adrianus Masterson** (February, 2022)

**Thaddaeus Robert Megchelsen** Minor in Economics

Robert Cody Moose

Ryan D. Nall

Jorge A. Nin

Hyeonji Oh

Mojolaoluwa Olatunji Oke

Minor in Japanese

Bryan T. Padilla

Minor in Public Policy

Lynda Victoria Palacios

Dominic A. Panzino

Minor in Management Minor in Computer Science

Lillian Claire Papalia

(February, 2022)

John Ramhorst Paris

Also with a Major in Course VI-2

Kolade Alexander Paul-Ajuwape

Pedro Pavao Neto

Leah K. Pettit

Joseph J. Pierre

Lauren Elizabeth Platt

Also with a Major in Course XXI-L

Collin B. Renae

Minor in Economics Minor in Mathematics (February, 2022)

Zachary S. Rolfness

Roberto R. Sarabia

Minor in Management

Emily R. Satterfield

Minor in Business Analytics

Rebecca Louise Saulnier Sholler

Minor in Design

Sarah Jean Simmons-Hoffmann

Minor in Design

Talia Rose Spitz

Natasha Lia Stamler

Also with a Major in Course XI

Matthew Charles Stringfellow

Minor in Music (February, 2022)

Erik M. Thompson

Minor in Russian and Eurasian Studies

Meghana Vemulapalli

Minor in Urban Studies and Planning

Claire B. Wichman

Minor in Physics

Peter C. Williams

Robert P. Williamson

(February, 2022)

Lila N. Wine

Minor in Design

Minna Z. Wyttenbach

Bachelor of Science in

Engineering as recommended by the Department of

**Mechanical Engineering** 

Course II-A

Department of Mechanical

Engineering

Isabella Adu

Daniel Alel

(February, 2022)

Omoruyi E. Atekha

Minor in Design

Isabel R. Barnet

Minor in Literature

**Christian Alexander Belser** 

Also with a Major in Course VI-3

Kaleb Arthur Blake

Nathaniel James Chi Sung Boerner

Minor in Music

Caroline G. Boone

(February, 2022)

Eli S. Brooks

Minor in Environment and Sustainability

Miranda Sydney Carson

Minor in Brain and Cognitive Sciences

(February, 2022)

Darius Jun Loung Chan

Minor in Entrepreneurship & Innovation

Patricia Jocelyn Chan

Minor in Energy Studies

Anya Sophia Chase

Julia Besecke Chatterjee

Samantha Cheung

Minor in Women's and Gender Studies

Sophia Cheung

Minor in Japanese

Isabella Chiurillo

Luis Jose Franco

Simon M. Ganeles

Minor in Architecture

Adrian F. Garza

Danielle Alexa Geathers

Jesse C. George-Akpenyi

Also with a Major in Course VI-1

Stacy Chidera Godfreey-Igwe

Also with a Major in Course XXI

Jeffrey R. Hesslink

Stephanie Thein Hoo

Shan Shan Huang

Joel A. Hutchison

Minor in Music

Samuel Ingersoll

Also with a Major in Course VI-2

Minor in Writing

Salma Islam

Minor in Design

**Faith E. Jones** Minor in Design

Hana Khalil

Minor in Applied International Studies

**Emily Jane Kiley** Minor in Design

Sophia Li

Minor in Management

Bethany Paige Lowenkamp

Kevin A. Lu

Naomi P. Lutz

Minor in Environment and Sustainability Minor in Energy Studies

Jaime A. Martin

Isaac Aguilera Martinez

Michael Mazumder Also with a Major in Course XV-1

Jeremy Alexander McCulloch

Olivia Blanche McGrath

Minor in Environment and Sustainability

Claire Davis Melvin

Naomi Michael

Janice Christine Moya

Maya Katherine Nielan

Also with a Major in Course VI-2 (February, 2022)

**David Oluwabamidele Ologan** Also with a Major in Course VI-2

Mario A. Peraza

Inés Elena Pinilla

Allison N. Pinto Minor in Management (February, 2022)

**Adam W. Potter** Minor in Energy Studies **Emily Gita Christa Rabinovitsj** 

Jason Isaiah Ramirez

Julianna Rodriguez

Catalina Romero

Minor in Environment and Sustainability

Laura M. Rosado

Also with a Major in Course XXI-W

Jonah M. Scott

Aashini S. Shah

Also with a Major in Course VI-1

Andrew S. Shin Minor in Economics Minor in Computer Science

Margaret E. Shutts

Rebecca Yeh-Ching Slater

Minor in Design

Jessica E. Sonner

Brendt Dameon Stephens, Jr.

Minor in Environment and Sustainability

Philip William Tegmark (February, 2022)

**Ashley Teng** 

**Quentin I. Thernize**Minor in Computer Science

Janice Tjan

Also with a Major in Course IV-B

Wendy L. Trattner (February, 2022)

**Alexander Tsao** Minor in Design

**Prajwal Tumkur Mahesh** Minor in Computer Science

Minor in Design

**Gavin Raymond Vandenberg** Also with a Major in Course XIV-1 **Logan William Vawter** Minor in Energy Studies

Kiara Isabel Wahnschafft

Also with a Major in Course XIV-1

(February, 2022)

**Julia A. Wyatt** Minor in History

Gregory Xie

Also with a Major in Course VI-2

Leslie Yan

Also with a Major in Course IV-B

Lisa Yan

Minor in Management (February, 2022)

Emily M. Yuan Minor in Management

Zhijian Zhou (February, 2022)

Bachelor of Science in Materials
Science and Engineering

Course III

Department of Materials Science and Engineering

Jacqueline M. Ahrens Minor in Management

Shubhanga Ballal

Alana Satsuki Chandler

Minor in Polymers and Soft Matter Minor in Women's and Gender Studies

**Udochukwu D. Eze** Minor in Physics

Gabriela Juliana Goldsmith

Christopher M. Kiel

Sophia Michelle Mittman

Aditi Saayujya

**Kiera Yeechen Tai** Minor in Computer Science

## 4 School of Engineering

Spencer J. Toll (February, 2022)

Kierstin P. Torres Minor in Music

Mollie M. Wilkinson

**Jasmine Yang Yang** Minor in Earth, Atmospheric, and Planetary Sciences

**Bachelor of Science as** recommended by the Department of Materials Science and Engineering

Course III-A Department of Materials Science and Engineering

Joyce Miao An

Jessica Elizabeth Arbuckle

Jeremy M. Dudo

Sophia Y. Fang Minor in Biology

Flor E. Garza Romero (February, 2022)

Danielle Rose Herman (February, 2022)

Lucy Grace Kitch-Peck Minor in Energy Studies

Heidi Leya Li Minor in Public Policy Minor in Energy Studies

Kyle A. Markland Minor in German

Neosha Gupta Narayanan

Thomas M. Sierra Minor in Business Analytics

Isaac Azael Toscano Mina Also with a Major in Course XV-1 Kathryn A. Tso

Also with a Major in Course XXI-H

Paige K. Vincent Minor in Energy Studies

Lori Insun Won

Elliott S. Yarwood

**Bachelor of Science in Electrical** Science and Engineering

Course VI-1 Department of Electrical Engineering and Computer Science in conjunction with the Schwarzman College of Computing

Julia Marshall Arnold Minor in Political Science (See also M.Eng., Course VI-P)

Kellie Elizabeth Everett

Roberto E. Garcia

Ishaan Govindarajan

Sidne V. Gregory Minor in Spanish

Bernardo Hasbach Covian

Petra E. Hernandez (February, 2022)

Jonathan Maiara

Jordan Christopher McDermott

Fischer Jay Moseley Also with a Major in Course VIII

Suparnamaaya Prasad Also with a Major in Course XXI-W Minor in Mechanical Engineering

Jenessa M. Rodriguez (February, 2022)

**Brian Wang** 

Reagan Pauline Zimmerman Also with a Major in Course XVII

**Bachelor of Science in Electrical Engineering and Computer** 

Science Course VI-2

Department of Electrical Engineering and Computer *Science in conjunction with the* Schwarzman College of Computing

So Hee Ahn

Bradley D. Albright

Yaseen S. Alkhafaji

Kazi Alom

Henry Nils Andersen

**Rachel Anderson** 

**Antonio Berrones** 

Kade M. Bose

Jasmin Charifa Bouzarouata

Paul G. Calvetti, Jr. Minor in Mathematics

Michael R. Cantow Minor in Mathematics

Valerie Ku Chen Minor in Music

William Chen (February, 2022)

Melissa Chhaunkar

Tamique de Brito

Mingfei Phil Duan Minor in Mathematics

Tareq El Dandachi

Also with a Major in Course II-A

Julian Christopher Espada

Minor in Mathematics

Marc Andrew Felix

Matthew R. Feng

Cassidy M. Fialkiewicz

Aaron T. Fleischer

Alisha Fong

Reed A. Foster

Albert Garcia

Ethan Z. Garza

Jamie Geng

Arlene Ezinne Godfreey-Igwe

Minor in African and African Diaspora

Studies

Avichal Goel

Also with a Major in Course XVIII

Adina H. Golden Minor in German

Miguel Gomez-Garcia

Richard L. Gong

Minor in Physics

Rolando Alfonso Gonzalez

Luka Govedič

Minor in Physics Minor in Music

Veronica M. Grant

Minor in Brain and Cognitive Sciences

Colin T. Greybosh

Wilson Guo

Kelly He

Minor in Mathematics

Tommy S. Heng

Adeline F. Hillier

(See also M.Eng., Course VI-P)

Kelly P. Ho

Julius-Bao Gia Hoang

Minor in Music (February, 2022)

Amanda Elisabeth Horne

(See also M.Eng., Course VI-P)

**Emily Ming-Lee Huang** 

Also with a Major in Course XVII

Spencer David Hylen

Also with a Major in Course XIV-2 Minor in Business Analytics

(February, 2022)

William W. Jack

Holly M. Jackson

Minor in Applied International Studies

Lenna Sakura Kanehara

Also with a Major in Course VIII

Sohini Kai

Minor in Brain and Cognitive Sciences

Sathwik V. Karnik

Also with a Major in Course XVIII

**Benjamin Burton Kettle** 

Minor in Urban Studies and Planning

Meesue Kim

Minor in Design

Daniel A. Klahn

Gokul R. Kolady

Minor in Music

Abby Arleen Lambert

(February, 2022)

David B. Li

Minor in Mechanical Engineering

Minor in Economics

Xin Yu Lin

(See also M.Eng., Course VI-P)

Donald Dee Liu

Bryan López

Kerri Lu

Also with a Major in Course XVIII

Minor in Physics Minor in Economics

(See also M.Eng., Course VI-P)

Chun Ming J Ma

Minor in Brain and Cognitive Sciences

Minor in Mathematics

Tim Yuan Magoun

Yashaswini I. Makaram

Minor in History (February, 2022)

Jacob T. McGuire

Minor in Mechanical Engineering (See also M.Eng., Course VI-P)

Aditya Mehrotra

Minor in Mechanical Engineering

Ian J. Merrick

Kelsey N. Merrill

Minor in Economics

Devin F. Murphy

Pranav M. Murugan

Also with a Major in Course VIII

Minor in Biology

Anthony Dakota Nardomarino

Ahmad Hussein Negm

My Uyen Tran Nguyen

Carol Pan

Minor in Chinese

Meenal Parakh

Also with a Major in Course XVIII

Nitya Parthasarathy

Syamantak Payra

Minor in Entrepreneurship & Innovation

Minor in Public Policy

Joshua J. Piel (February, 2022)

(See also M.Eng., Course VI-P)

Isabelle A. Quaye Minor in Economics

Muhammad S. Rahman Minor in Mathematics

Saad Nafim Rahman (February, 2022)

Sneha Ramachandran

Nicholas R. Ramirez Minor in Music

Sanjna Ravichandar

Diego A. Raygoza-Castanos

Also with a Major in Course XVIII Minor in Philosophy Minor in Statistics and Data Science

Dana Rosenfarb Minor in Mathematics (February, 2022)

Pedro Sales Rodriguez

Also with a Major in Course VIII

Gustavo X. Santiago-Reyes Minor in Theater Arts

Hannah Savoldy

Also with a Major in Course XXI-M

Christian J. Scarlett Minor in Music

Gila Rachel Schein (February, 2022)

Georgia Elizabeth Shay

**Peyton Douglas Shields** 

Sage Simhon

Nailah Jonquil Smith

Also with a Major in Course XXI-W

Jackson C. Snowden

Ria V. Sonecha

Minor in Mechanical Engineering

Natalia G. Suarez

Also with a Major in Course XV-1

Hillary Tapiwa Tamirepi

Krittamate Tiankanon

Sabina Tontici Minor in Mathematics

Tiffany Trinh

Minor in Comparative Media Studies

Bréjah M. Upton

Sreya Vangara

Also with a Major in Course II-A

Vikram Varma Minor in History

**Geoffrey Wang** 

Jialan Wang Minor in Linguistics

Margaret X. Wang

Minor in Mechanical Engineering

Daniel F. Wisdom Minor in Mathematics

Carine Xinbo You

Also with a Major in Course XVIII

Justin S. Yu

Brandon W. Yue

Jingjun Zeng

Lori Liu Zhang (February, 2022)

Sammy W. Zhang (February, 2022)

Bachelor of Science in Computer Science and

**Engineering** Course VI-3

Department of Electrical Engineering and Computer Science in conjunction with the Schwarzman College of Computing

Adit Abraham (February, 2022)

Alan Abreu

Ariana Ines Adames

Ikechukwu Daniel Adebi

Adedolapo Adedokun

Raúl A. Alcántara Castillo

Emilio Amaya

Peter Amenewolde

Amir-Hizami S. Anuar

Enrique Aviña, Jr.

Arkadiusz Bałata

**Abigail Rose Bancks** 

**Gannon Octo Luke Barnett** 

Reginald Davis Best, Jr. Minor in Theater Arts

Ether Y. Bezugla

Minor in Earth, Atmospheric, and Plane-

tary Sciences

Vivek A. Bhupatiraju Minor in Mathematics

Christopher J. Blazes

Elena Sheppard Boal Minor in Spanish

**Baptiste Bouvier** 

Terryn Diane Brunelle

(See also M.Eng., Course VI-P)

Anna Grace Bryan

Also with a Major in Course XIV-2

Amarbold Byambajargal

Matthew R. Byrd

Raul Campos

Jesus R. Cantu

Shirley Q. Cao

**Emily I. Caragay** Minor in Public Policy

**Angelica Castillejos** 

Sze Hoi Sophia Chan Minor in Finance

Ioannis Chatziveroglou Minor in Mathematics

**Brad Chavero-Correa** (February, 2022)

Jeffrey T. Chen Minor in Mathematics

Shiyu Chen

Also with a Major in Course XVIII Minor in Economics

Tiffany Tianyu Chen

Also with a Major in Course XXI-S

Claire Cheng

Also with a Major in Course XXI-M

Katherine Y. Cheng

Also with a Major in Course XVIII (See also M.Eng., Course VI-P)

Itamar S. Chinn

Keenly S. Chuang

Soomin Chun

Minor in Mathematics

**Andrew Day Churchill** 

Jahrid Juan-Pablo Clyne

**Spencer Compton** 

(See also M.Eng., Course VI-P)

John B. Cook

Minor in Brain and Cognitive Sciences

Sebastian Andre Cordova

Also with a Major in Course XVIII

**Christian Cruz Matias** 

Jacob R. Cucinello

Guangqi Cui (February, 2022)

Tristan T. Culp Minor in Finance

Howard DaCosta III

Haimoshri Das

Also with a Major in Course XVIII Minor in Economics Minor in Entrepreneurship & Innovation

Tyrone Davis III

Minor in Russian and Eurasian Studies

Andrei R. Dumitrescu

Yun Shwe Eain

Also with a Major in Course XXI

Gabrielle Edyt Ecanow

Diego Escobedo

Shushu Fang

Also with a Major in Course XVII Minor in Mathematics

Noah M. Faro

Minor in Biology

Manuel Alejandro Favela

Winston S. Fee

Violet Celeste Felt

(See also M.Eng., Course VI-P)

Marco A. Fleming

Stephanie Fu

Also with a Major in Course XXI-M

Minor in Mathematics

Jenny Leixin Gao

Also with a Major in Course XVIII

Karen Gao

Ana Raquel Garcia

Minor in Business Analytics

Derek Jesus Garcia

Minor in Latin American and Latino

Studies

Serafin Joseph Cwynar Garcia IV

(February, 2022)

Edward G. Gathuru

Minor in Mathematics

Ricardo M. Gayle, Jr.

Shinjini Ghosh

Also with a Major in Course XXIV-2

Minor in Mathematics

Michael Gilbert

Minor in Economics

Marlena C. Gomez

Yulia Malka Gonik

Minor in Mathematics

Luis J. Gonzalez (February, 2022)

Garrett A. Gordon

Pawan Goyal

Also with a Major in Course XIV-2

Peyton Steven Greve

Luz Elena Grisales Gómez

Also with a Major in Course XVIII

Alicia X. Guo

Minor in Mathematics Minor in Design

Xinyi Guo

(February, 2022)

Aayush Gupta Zachary D. Johnson Mario Leyva, Jr. **Raxel Gutierrez** Cooper R. Jones Amanda Li Minor in Mathematics Also with a Major in Course XVIII Shannon A. Hagmaier Shulamit Hava Rothberg Jones Amber M. Li Minor in Linguistics Minor in Mathematics Dagmawi Samuel Haile Luann C. Jung Andrea Yingjun Lin Julian Shumirai Hamelberg Minor in Statistics and Data Science Minor in Mathematics Also with a Major in Course XXI-M (See also M.Eng., Course VI-P) (February, 2022) Mateo E. Hendricks-Hernandez Akshaj Kadaveru **Ashley Lin** Minor in Mathematics Also with a Major in Course XVIII Isaak Hernandez Ioannis Kaklamanis Gloria Zhi-Xian Lin Tyler E. Higgs Also with a Major in Course XVIII (February, 2022) (See also M.Eng., Course VI-P) Daven W. Howard Patrick D. Kao (See also M.Eng., Course VI-P) Caleb Andrew Littlejohn Grace Wenzhen Ni Hu Hyunji Kim Alex C. Liu (See also M.Eng., Course VI-P) Also with a Major in Course XVIII William Hu Minor in Chemistry Minor in Music Nathaniel Jongmin Kim Minor in Mathematics Emma J. Liu Tiffany Y. Huang Minor in Statistics and Data Science Minor in Economics Also with a Major in Course VIII Minor in Statistics and Data Science (See also M.Eng., Course VI-P) Yo-whan Kim **Raymond Minor Huffman** (See also M.Eng., Course VI-P) Kevin Liu Hoang Ngoc Minh Huynh Minor in Mathematics Cole Thomas Kingston Peter Gyoomin Hwang Richard T. Liu Nadia Noriko Koshima (February, 2022) Helen Lu Shenal Santhush Kotuwewatta Chiho Im Minor in Business Analytics Also with a Major in Course XVIII (February, 2022) Minor in Business Analytics Mindren D. Lu Elsa Mukene Itambo Also with a Major in Course XX Andrew S. Kreisher Bibiloni Minor in Mathematics Minor in Linguistics (See also M.Eng., Course VI-P) Jay T. Lang James Daniel Jackson William Luo Pedro D. Lantigua Lay Jain Also with a Major in Course XIV-2 Lilian Luong Joie Y. Le Minor in Brain and Cognitive Sciences Meagan R. Jens Aileen Ma Minor in Mathematics Minor in Business Analytics Yunfei Ma Ioshua Lee Sharon Jiang Also with a Major in Course XVIII Minor in Mathematics (February, 2022) Niklas Mannhardt

Jungyeon Lee

Minor in Economics

Also with a Major in Course XVIII

Kathryn J. Jin

Suzanna A. Jiwani

Also with a Major in Course XVIII

Alexandra N. Marsh

Alexandra Martirosian
(February, 2022)

Ian C. McJohn

Nicholas Allen Medearis

Carolyn Mei

Amelia A. Meles
Minor in Chinese

Sebastian K. Mendez
(February, 2022)

Tamara Mitrovska

Abhishek Mohan
(February, 2022)

Enrique B. Montas Minor in Mathematics

**Alexander Paul Moreno** (February, 2022)

Julia Nicole Moseyko

**Rajiv Movva**Minor in Biology
Minor in Women's and Gender Studies

Veronica Muriga

Oluwatobi Risqat Mustapha

Umarbek Sheraliyevich Nasimov

**Diogo Correia Netto** Also with a Major in Course XIV-2

Gary Thanh Nguyễn

**Kevin Q. Nguyen** Minor in Japanese

**Linh Tường Nguyễn** Minor in Spanish

Lena Q. Nguyen-Vo

Raveen Nzilani

Cory Jakob O'Shea

Timothy O. Ogunfunmi

**Temiloluwa O. Omitoogun** Minor in Theater Arts

Ishan Pakuwal Minor in Economics Minor in Statistics and Data Science

Jennifer R. Pan

Also with a Major in Course XIV-1 Minor in Mathematics

**Shreya L. Pandit** Also with a Major in Course IX

Vishnu Sai Penubarthi

**Jorge L. Pérez** Minor in Biology

**Sergio Perez** Minor in Music

**Gregory G. Peterson**Also with a Major in Comparative Media

**Daniel P. Pilsbury** (February, 2022)

Shirlyn Prabahar (February, 2022)

Abilash Prabhakaran

Sonia Purohit

Laura Isabella Queipo Morales

Anushka Ray (February, 2022)

Isaac Charles Redlon

Jordan S. Ren

Sol Estrella Rodríguez Garnica

**Marina Olivia-Marie Rogers** Minor in Design

Anthony C. Roman

Also with a Major in Course XXI-M (See also M.Eng., Course VI-P)

Sabrina Romero Arrazcaeta

Stuart A. Rucker

Mitchel P. Rydzynski Minor in Mathematics

**Kyle A. Sandell** Minor in Finance

Aman R. Sanger

Also with a Major in Course XVIII

Pasapol Saowakon Minor in Economics Minor in Statistics and Data Science

Nehemiah Zerayohannes Seblu

Samuel Seseña

Andrew Y. Shao

Also with a Major in Course XVIII

Khaled K. A. Shehada

**Jeffrey J. Shen** Minor in Political Science

Michelle Cindy Shen

Nina X. Singh

Abraham Skandera

Carson J. Smith Minor in Political Science (See also M.Eng., Course VI-P)

Mahmoud Sobier

Also with a Major in Course XXIV-1

Jesus A. Solis (February, 2022)

Wilson Banks Spearman

Benjamin F. Spector

Also with a Major in Course XVIII (See also M.Eng., Course VI-P)

Suraj S. Srinivasan

Also with a Major in Course XVIII

Crystal B. Su

Also with a Major in Course XV-1 Minor in Economics

Chuyue Sun

Daniel D. Sun

Shobhita S. Sundaram

Also with a Major in Course XVIII

Viktoriya Tabunshchyk

**Kevin Tang** 

Minor in Mathematics

**Britney Alda Ting** 

Ritaank Tiwari

Also with a Major in Course XVIII

**Deborah Cheron Torres** 

Moises Trejo, Jr.

Michael N. Truell

Also with a Major in Course XVIII (February, 2022)

Savannah B. Tynan

Minor in Mathematics

**Fausto Uribe** 

Monica M. Valcourt

Nancy Sheccid Vargas Balderas

Derek J. Velez

Ashika Verma Minor in Music

Eli Villa

Minor in Physics

Daniel C. Vuong

Also with a Major in Course XVIII

Minor in Economics

Ellen F. Wang

**Emily Jiatong Wang** 

Minor in Comparative Media Studies

Handong Wang

Also with a Major in Course VIII Minor in Mathematics

Ivy A. Wang

Also with a Major in Course XVIII

Minor in Design

Lilian Wang

Madeline Wang

Also with a Major in Course XVIII

Tony R. Ward

Minor in Business Analytics

Megan Jian Wei

Minor in Business Analytics

Anna E. Weinstein

Minor in Brain and Cognitive Sciences

Christian T. Williams

Edmund D. Williams, Jr.

Max Xavier Williamson Minor in Public Policy

Shannon P. Wing

Benjamin David Wolz

Anna Jiayi Wong

Also with a Major in Course XVIII

Minor in Management

Elaine Y. Xiao

Timmy Xiao

Minor in Mathematics

Ari Xie

Minor in Writing

Katherine Xiong

Minor in Economics Minor in Mathematics

Katherine Yang Xu Minor in Mathematics

(February, 2022)

Michelle Yakubek

(February, 2022)

**Forest Yang** 

Janice Catherine Yang

Tanya Yang

**Yilinn Yang** 

Also with a Major in Course XV-2

Rui Yao

Also with a Major in Course XVIII

Derek Jia-Wen Yen

Also with a Major in Course XXIV-2

Minor in Mathematics

Richard A. York IV

Minor in Political Science

Joanne Yuan

Ann Zhang

Jerry Zhang

Minor in Statistics and Data Science (See also M.Eng., Course VI-P)

Qianqia Zhang

Minor in Mathematics

Jason Y. Zhao

Tong Zhao

Minor in Mathematics

George Zheng

Jessica Amber Zheng

Minor in Mathematics

Winnie X. Zheng

Ye Cheng Zheng

Sophia Zhi

Minor in Linguistics

Elizabeth Y. Zou

Also with a Major in Course XVIII (See also M.Eng., Course VI-P)

Bachelor of Science in Computer Science and Molecular Biology

Course VI-7
Department of Electrical
Engineering and Computer
Science in conjunction with the
Schwarzman College of Computing

Miles Povich Agus

**Tiwalayo Terrence-Luke Aina** Also with a Major in Course XVIII (See also M.Eng., Course VI-7)

Elena Rosette Andree

Hieu Dinh

Also with a Major in Course V Minor in Physics

**Shulammite Eve Lim** 

Also with a Major in Course XXI-M

Stephen J. Lostetter III

Karthik Nair

(See also M.Eng., Course VI-7)

Samuel Toliver Eaton Nitz

Clinton S. Reid

Also with a Major in Course XVIII

Ailis Robinson

Minor in Japanese

Harveer Singh

Elaine Wu

Andrew G. Xue

Stephanie Xue Zhang

Also with a Major in Course XVII

Bachelor of Science in Computer Science, Economics, and Data Science

Course VI-14

Department of Electrical Engineering and Computer Science in conjunction with the Schwarzman College of Computing

Giovanni J. Ahern

Also with a Major in Course XVIII Minor in Finance

**Griffin Scott Ansel** 

Rikita Bansal

Minor in Business Analytics Minor in Literature

Alain Roberto Berwa

Julia M. Caravias

Minor in Environment and Sustainability Minor in Statistics and Data Science

Rachel Cheng

Also with a Major in Course XVIII Minor in Business Analytics

Vijay Dey

Minor in Mathematics

Alexander C. Ellison

Danielle B. Fang

Xingchen Joy Feng

Also with a Major in Course XVIII

Minor in Music

Benjamin P. Gulak

(February, 2022)

William A. Jones

Also with a Major in Course XXI-L Minor in Business Analytics

Deekshita Kacham

Minor in Women's and Gender Studies

Thatcher A. Kaspers

Ali Sinan Kaya

Minor in Business Analytics

Lara Linnea Ketonen

Minor in Business Analytics Minor in Design

Andrew Rubin Masami Komo

Also with a Major in Course XVIII (February, 2022)

Christopher J. McKinney

John H. Montinaro

Pranit Nanda (February, 2022)

Thomas B. Ogeka Minor in Statistics and Data Science

Orrie B. Page

Minor in Business Analytics

Joseph C. Powell

Ramon Jesse H. Roco, Jr.

Minor in Mathematics

Sarah R. Wertheimer

**Annika Eleanore Sougstad** Also with a Major in Course XV-2

,

Wendy Dee Yin

Karina C. Zhang

Suki Zhang

Also with a Major in Course XV-2

**Amber Zheng** 

Tianxin Zheng

Minor in Mathematics

Bachelor of Science in Chemical Engineering

Course X

Department of Chemical

Engineering

Nicholas E. Aiello

Minor in Economics

Noah B. Brooks

Chloe Ann Ophelia Brown

Minor in Economics

Quan H. Do

Danica Dong

Minor in Design Minor in Energy Studies

William Everett Exson

Minor in Business Analytics

Evan James Gwozdz

Minor in Management

Audrey R. Leibig

Minor in Environment and Sustainability

Ruoxin Lu

Minor in Chemistry Minor in Writing

D'Ante L. McCollum

Nicole Marie Munné

Minor in Management

Alec M. Nguyen

Minor in Economics Minor in Energy Studies

Alyssa M. Spencer

Minor in Chemistry

Ashleigh Nicole Teygong

Minor in Management

Chih Yu Tung

Minor in Energy Studies

William P. Woltmann

Minor in Biology

**Bachelor of Science in** Chemical-Biological **Engineering** 

Course X-B

Department of Chemical

Engineering

Juan A. Aleman

Spencer Patryck Delgado

Minor in Mathematics

Antonio E. Diaz

Minor in Biology

Isabella R. Gengaro

Minor in Computer Science

David E. Gomez

Mariss Haddad

(February, 2022)

Anna Alexis Johnson

Minor in Business Analytics

(February, 2022)

McKenzie Sampson McArthur

Minor in Biology Minor in Writing

(February, 2022)

Jaclyn A. Ng

Also with a Major in Course VII

**Britney Han Pham** 

Also with a Major in Course VII

(February, 2022)

Yvonne Rong

Also with a Major in Course VII

Jonathan Joseph Sandlin

Liliana C. Vela

Also with a Major in Course VII

Sydney M. Vleck

Also with a Major in Course VII

(February, 2022)

Bachelor of Science as recommended by the

**Department of Chemical** 

**Engineering** 

Course X-C

Department of Chemical

Engineering

Kailyn M. Bryk

Also with a Major in Course XV-2

(February, 2022)

Bachelor of Science in Engineering as recommended by the Department of Chemical

**Engineering** 

Course X-ENG

Department of Chemical

Engineering

Lina Atif Ahmed

Minor in Computer Science

Ayomikun Ayodeji

Also with a Major in Course XV-1

**Jude Bonesteel** 

Minor in Energy Studies

Laura Chunying Chen

Minor in Public Policy

Shuxin Chen

Minor in Computer Science

(February, 2022)

Nicholas Philip Duchatellier

Minor in Economics

Tomás M. Herrera

Minor in Computer Science

Destinee-Jade Tsai Hung

Minor in Computer Science

Alexander H. Liu

Liew Min

Avery K. Nguyen

Also with a Major in Course XXI-L

Christine Marie Padalino

Also with a Major in Course XII

Natalia Perez-Lodeiro

Minor in Energy Studies

Paula F. Pieper

Minor in Statistics and Data Science

Naksha Roy

Minor in Management

Kelly Shuyao Wu

Ming Ying Yang

Also with a Major in Course VI-3

Minor in Economics

Bachelor of Science in Aerospace Engineering

Course XVI

Department of Aeronautics and Astronautics

**María Paula Barbosa** Minor in Astronomy

Lindsey Catherine Bjornstad Minor in Political Science

Jack J. Capper

Minor in Computer Science

Henri Conradt Champigneulle

(February, 2022)

Vittorio Colicci IV

Also with a Major in Course VIII Minor in Earth, Atmospheric, and Planetary Sciences Minor in Astronomy

Megan F. L. Cooper

Also with a Major in Course III-A

**Sean G. Crozier**Minor in Literature

Lukas Z. Drexler-Bruce

Thomas S. Edelman

German A. Espinosa

Also with a Major in Course VI-2 Minor in Music

**Charles Johannes Fenske** 

Wyatt M. Giroux

Carlos G. Hernandez

Also with a Major in Course VI-2 (February, 2022)

Alexander James Hodge

Minor in Music

Brian Hoon Hoh

Minor in Computer Science

**Kevin James** 

Minor in Computer Science

**Eun Young Jung** 

Minor in Computer Science

Jayaprakash Ding Yuan Fung Kam-

bhampaty

William John Kuhl

Max K. Kwon

**Alassia N. Lang** Minor in Japanese

**Daniel Ledesma** Minor in Japanese

Erin M. Leydon

Cici Mao

Parker Mayhew

Bryan S. Medina

Amanda F. Olphie (September, 2021)

John Michael Ped

**Jacqueline E. Pedlow**Minor in Economics

Victor M. Perez-Ramirez

Joshua E. Rapoport

Matthew E. Schofield Minor in Computer Science

Steven Serrano

Juliana R. Silldorff Minor in Political Science

**Ethan Sit** 

Jon K. Stenger

Minor in Computer Science

**Delia Stokes Stephens** (See also S.M., Course XVI)

Michelle S. Tang

Isabella S. Torres

Also with a Major in Course XV-1

Minor in Spanish

**David Dezell Turner** 

Herbert M. Turner IV

Also with a Major in Course VI-2

Tara Kamala Venkatadri

Minor in Earth, Atmospheric, and Plane-

tary Sciences

Catherine L. Washburn

(February, 2022)

**Tyler Chase Worthley** 

Minor in Economics

Azreen Zaman

Also with a Major in Course VI-2

Minor in Economics

Maggie Zheng

Bachelor of Science in

Engineering as recommended

by the Department of

**Aeronautics and Astronautics** 

Course XVI-ENG

Department of Aeronautics and

Astronautics

Juliana L. Chew

Also with a Major in Course VI-2

Elissa Akusika Gibson

Also with a Major in Course IX

Dylan F. Goff

Minor in Earth, Atmospheric, and Plane-

tary Sciences

Jared L. Hensley

Minor in Computer Science

Devin Johnson

Minor in Physics

Anika A. Kamath

Alexander P. Koenig

Also with a Major in Course VIII (February, 2022)

Katherine Kutina

Minor in Brain and Cognitive Sciences

Abdulazeez Mohammed Salim

Also with a Major in Course VIII

Savva Morozov

Kaila Guarda Pfrang

Minor in Public Policy

Karolina Weronika Podsada

Bachelor of Science in **Biological Engineering** 

Course XX

Department of Biological

Engineering

Sarah Wonboon Acolatse

Lainie W. Beauchemin

**Imane Bouzit** 

Laura E. S. B. Chen

Minor in History

Prem Chintalapudi

Also with a Major in Course VI-3

(February, 2022)

Kaden S. DiMarco

Desmond Livingston Edwards, Jr

Also with a Major in Course VII

Minor in French

Erinn L. Fagan

Also with a Major in Course IX

Kylie Jane Gallagher

Jenny Gao

Minor in Applied International Studies

Diana L. Garibay

Malik Aaron George

Minor in African and African Diaspora

Studies

Miles Avery George

Minor in African and African Diaspora

Karenna Jade Groff

Minor in Brain and Cognitive Sciences

Dana L. Haig

Emily L. Han

Hannah Joy Harens

Minor in Statistics and Data Science

Nicole Rose Haseley

Camellia Huang

Maile Marie Yu Liang Jim

Devin T. King-Roberts

Jessica R. Knapp

Olivia Rose Lucchese

**Oyuntugs Luubaatar** 

Kevin S. Ly

Also with a Major in Course VI-2 Minor in Mechanical Engineering

Michael Vincent Mandanas

Minor in Computer Science

Anais Victoria Marenco

Abigail Mauermann

Minor in Biology

Carlos F. Mercado-Lara

Also with a Major in Course XV-1

Ilana Sandra Nazari

Minor in Spanish

Sharon Chidinma Opara-Ndudu

Minor in Political Science

Joshua J. Park

Giramnah Sofía Peña-Alcántara

Alexandra Jeena Poret

Minor in Science, Technology, and

Society

Diana C. Renteria

Haniyah Shareef

Juliana M. Strother

Minor in Brain and Cognitive Sciences

Allison Y. Tong

Minor in Computer Science

Brian A. Williams

Heekyoung Woo

(February, 2022)

Melody Wu

Minor in Environment and Sustainability

Minor in Design

Eleanor Lee Xiao

Michelle Yin

Minor in Computer Science

Linda A. Yu

Chelsea Jiaruo Zhang

Minor in Women's and Gender Studies

Wen Ting Zheng

Bachelor of Science in Nuclear Science and Engineering

Course XXII

Department of Nuclear Science and

Engineering

Liam S. Hines

Also with a Major in Course XXIV-1

Joseph W. Jerkins

Also with a Major in Course VIII

(February, 2022)

Peninah Lise Levine

Minor in Public Policy

(See also S.M., Course XXII)

**Bachelor of Science in** Engineering as recommended by the Department of Nuclear **Science and Engineering** Course XXII-ENG Department of Nuclear Science and Engineering

**Amelia J. Cavallaro** Minor in Computer Science

Jovier Alejandro Jiménez Minor in Economics Minor in Energy Studies

## SCHOOL OF HUMANITIES, ARTS, AND SOCIAL SCIENCES

Bachelor of Science in **Economics** 

Course XIV-1

Department of Economics

Bevan Anthony Gordon Pereira

Liam R. Miller

Minor in Mathematics

Chase A. Reid

Lauren Elizabeth Rice

Luke R. Stewart

Minor in Mathematics

Bachelor of Science in **Mathematical Economics** 

Course XIV-2

Department of Economics

Prosser M. Cathey

Also with a Major in Course XVII Minor in Management

Lucy Ayres McMillan

Minor in Environment and Sustainability Minor in Public Policy

**Ashley Ann Thomas** 

(February, 2022)

Hanna Alexa Tuomi

Minor in Mechanical Engineering

Minor in Design

**Bachelor of Science in Political** Science

Course XVII

Department of Political Science

**Zachary Daniel Alfaro** 

Also with a Major in Course XV-3

Yuxin Chen

Roy H. Kwon

Minor in Science, Technology, and

Society

**Bachelor of Science in Music** 

Course XXI-M

Music and Theater Arts

Anna Baiba Aldins

Minor in Mathematics

Minor in Ancient and Medieval Studies

Eva A. Demsky

Also with a Major in Course XIV-2

Katherine E. Karwoski

Also with a Major in Course IX

**Bachelor of Science in Music** and Theater Arts

Music and Theater Arts

**Peter Anthony Tone** 

Also with a Major in Course VI-3

Bachelor of Science in **Humanities and Engineering** 

Course XXI-E

Department of Humanities

Jonah A. Baskerville

**Preston Bezos** 

Yiqing He

(February, 2022)

Havley Ye

Minor in Design

Bachelor of Science in **Humanities and Science** 

Course XXI-S

Department of Humanities

Amira Casaclang Beck

Madeline Ferrari Holtz

Sarah Bingham Knopf

Tanya M. Llanas

Bachelor of Science in **Linguistics and Philosophy** 

Course XXIV-2

Department of Linguistics and

Philosophy

Kristy M. Chang

Theodor Cucu

Also with a Major in Course VI-9

Rujul Gandhi

Also with a Major in Course VI-2

Bachelor of Science in **Comparative Media Studies** 

Program in Comparative Media Studies

Andi L. Mitchell

Miriam G. Suarez

AudreyRose Ramona Wooden

## SLOAN SCHOOL OF MANAGEMENT

Bachelor of Science in

<u>Management</u>

Course XV-1

Sloan School of Management

Gavin M. Fischer

Minor in Computer Science

Ian J. Hinkley

Also with a Major in Course II-A Minor in Anthropology

Shelli Orzach

Also with a Major in Course XVIII Minor in Environment and Sustainability

Christine M. Sanchez

Also with a Major in Course VI-14

Sajjad A. Zaheer (February, 2022)

Elizabeth Abby Zhou

Also with a Major in Course VI-3 (September, 2021)

Jenny Zhu

Also with a Major in Course VI-14 Minor in Entrepreneurship & Innovation

Bachelor of Science in Business
Analytics

Course XV-2

Sloan School of Management

Tevita Asilolohea Akau

Minor in Computer Science

Giulia Alvarenga

Minor in Computer Science

Christina Elizabeth Antonakakis Also with a Major in Course VI-14

Brian S. Glat

Also with a Major in Course XVIII

**Julia Elena Gonzalez Fernald**Also with a Major in Course XI

Adam M. Katz

Aaron Lu

Also with a Major in Course VI-14 Minor in Mathematics

Valeria N. Martin Del Campo

(February, 2022)

Sarah Anne Moseson

Minor in Urban Studies and Planning (February, 2022)

Peter J. Novoa

Also with a Major in Course VI-14

Munachimso C. Nwana

Johnvir S. Pangli

**Audrey Wohl Pettigrew** 

Also with a Major in Course VI-14

Mia Reilly

Roland Rocafort Fernández

Also with a Major in Course VI-14

Minor in Mathematics

Margaret Elizabeth Rodriguez

Also with a Major in Course VI-14

John D. Steele

Minor in Computer Science

Eileen I. Tan-Aristy

Minor in Computer Science

Lvdia Yu

Also with a Major in Course VI-14

**Bachelor of Science in Finance** 

Course XV-3

Sloan School of Management

William Wei-En Chang

Also with a Major in Course VI-14

Alexander D. Hom

Also with a Major in Course VI-14

Keith B. Lamp

Also with a Major in Course XVIII

Diana Ma

Maya Reves

Gabriela I. Rodriguez

James Thomas Santoro

Sebastian Simon

Also with a Major in Course XIV-2

Ryan Suh

Minor in Japanese

Minor in Computer Science

Jennifer Yu

Minor in Economics

## **SCHOOL OF SCIENCE**

**Bachelor of Science in Chemistry** 

Course V

Department of Chemistry

Zachary E. Chin

Also with a Major in Course VI-2 Minor in Music

Yutong Dai

Also with a Major in Course VI-7 (February, 2022)

Rondel S. Garguilo

Peter Garrett Hegel

Minor in Computer Science

**Ruby Anise Kharod** 

Minor in Science, Technology, and Society

Jiwon Michelle Lee

Minor in Biology Minor in Public Policy

Alex Jie Li

**Xochitl Luna** 

Minor in Brain and Cognitive Sciences

Omar A. Santiago Reyes

Minor in Biology Minor in Music

Abigail Kamila Dawn-Marie Scott

**Bachelor of Science in Chemistry and Biology** 

Course V-7

Department of Chemistry

Aniket Dehadrai

Minor in Theater Arts

Leyna Duong

Minor in Writing

Laney R. Flanagan

Hannah R. Grupe

Marina Grace Monsivais

Mydia Diep Phan

Also with a Major in Course IX

Shannon Yuanling Weng

Minor in Physics (February, 2022)

**Bachelor of Science in Biology** 

Course VII

Department of Biology

**Titash Biswas** 

Minor in Brain and Cognitive Sciences Minor in Science, Technology, and

Eduardo A. Canto

Silvia Seoyeon Cho

Also with a Major in Course IX

Michelle Junyi He

Also with a Major in Course IX Minor in Applied International Studies

Alexandra Fallon Hoffman

Jonas Kantola

Heya Lee

Soo Min Lee

(February, 2022)

Sarah C. Lincoln

Also with a Major in Course XXI

Isha Mehrotra

Adesefeoise Michael Oriaifo

(February, 2022)

Vaishnavi V. Phadnis

Rachel Min Shen

Minor in Earth, Atmospheric, and Plane-

tary Sciences

Sofía Isabel Torres Bigio

Max Yaeil von Franqué

Also with a Major in Course XI

**Zhishan Wang** 

Minor in French

Jason Yang

Minor in Computer Science

Daniel D. Zhang

Minor in Comparative Media Studies

**Bachelor of Science in Physics** 

Course VIII

Department of Physics

**Brendan Michael Ashworth** 

Also with a Major in Course VI-9 (February, 2022)

Elliott M. Barnhill

Also with a Major in Course XXI-L

Mason G. Bishop

Quinn Nicole Brodsky

Also with a Major in Course XVIII Minor in Writing

Kiara T. Carloni Minor in Mathematics

Minor in Literature

Grecia Castelazo

Also with a Major in Course VI-2

Minor in Mathematics

Chang-Han Chen

Also with a Major in Course XVIII

Shiai Chen

Also with a Major in Course VI-2

Sabrina Y. Cheng

Minor in Computer Science

Diego Colín

Minor in Urban Studies and Planning

Sean Condon

Minor in Computer Science

(February, 2022)

William P. Cuozzo

Also with a Major in Course VI-14 Minor in Mathematics Minor in Business Analytics

Kylie Yui Dan

Minor in Astronomy Minor in Japanese

John Theodore Dinsmore

Minor in Mathematics Minor in Astronomy

Luke C. Gianni

(February, 2022)

Max R. Hardy

Also with a Major in Course VI-1 Minor in Materials Science and Engineering

Sihao Huang

Also with a Major in Course VI-1 Minor in Political Science

Nory G. Klop-Packel

Serhii Kryhin

Jesus E. Lares

Also with a Major in Course VI-3

Keiran James Lewellen

Also with a Major in Course XVIII

Chih-Wei Joshua Liu

Keith Gerard Mokry

Minor in Computer Science

**Manuel Morales** 

Also with a Major in Course VI-1 Minor in Energy Studies

Karna Ashwin Morey

Quynh The Nguyen

Also with a Major in Course VI-3 Minor in Mathematics

Mikael Girma Nida

Also with a Major in Course VI-3

Mofeyifoluwa O. Oluwalana

Also with a Major in Course VI-2

Alex F. Pacheco

Ava Alexandra Baer Pettit

Maya L. Reese (February, 2022)

Elena A. Romashkova

Also with a Major in Course XII

Lulu Danger Russell

Yoshihiro Saito

Minor in Mathematics Minor in Computer Science

**Eve Lockhart Schoen** 

Devin Jon Seyler

Also with a Major in Course XVIII Minor in Energy Studies

John Shackleton

Also with a Major in Course VI-3

Bereket Z. Sintayehu

Alexander W. Smith

Minor in Chemistry

Alexandra R. Stewart

Michal Szurek

Also with a Major in Course VI-1

Joshua R. Talbot

Also with a Major in Course VI-2 Minor in Mathematics (February, 2022)

Octavio J. Vega

Also with a Major in Course XVIII Minor in Public Policy

**Rokas Paul Veitas** 

Also with a Major in Course XVIII

**Cindy Wang** 

Also with a Major in Course VI-3

Raymond A. Wynne

Also with a Major in Course VI-1 Minor in Mathematics

YuQing Xie

Also with a Major in Course XVIII-C

**Hao Bang Yang** 

Also with a Major in Course VI-3

Muye Yang

Also with a Major in Course XVIII-C Minor in Statistics and Data Science

Yuan-Chen Yeh

Also with a Major in Course XVIII

Bachelor of Science in Brain and Cognitive Sciences

Course IX

Department of Brain and Cognitive Sciences

Chelsea Chinyere Ajunwa

Maggie Chen

(February, 2022)

Aidan Cook

Minor in Theater Arts

Erick J. Eguia

Minor in Biology

Kristine Marie Hocker

Alana Nicole Kalehua

Minor in Biology

Ravi Kapoor

Rucha Atul Kelkar

(February, 2022)

Dana Marie McCormack

Keith Michael Skaggs

Minor in Biology

Kareena L. Villalobos

Minor in Writing

Yizhi Wang

Minor in Theater Arts

Anna Laura Wilson

Bachelor of Science in **Computation and Cognition** 

Course VI-9

Department of Brain and Cognitive Sciences in conjunction with the Schwarzman College of Computing

Tyler H. Allen

Annalisa Justine Broski

Hannah T. Collins

Sophia Emmanuelle Diggs-Galligan

Cesar I. Duran

**Benjamin Dwyer** 

**Emelie Ann Eldracher** Minor in Management

Mohanned M. Elkholy

Caleb M. Harris

Alisa Y. Hathaway

Minor in Mechanical Engineering

Doron Hazan

Also with a Major in Course XV-2 (February, 2022)

Annika L. Heuser (February, 2022)

Ashley K. Holton

**Emily Huang** Minor in Writing

Michelle S. Hung

Bhav Jain

Joanna Sarah Kennedy

Minor in Biomedical Engineering Minor in Science, Technology, and Society

Faduma Bashir Khalif Minor in Mathematics

Elian Malkin

Minor in Mechanical Engineering

**Keith Thomas Murray** 

Also with a Major in Course XXIV-2

Haylee J. Niemann

Uche O. Okwo

Isaac Kyle Lau

(February, 2022)

Minor in Music

Vinh Phúc Lê

Noah Hye-Jae Lee (February, 2022)

Griffin S. Leonard

Mason T. Lykes

Robert Cheukying Law

Eileen Pan

Nikasha G. Patel

Mariela M. Perez-Cabarcas

Minor in Russian and Eurasian Studies

Habeeb Ayodeji Salau

Luyao Tian Minor in Design

Aniekan M. Umoren

Olivia G. Valle

Lily Wang

Also with a Major in Course XV-1

**Brody West** 

Bachelor of Science in Earth, Atmospheric, and Planetary **Sciences** 

Course XII

Department of Earth, Atmospheric, and Planetary Sciences

Juliana Kristine Drozd

Lin Hou

Also with a Major in Course VII

Zoe Levitt

Minor in Mathematics Minor in Music

Lily N. Zhang

Also with a Major in Course VIII

Minor in Public Policy

Bachelor of Science in **Mathematics** 

Course XVIII

Department of Mathematics

Sualeh Asif

Also with a Major in Course VI-3

Minor in Theater Arts

Dina Atia

Also with a Major in Course VI-14

Minor in Philosophy

Nicholas Shiao Baginski

Also with a Major in Course VI-14

Daniel C. Barnett

Also with a Major in Course VI-3

Minor in Economics

Scott C. Becker

Also with a Major in Course VI-3 (See also M.Eng., Course VI-P)

Scott E. Belair

Also with a Major in Course XV-2

Elisabeth Daniella Bullock

Yiran Cai

Also with a Major in Course VI-3

Andrea Ck Chan Minor in Economics

(February, 2022)

**Ashley Chen** 

Also with a Major in Course VI-3

Also with a Major in Course VI-3

Kelly Judy Chen

Also with a Major in Course V

Kenny Chen

Minor in Physics Minor in Japanese

Jung Soo V. Chu

Also with a Major in Course VI-3

Sophia L. Cohen

Also with a Major in Course XXI-W (February, 2022)

**Preston Cranford** 

Jonah M. Darnel

(February, 2022)

David W. Darrow

Minor in German

Daniel G. Edelman

Also with a Major in Course VI-3

Elias Theodore Garcia

Swapnil Garg

Also with a Major in Course VIII Minor in Biology Minor in Computer Science

Elley M. Goldberg

Minor in Economics

Andrew Gu

Also with a Major in Course VI-3

David He

Also with a Major in Course VI-3

Alexandra A. Hoey

Minor in Computer Science

Letong Hong

Also with a Major in Course VIII

Brian R. Huang

Also with a Major in Course VI-3

Nabil Khalil

Also with a Major in Course XXI-M Minor in Physics Minor in Finance (February, 2022) Robert Koirala B.K.

Also with a Major in Course VIII

Junhee Lee

Also with a Major in Course VI-3 Minor in Music

Madeleine Kaiyuan Li

Wanlin Li

Also with a Major in Course VI-3 (See also M.Eng., Course VI-P)

Ian J. Limarta

Also with a Major in Course VI-3

Andrew Y. Lin

Also with a Major in Course VIII Minor in Music

James H. Lin

Also with a Major in Course VI-3

Daniel S. Liu

Also with a Major in Course VI-2 Minor in Music

William Henry Francis Ludington

Arvid Lunnemark

Also with a Major in Course VI-3

Joy Yan Ma

Minor in Economics

Michael Yuanchao Ma

Annah Aureliea Grace Mercer

William K. Nash

Also with a Major in Course VI-3

Hesham Nawaz

Also with a Major in Course VI-14

Anders Olsen

Also with a Major in Course VI-3

Justin S. Park

Minor in Physics

Minor in Computer Science

Alan E. Peng

Minor in Music

Dylan G. Pentland

Mario A. Pereira

Maximilian Porlein

Also with a Major in Course VI-14

Hugo Ernesto Ramirez, Jr.

Also with a Major in Course VI-3

Kevin K. Ren

Also with a Major in Course VIII (February, 2022)

Michael Ren

Also with a Major in Course VI-3

René David Reyes Bardales

Also with a Major in Course VI-3

Ana Paola Reyes Sánchez

Also with a Major in Course XXIV-1

Hayden MacKenzie Rome

Also with a Major in Course VI-3

Isabel Sarah Hokuao Rosa

Also with a Major in Course VI-3 Minor in Spanish Minor in Statistics and Data Science (February, 2022)

**Peter Niiler Rowley**Also with a Major in Course VI-3

Amber Z. Shen

Veronika Silkin

Mihir Anand Singhal

Also with a Major in Course VI-3

**Edwin Cheng Song** 

Also with a Major in Course XIV-1

**Emerson Gabriel Studt** 

(September, 2021)

Megan Su

Also with a Major in Course VI-3

Abram Lucas Turner

(February, 2022)

**Amanda Isabel Vanegas Ledesma** Also with a Major in Course XII Collin Robert Warner

Also with a Major in Course VI-3

Andrea Arias

Minor in Women's and Gender Studies

Xunjing Wei

Iulia Balla

Minor in Economics

Catherine W. Wu

Also with a Major in Course VI-3

Azariah Z. Beyene

David Xing Wu

Also with a Major in Course VI-3

**Casey Spencer Bussone** 

Wanyi Xiao

Also with a Major in Course VI-2

Kyri H. Chen Minor in Economics

**Grace Xiong** 

Minor in Finance

Shardul Chiplunkar

Minor in Music

Briana A. Douglas

Guanpeng A. Xu

Also with a Major in Course VI-3

**Brin Catherine Harper** 

Also with a Major in Course XXIV-1

(February, 2022)

Torridon D. Yearwood

(February, 2022)

Michelle Y. He Minor in Finance

Joshua Yoon

Also with a Major in Course VI-14

Linda Huang

Leah Sullivan Yost Also with a Major in Course XXI-W Megan Joshi

Terry T. Kang

Jeffery Yu

Also with a Major in Course VIII

Minor in Music

Minor in Computer Science

Jabari A. King (September, 2021)

**Shengtong Zhang** 

Also with a Major in Course VI-3

Minor in Economics

Michelle Li

Grace Y. Zheng

Hannah Liu Minor in Chinese

(February, 2022)

Also with a Major in Course XV-2

Melissa Mu

Minor in Computer Science

Willis Y. Ong

Bachelor of Science in **Mathematics with Computer** 

Science

Course XVIII-C

Minor in Design

Department of Mathematics

Omomayowa Songonuga

Alice Anran Zhang Also with a Major in Course XXIV-1

Fiyifolu Olufemi Han Adebekun

Cindy Y. Zhang

Ifeoluwapo Imammachukwu Ademolu-Odeneye

Kathryn Zhao

Also with a Major in Course XV-1

Aruzhan Amanbayeva

## SCHOOL OF ARCHITECTURE AND PLANNING

#### **Master of Architecture**

Course IV

Department of Architecture

#### Ana Paula Arenas

(February, 2022)

A Taste of Home (with C.-A. Rodrigues)

#### **Taylor Lynn Boes**

(February, 2022)

The Incomplete Domestic Landscape (with F. Ma)

#### Jonathon Glyn Brearley

(See also S.M.Building Tech., Course IV) Taming Torridity: New Housing Forms for Heat Resilience

#### Ryan Clark Clement

(February, 2022)

Bernini Started It (with C. Matthai)

#### Ginevra D'Agostino

(February, 2022)

Rebuilding the Edge: The Case of the Sulmona-Carpinone Railway and the Town of Pettorano sul Gizio

## Angelica Marie Door

(February, 2022) Fourth Dimension

## Hugh Timothy Ebdy

The Renovation of East Campus: Control and Culture

#### Nare Filiposyan

(February, 2022)

(Re)Turn to Stone

#### **Daniel Griffin**

(February, 2022)

Seeing Labor (with I. Ow Su Wei)

## Ji Ye Ha

(See also S.M., Real Estate Development) Co-Working in Seoul: Integrating Public Infrastructure into the Metaverse

## Emma Jane Eileen Jurczynski

(February, 2022)

Who Cares? Assemblies of Care-and-Repair

#### Katharine Amelia Kettner

(See also M.C.P., Course XI) Inheritance Geographies: Black Presence and the Making of London

#### En-Han Thaddeus Lee

2.5D: An Exploration of Hybrid 3D Printing on Fabric

#### Florence Luyao Ma

(February, 2022)

The Incomplete Domestic Landscape (with T. Boes)

#### Charlotte Rose Matthai

(February, 2022)

Bernini Started It (with R. Clement)

#### Ana Alice McIntosh

(February, 2022) Inhabiting Wetness

#### Christopher Masahiko Moyer

(See also M.C.P., Course XI) Expanding Architectures of Sharing: Public Housing Authority-Supported Middle-Income Limited-Equity Cooperatives

#### **Ruth Blair Moyers**

(February, 2022) Accurate-ish

#### Inez Ow Su Wei

(February, 2022)

Seeing Labor (with D. Griffin)

## Carol-Anne Veronica Rodrigues

(February, 2022)

A Taste of Home (with A. Arenas)

#### Jia Li Song

(February, 2022)

Speculative Friction: Seven Stories from the Geneva Freeport (with Y. Yacoby)

## Yutan Sun

(February, 2022)

Pronounced Absurdity: The Weddingscape Outside a Conical Field

#### Gil Schwimmer Sunshine

(February, 2022) Medium Resolution

## Jitske Swagemakers

(February, 2022)

Forest Framing

#### Carolyn Tam

(February, 2022)

The Third Teacher: Architecture as Enabler of Active Learning

#### **Evellyn Tan**

(February, 2022)

Tsunami Bosai

#### Ellen Wood

(February, 2022)

Under (De)Construction

#### Jie Wu

(February, 2022)

Specious Materials (with Z. Xu)

#### Zhicheng Xu

(February, 2022)

Coping with Neighbors and Other Entanglements

#### Zhifei Xu

(February, 2022)

Specious Materials (with J. Wu)

## Yaara Yacoby

(February, 2022)

Speculative Friction: Seven Stories from the Geneva Freeport (with J.L. Song)

## Mengqiao Zhao

(February, 2022)

Fukushima Exclusion Zone Survival Handbook

# Master of Science in Architecture Studies

Course IV

Department of Architecture

#### Maryam Aljomairi Alhajri

Self-Shaping Mechanisms: Prototyping of PneuKnit Systems

## Feiyue Chen

(February, 2022)

Symbols and Spatiality of Social Media: Re-Constructing the Digital Public Realm

#### Joel Austin Cunningham

As the Curtain Falls

#### Gabriela Degetau Zanders

The Afterlife of Wells, from Oil to Soil in the Amazonia

#### Mariam E. Elnozahy

Visualizing Oil in Aramco World Magazine: Public Relations and Corporate Photography from 1949-1960

#### Kiley Anne Feickert

Thin Shell Foundations: Embodied Carbon Reduction through Materially Efficient Geometry

#### Aidan Flynn

(September, 2021)

Surveilling Sin: Locating Sodomy in the Early Modern Florentine Bathhouse

#### Laura Maria Gonzalez

Beyond the Brick: Collaborations with a Sensing Microbial System in the Built Environment

#### James Heard

"Professionals in a Soviet America": Federal Housing Policy, the Popular Front, and Architects in Los Angeles, 1919-1947

#### **Shakeel Hossain**

(February, 2022)

#### Eakapob Huangthanapan

(September, 2021)

Mediating Chana: Seeding Synergies between Doves and Development

## Ryuhei Ichikura

(September, 2021)

Mokumitsu Districts in Tokyo

## Kimball Regli Kaiser

Parts-In-Progress

## Wonki Kang

(February, 2022) (See also S.M., Course VI) Sonic Hypermirror: Attuning to Hyperobjects

#### Xuan Lan

China's Community Riders: Digital Labor, Delivery Logistics and Spaces

#### Yuxuan Lei

(See also S.M., Course VI) A Virtual Reality Rehabilitation Interface with Augmented Sensing, Interaction, and Visualization Techniques

#### Kuang-Chun Lo

Duality of Ground: Re-Envisioning Space of Death in New York City (with J. Prachasartta)

#### Muhammad Hasan Nisar

An Experiment in Piety: The Three Domed Suhrawardy Tombs at Uchch Sharif

## Eleni Styliani Oikonomaki

(See also S.M., Course VI) Soundscapes as Urban Transformation: Introducing a Notational Language that Represents the Shifting Relationships Between Sound, Space, and Movement

#### Olivia Paraiso de Campos Serra

(September, 2021)

Seedling: Reconciling Social Housing and Access to Urbanity in Rio de Janeiro

#### Jariyaporn Prachasartta

Duality of Ground: Re-Envisioning Space of Death in New York City (with K.-C. Lo)

#### Lasse Rau

On Viscous Grounds: Planning for Friction across the Trans-Alaska Pipeline, 1968-1981

#### Myles Boykins Sampson III

Discrete-to-Complete: The Fundamentals of Design Directed Robotics

## Siyuan Sheng

(September, 2021)

Made in Rural China -- The Analysis and Redesign of the Urbanization Trajectory for E-Commerce Villages in Rural China

#### Meriam Soltan

Motivated Fictionality: Worldbuilding and The Thousand and One Nights

## Qianqian Wan

(September, 2021)

Generative Urbanism toward Thermal Synergy: Sustainable Urban Design for District Heating and Cooling

#### Ngai Hang Wu

Patterns of Moments - Reasoning about Space Video via Pattern Language of Human Behavior by Extracting Multi-Action Activities via Machine Learning Video

#### Qianyue Xu

"Scraping and Bloodletting": Xiamen Dada and the Self-Renewing System of Reform-Era Art

## Master of Science in Art, **Culture and Technology**

Course IV

Department of Architecture

#### Pohao Chi

(September, 2021) Synchronizing Glitches as Internetworked Entities

#### Weihan Jiang

Imagined Common Ground: Rethinking on Language, Translation and Technology

#### Kwan Yee Queenie Li

Hope-Hopping

#### Jesus Ocampo Aguilar

(September, 2021)

How to Never Walk in a Straight Line Again: A Methodology to Stop Making Sense.

#### Faruk Sabanovic

Expanded Cinema and War; Trauma in Hyper-Documented Age

## Aarti Sunder

(September, 2021)

A Location in Parts

## Master of Science in Building **Technology**

Course IV

Department of Architecture

#### Jonathon Glyn Brearley

(See also M. Arch., Course IV) Taming Torridity: New Housing Forms for Heat Resilience

#### Yuan Cai

(February, 2022) (See also S.M., Course VI) Simulation- and Experiment-Based Setpoint Control for Heating, Ventilation, and Air-Conditioning Systems: A Singleand Multi-Objective Optimization Problem

## Jingyi Liu

(September, 2021) Early Design Stage Building Lifecycle Analysis (LCA) of Cost & Carbon Impact

## **Master in City Planning**

Course XI

Department of Urban Studies and **Planning** 

#### Britani Nicole Allen

Cultivating Capacity in the Northeast's Native Seed and Plant Supply Chain

#### Fiorella Belli Ferro

(September, 2021)

Public Housing, Private Priorities: The Invisible Dynamics in Low-Income Housing Allocation in Urban Peru, the Case of CSP-Techo Propio (with M. Orensanz)

#### Lauren Elspeth Craik

(See also S.M., Transportation) Congestion Pricing: Moving from Equity Analysis to Transportation Justice

## Miguel Ángel Dávila Uzcátegui

An Engagement Toolkit to Center Unhoused Stakeholders in the Design and Programming of Open Space

## Somala Marseau Diby

(September, 2021) Narrating the Politics of Urban Development in "New Era" Boston

## Neha Jayesh Doshi

(February, 2022) An Economic Development Practitioner's Guide to Childcare

## Ehab A. Ebeid

(See also S.M., Transportation) The Invisible Hand or the Handgun: Ride Hailing, Violence, and Political Settlements in the South African Urban Mobility Market

#### John Thomas Fay, Jr.

(September, 2021)

Housing for Whom: Does Adherence to Massachusetts' 40B Provide Adequate Stock of Housing Types Needed at the Local Level?

#### **Alexander Paine Gant**

(September, 2021) Leveraging the US Army Corps of Engineers Civil Works Public-Private Partnerships (P3) Pilot Program to Promote Equitable Outcomes from Local Climate Mitigation and Adaptation Projects

#### César Giovanni García López

(Re)envisioning Land and Power: The Fight for Community Ownership + Control in Massachusetts

#### Andrea Daniela Grimaldi

(September, 2021)

Envisioning Lower Allston's Future: Contested Spaces at the Margins of Harvard University's Expansion

#### Lamice Halaby

Can Urban Gardening be a Case for Neighborhood Infrastructure Reparation The Case for Cambridge, Massachusetts

#### Ava Rose Hoffman

(September, 2021)

Commoning the Public: Federal Land as a Site of Housing Struggle in Rio de **Ianeiro** 

#### Meital Hadassa Hoffman

Undead Bed: Mattress Recycling in Boston

#### Rajan Jorden Hoyle

REMEMORY: Territorial Justice in Both Americas

#### Adriana Maria Jacobsen

(September, 2021)

Designing Public Transit at the Margins: How Rethinking Public Transit in Boston to Support the Travel Patterns of Transit-Reliant Women Could Transform Public Transportation for the Better

#### **Rhett Marville James**

(September, 2021)

StreetSmart: Reinventing Retail through Smarter Small Business

#### Aiyah Josiah-Faeduwor

(February, 2022)

Re-collective Revolution: A Reclamation of Black Self-Subsistent Economic Tradition

## Katharine Amelia Kettner

(See also M. Arch., Course IV) Inheritance Geographies: Black Presence and the Making of London

#### Poun Laura Kim

(September, 2021)

Brooklyn of Korea: Place Branding as a Process in Production of Space

#### Allison Hannah Lee

(February, 2022)

From Rural Ground to Rural Grocery: Designing a Local Food Value Chain

#### **Jasmine Marie Martin**

(September, 2021) Neighborhood Mutual Aid Groups and Spaces of Deviant Care

#### Maria de los Angeles Martinez Cuba

(September, 2021)

Measuring Spatial and Social Interdependencies between Public Schools and the Community: City of Cambridge

#### Danielle Evelyn-Olivia Moore

One Size Does Not Fit All: Individualizing Climate Action Plans in Southern California

## Maria Lucia Morelli

(September, 2021)

The Right to Navigate Risk in Mexico City: Possibilities for Creating Safer Spaces for Women Experiencing Fear of Sexual Harassment in Their Daily Use of the City

## Christopher Masahiko Moyer

(See also M. Arch., Course IV) **Expanding Architectures of Sharing:** Public Housing Authority-Supported Middle-Income Limited-Equity Cooperatives

#### Mora Orensanz

(September, 2021)

Public Housing, Private Priorities: The Invisible Dynamics in Low-Income Housing Allocation in Urban Peru, the Case of CSP-Techo Propio (with F. Belli Ferro)

#### Jordan Victor Owen

(See also S.M., Real Estate Development) Data Driven Transit Oriented Development Planning: Using with Montreal's New Transit System as a Case Study

#### **Andrey Prigov**

Making a Neighborhood Illegal: Zoning, Nimbyism, and Housing Justice in Bensonhurst, Brooklyn

#### Maria Camila Ramos Yanez

(September, 2021) Understanding Subway Vibrancy in Live-Work-Play: A Case Study from and for Santiago, Chile

#### Tyler Luis Rivera

"No One Washes a Rental Car": Parsing Contested Narratives of Worker Ownership in the Massachusetts Cooperative Economy

#### Anna Maureen Schuessler

The Unintended Inevitable: How Housing Fell through the Cracks in Venice Beach's Transition to Community Planning, and What It Might Take to Build an Imagination for the Future

#### Kevin Kaiwen Shi

Resilience and Its Discontents: Risk, Temporality, and a Climate Change Crisis

#### Stephanie Julia Silva

Down Then Out: Basement Apartments and Housing Insecurity in the Face of Flood Risks

#### Asher Harrison Burk Simon

The War on Who? An Analysis of Drug Possession Arrests in Four U.S. Cities

#### **Christian Joseph Eugene Turner**

(February, 2022)

People-Centered Planning: A Case Study in Virtual Participatory Design with Chicago Residents

#### **Matias Williams**

(September, 2021)

Measuring the COVID-19 Shock from Outer Space: Local Economic Vibrancy in 15 Global Cities

#### Prathito Andy Wisambodhi

(September, 2021)

Pushcarts to Platforms: Measuring Food Delivery Apps' Effect on Street Vendors' Location Preferences in the Global South. Case Study: Surakarta, Indonesia

## Master of Science in Urban Studies and Planning

Course XI

Department of Urban Studies and Planning

#### Klo'e Yim Chew Ng

(September, 2021)

Walking to Transit - Using Big Data to Analyze Bus and Train Ridership in Los Angeles.

## Master of Science in Media Arts and Sciences

Program in Media Arts and Sciences

## Mariah J. Avila

(September, 2021) Methods for CRISPR Cas12a Multiplexing in Mammalian Systems

#### Guadalupe Babío Fernández

(September, 2021)

Nuclear, A Climate Opportunity

#### Ayush Chopra

Decision Making for Populations

#### **Justin Browning Christensen**

(September, 2021)

Distributed Displays for Discrete **Integrated Circuit Electronics** 

#### Daniella E. DiPaola

(September, 2021)

Children as Spectators, Actors, and Producers: Understanding the Impact of Knowledge and Agency on Child-Robot Relationships

#### Jack Anderson Forman

(September, 2021)

DefeXtiles: 3D Printed Quasi-Woven Textiles via Underextrusion

#### **Zachary Peter Fredin**

(September, 2021)

Assembling Integrated Electronics

## Lily Elizabeth Gabaree

(September, 2021)

Agency and Community: Supporting Creative Learning in a Global Online

#### Alice Hong

(September, 2021)

KnitheWorld: lines of code as loops

## Xi Hua

(February, 2022) Plantable Maps

#### Aaron M. Jaeger

(September, 2021)

Design of an Automated Fiber Placement Machine to Build Prosthetic Sockets

#### Wonjune Kang

Speaker Anonymization using End-to-End Zero-Shot Voice Conversion

#### **Zhipeng Liang**

(September, 2021)

Membrane I/O: Designing Bits and Atoms for Tangible Telepresence

#### Hannah R. Lienhard

(September, 2021)

Squishy Music Toys: Creating a Less Stressful, More Pliable Way to Enter the Music World

## Fangzheng Liu

(September, 2021)

LunarWSN: A Wireless Sensor Network for In-Situ Lunar Water Ice Detection

## Nina M. Lutz

(September, 2021)

A Counting for Silence

#### Christina Isabella Zeilberger Meyer

(September, 2021)

Design and Efficacy of a Variable Thickness Transtibial Prosthetic Liner

#### Manaswi Mishra

(September, 2021)

Living, Singing A.I.: An Evolving, Intelligent, Scalable Composition System

#### Aarón Montoya-Moraga

(September, 2021)

Tiny Trainable Instruments

## **Caitlin Anne Morris**

(February, 2022)

Exploring The Impact of Simulated Transfer of Sensory Experience on Social Behavior and Empathy

#### Alfonso Parra Rubio

(September, 2021)

Discrete Cellular Continuum Robots

#### Gaurav Rajaram Patekar

(September, 2021) Feeling Climate Crisis

#### **Eval Perry**

(September, 2021)

DNA Canvas: Towards Affordable and Scalable Enzymatic Fabrication of DNA Nanoarrays

#### Venkata Subhash Chandra Sadhu

(September, 2021)

Physics and Algorithms in Time of Flight Based Computational Imaging

#### Aruna Sankaranarayanan

(September, 2021)

Interactivity and Authenticity in AI Augmented Videos

#### Karsten Schuhl

(September, 2021)

Superpose - A Connected Experience of Sound and Space

## Aubrey Elizabeth Simonson

(September, 2021)

An Integrated System for Interaction in Virtual Environments

## Soumya Pratap Tripathy

(September, 2021)

Sub-Picomolar Detection of SARS-CoV-2 RBD via Computationally-Optimized Peptide Beacons

#### Anika Nawar Ullah

(September, 2021)

Community Guided Gene Drive Development :: Architecting Action Towards Transcultural Health and Ecological Justice

#### Shubham Yadav

(September, 2021) Self-Standing Sub-Cellular Sized Photovoltaic Devices for Minimally-Invasive and Precise Neuronal Stimulation

## Master of Science in Real Estate Development

Center for Real Estate Development

#### James Griffin Geoghegan

The Institutionalization of the American Dream

#### Ji Ye Ha

(See also M. Arch., Course IV) Co-Working in Seoul: Integrating Public Infrastructure into the Metaverse

## Derek James Hansen

(February, 2022)

Overcoming Obsolescence: A Roadmap for Redeveloping Massachusetts Gas Station Real Estate in a Post-Gasoline World

#### Fan He

(September, 2021)

Application of the Fama - French Model to Singapore REITs (with K.T. Neo)

#### **Kok Tong Neo**

(September, 2021)

Application of the Fama-French Model to Singapore REITs (with F. He)

#### Teo P. Nicolais

Investment Performance of Small Multi-Family Properties

## Jordan Victor Owen

(See also M.C.P., Course XI)
Data Driven Transit Oriented
Development Planning: Using with
Montreal's New Transit System as a Case
Study

#### Cassie Ann Raazi

(February, 2022)

(See also S.M., Engineering and Management)

The Value of Flexibility in Lease Duration

## Master of Science (without specification of field)

#### Lauren Camron Blackburn

Med. Arts & Sciences (September, 2021)

Superconducting Asynchronous Logic for Ultra-low Power High Performance Computing

## Allan dos Santos Costa

Med. Arts & Sciences (September, 2021)

Distillation of Protein Language Models for Protein Structure Prediction

#### **Daniel Augusto Marquez**

Med. Arts & Sciences (September, 2021)

An Attempt at Democratizing Resource Allocation for Social Movements Using Decentralized Autonomous Organizations

#### Andrés Rico Medina

Med. Arts & Sciences Socio-Environmental Sensor Networks for Community Sensing

## SCHWARZMAN COLLEGE OF COMPUTING

## Master of Science in Computational Science and **Engineering**

Program in Computational Science and Engineering

#### Sarah Abdulaziz Alnegheimish

(See also S.M., Course VI) Orion: A Machine Learning Framework for Unsupervised Time Series Anomaly Detection

#### Abdullah Omar M Alomar

(September, 2021) (See also S.M., Course VI) Multivariate Singular Spectrum Analysis: A Principled, Practical, and Performant Solution for Time Series Imputation and Forecasting

## Manmeet Singh Bhabra

(September, 2021) (See also S.M., Course II) Harvest-Time Optimal Path Planning in Dynamic Flows

#### Aimee Elizabeth Maurais

Multifidelity Covariance Estimation Three Ways

#### Benjamin James Yu

A Genetic Algorithm Framework using Variable Length Chromosomes for Vehicle Maneuver Planning

## Master of Science in Technology and Policy

Institute for Data, Systems, & Society

#### Ilham K. Ali

Sustainable for All? How Satellite Remote Sensing Contributes to Sustainable Development in Africa and International Climate Policy

#### Lama Sara Aoudi

(February, 2022) (See also S.M., Course VI) An Open-Source Computational Framework for the Scalable Application of Electrification Planning

#### William Ayres Atkinson

Quantifying a Range of Global Air Pollution Projections and Health Impacts under the Paris Agreement's Temperature Targets

#### **Abhishek Bose**

(September, 2021) Role of Hydrogen in Multi-Sector Decarbonization

#### Helena Rose Caswell

Win-Win-Win? Evaluating the Climate, Health, and Equity Benefits of Retrofitting Low Income Housing in the

#### Axelle Clochard

(February, 2022) (See also S.M., Course VI) Using Network Analysis of Job Transitions to Inform Career Advice

#### **Jared Matthew Cochrane**

Simulating an Optical Neural Network for Deep Learning in Edge Computing

#### Pedro de Vasconcellos Oporto

Pathways for Investor Climate Action: Trade-offs and Synergies under the Banner of Net Zero

## **Tristan Downing**

(September, 2021) Modeling Supply Chains and Markets to Support Humanitarian Response Analysis

## Farri Gaba

(See also S.M., Course VI) Solutions to the Generalized UAV Delivery Routing Problem for Last-Mile Delivery with Societal Constraints

## Nicolas Elie Guetta-Jeanrenaud

(February, 2022) Social Media Data for Policy Decision Making

## Jisoo Hong

A Thesis, Allegedly

#### Jessica Ingabire

What Makes Your Business a Winner: Empirical Analysis Using the Department of Defense Contracts with Small Manufacturing Firms

#### Teuku Mahfuzh Aufar Kari

(September, 2021) Causal Impact of Information Crowd-Sourcing Platform on Farmer Welfare

#### Helen Landwehr

(See also S.M., Course XVII) Analyzing the Usability of Natural Language Processing for Detecting Disinformation Tactics, Techniques, and Procedures

## Jacqueline Paige Lee

Examining the Post-Pandemic Role of Shared Micromobility: A Study of Travel Behavior, Policy, and Equity in Motion

#### Tony Lanson Lee

Implications of Heating Electrification on Distribution Networks and Distributed **Energy Resources** 

#### Boyu Liu

(February, 2022) (See also S.M., Course VI) Improving Labor Market to Reduce Labor Abuse in South East Asia

## Jameson Randall McBride

Clean Heat at What Cost? Economic Optimization of Residential Space Heating in Massachusetts

## Molly Katherine McGuigan

Simulating PPE Use in Acute Care Hospitals

## Patrick Stephen Meredith-Karam

(September, 2021) (See also S.M., Transportation) Exogenous Drivers of Public Transit and Ride-Hailing Ridership: a Study of Policy Intervention, COVID-19, and the Relationship between Ride-Hailing and Public Transit in Chicago.

#### John Francis Morris

Retrofit Solutions to Electric Power Sector Decarbonization in the American Midwest

#### Saba Nejad

(See also S.M., Course VI) Data-Driven Analysis of Time of Day Pricing for Residential Consumers

#### Jonathan Garrett Novak

Policy and Design Courses of Action to Improve Resilience of Proliferated Low Earth Orbit Constellations Against Adverse Solar Weather

#### Olivia Peihua Pfeiffer

(See also S.M., Course VI) Machine Learning for Strength Prediction and Optimal Design of Sustainable Concrete Formulas

#### Paul Dawson Picciano

Beyond Health Co-Benefits: Air Quality-Related Equity Implications of US Decarbonization Policy

#### **Aaron Matthew Schwartz**

(September, 2021) The Role of Natural Gas in Future Low-Carbon Energy Systems

#### Elwyn Sirieys

(See also S.M., Course XVI) Environmental Impact of Space Launches and Societal Response

## Maya Elizabeth Slavin

(See also S.M., Course XVI) Incentivizing Collaboration on Space Sustainability: Detectability, Identifiability, and Trackability of Space Missions

#### Rebecca Lauren Spiewak

Overlooking the Little Guy: An Analysis of Cyber Incidents and Individual Harms

## Ragini Sreenath

(February, 2022) (See also S.M., Course VI) Transitioning Transit: Modeling the Electrification of an Intracity Bus System

## Cathy X. Wang

(September, 2021) Ensuring Reliability in a Highly Decarbonized Power System: A Case for **Next-Generation Modeling Tools** 

## **SCHOOL OF ENGINEERING**

## Master of Engineering in Civil and Environmental Engineering

Course I-P

Department of Civil and **Environmental Engineering** 

#### Luke Bastian

Accuracy of Embodied Carbon Estimation During Early-Stage Structural Design

#### Brian William Borman

Conceptual Structural Design of Core Components for a Horizontal, Compact HTGR

#### **Emily Pearl Condon**

Characterizing the Influence of Turbulence Intensity on Energy Production at the Vineyard Wind 1 Farm

#### **Kevin Charles Headrick**

Investigating Root Storage and Exudation in the Brachypodium Genus

#### Sarah Ladhani

Reimagining Urban Highway Overpass Infrastructure in the US: Designing for Spatial Quality and Material Quantity

#### Olivia Oev

Optimization of Cable-Stayed Bridges at the Conceptual Design Stage

## **Davis Sebastian Philps**

Shear Wall Layout Optimization in Coordination with Architectural Floor Plans

#### **Rovi Chung Porter**

(See also S.B., Course I-ENG) Wake Characteristics Associated with Logjams to Inform River Restoration

#### Alexandra Whitney Steelman

A Computational Framework for Zero Waste Structural Design

## Master of Science in Civil and **Environmental Engineering**

Course I

Department of Civil and Environmental Engineering

#### Kexin Chen

Analysis of Potential Demand of On-Demand Urban Air Mobility via Agent-Based Simulation

#### Michelle Angela Feole

(See also M.B.A., Course XV) Optimizing the Supply Chain Design for Sourcing and Supply of Critical Materials

#### Alexandra Hardin

(See also M.B.A., Course XV) Supply Chain Sustainability Opportunities in the Utility Industry

## **Drew Meyers**

(February, 2022) The Development and Deployment of Sensors and Algorithms for the Mobile Monitoring of Urban Surface Water

## Alexander Ray Muller

(See also M.B.A., Course XV) Leveraging Analytics for Improved Supply Chain Operations

#### Mariko Ogawa

(See also M.B.A., Course XV) Building a Carbon Allocation Methodology across Multiple Business Teams and Activities with Interdependencies

#### Randall Alan Pietersen

Automated Method for Airfield Pavement Condition Index Determination

## Lauren M. Sakerka

(See also M.B.A., Course XV) Evaluating Strategies for Wide Scale Replacement of Human Inspection with Machine Vision

## Kunal Manoj Sanghani

(See also M.B.A., Course XV) Advanced Functionality of Digital Mining Predictive Analytics & Insights Platform

## Lampros Tsontzos

(See also M.B.A., Course XV) Dynamic Algorithm for Target Inventory and the Impact on Replenishment Strategy

#### Elli Danae Vartziotis

Inundation Flooding in Urban Environments using on-lattice Density Functional Theory

#### Tina Nepheli Vartziotis

Calibration of interaction Potentials for Molecular Dynamics-inspired Simulations of Structures: the Role of Dihedral Interactions

## Master of Engineering in Advanced Manufacturing and Design

Course II-P Department of Mechanical Engineering

#### Amélie Féron

(September, 2021) Improving Management Strategies for Reduced Freight Costs

#### Jonathan Michael Williams

(February, 2022) Incorporation of Carbon Nanoparticles in Polyaryletherketone Matrices for High Performance Liquid Chromatography Applications

#### Jiayue Zhao

(February, 2022) Improved Management Practice for Freight Savings

## Master of Science in Mechanical **Engineering**

Course II

Department of Mechanical Engineering

#### Jennifer Marie Amlani

(See also M.B.A., Course XV) **Equipment Installation Quality** Improvement

#### **April Marie Anlage**

(September, 2021) Relationships between Class Engagement, Community, and Engineering Design Self-Efficacy in Remote, Kit-Based Classes

#### **Austin Forrest Anthis III**

(September, 2021)

Six-Axis Levitated Stage with a Novel Flux-Steering Magnetic Hub Actuator

#### Jonathan Tae-Yoon Bessette

Simple, Sustainable, Water Straight from the Sun - Batteryless Electrodialysis Desalination

#### Manmeet Singh Bhabra

(September, 2021) (See also S.M., Comp. Sci. & Eng) Harvest-Time Optimal Path Planning in Dynamic Flows

#### **Gabriel Bradford**

Accelerating Polymer Electrolyte Discovery with Machine Learning

## Gustavo Castillo, Jr.

(See also M.B.A., Course XV) Using Electric Vehicles for Grid Services: Capacity Available and Applications for Electric Utility Commercialization

#### **Bianca Champenois**

Reconstructing 3D Ocean Temperature Fields from Real-Time Satellite and Buoy Surface Measurements

## George Chunfeng Chen

A Data-Driven Approach to System Dynamics Modeling and Control Design

## Luke Chung-I Chiang

(See also M.B.A., Course XV) Framework and Analytics for Emissions Forecasting and Planning

## Baju Chiyezhath Joy

(September, 2021)

Miniaturized Magnetostrictive Antennas for Wireless Sensing Applications

#### Christopher Michael Cubra

(See also M.B.A., Course XV) Automating Data-Driven Decisions to Improve Key Financial and Operational Metrics in Semiconductor Manufacturing

#### Madhurima Das

Assessing Early Stage Design Sketches and Reflections on Prototyping

#### Rishabh Datta

(February, 2022)

Laboratory Experiments of High-Energy-Density Shocks in Magnetized Collisional Plasma Flows

#### Austin C. de Maillé

(See also M.B.A., Course XV) Operations Strategy for the Mass Customization of Additively Manufactured Anatomical Models, Surgical Guides, and Implants

## Runpal Singh Sorensen Dhaliwal

(September, 2021)

First-Passage Time Analysis of Particle Transport in the Cytoplasm

#### Jacob Nathaniel Easley

Feasibility and Design of Solar-Powered Electrodialysis Systems for Agriculture Applications

#### Tyler J. Eggleston

(See also M.B.A., Course XV) Capacity Multipliers: Rapidly Scaling Production through Line Balancing and Critical Path Reduction

#### Michael F. Fernandez

A Virtual Muscle Model of the Arm for EMG-Driven Control of Prostheses

#### Marie Floryan

Fluid Shear Stress Effects on Cancer Metastasis

## **Charlotte Méry Folinus**

Design and Mechanical Validation of Commercially Viable, Personalized Passive Prosthetic Feet

## Tom Frejowski

(September, 2021) Development of Fine Motion Stages for Six Degree-of-Freedom Submicron Positioning

## Amit Galgali

(See also M.B.A., Course XV) Prototyping of Injection EVA Foam Footwear Midsoles

## Jack George Alexander Gammack

Design Knowledge Base Using Natural Language Processing

#### Ivan Dmitrievich Goryachev

(September, 2021)

Kiosks for Non-Contact Vital Sign Detection

## Megan Jené Hagen

(See also Naval E., Course II) Feasibility Analysis for a Nuclear-Powered Commercial Merchant Ship

#### Gina Han

Dimensional Control in Ceramics Printed by Projection Microstereolithography

#### Amin Heyrani Nobari

Generative Adversarial Networks for Inverse Design Problems in Engineering: Methods to Handle Performance, Constraints, and Creativity Requirements

#### Luke Richard Higgins

(See also M.B.A., Course XV) The Playbook - A Novel Approach to Identifying Opportunity for on Machine Measurement and Adaptive Machining

#### Grant Marshall Hosinski

(See also M.B.A., Course XV) IoT at Amgen - Evaluating and Piloting Industry 4.0 Technology in Biomanufacturing

#### Dayne Michael Howard

(See also Naval E., Course II) Quantifying Extreme Event Statistics for Ship Motions and Loads Using Low-Fidelity Models and Recurrent Neural Networks

## Yu Huang

(See also M.B.A., Course XV) Directed Energy Deposition Additive Manufacturing Supplier Sourcing for Aerospace

#### Thomas Guy Hubschman

(February, 2022)

Assessment of Scaling Rule for Hot Gas Ingestion in Representative Turbine Rim Seal System for Large Industrial Gas Turbines

#### Se Hwan Jeon

Structuring Optimal Control of Legged Locomotion with Learning-based Methods

#### Run Jiang

(See also M.B.A., Course XV) Oversized Package Placement Optimization in Warehouses

## Eric Dean Jorgensen

(February, 2022) Structural Optimization of Regeneratively Cooled Rotating **Detonation Rocket Engines** 

#### Zahra Kanji

(See also S.M., Engineering and Manage-Classification of Auscultation Sounds Using a Smart System

#### Hunjoo Kim

(See also M.B.A., Course XV) Development of Industrial Internet of Things Architecture and Business Strategy for Digital Substation Asset Management

#### Ava A. LaRocca

Design and Performance of a Highly Mobile, Climbing, Wheeled, Soft-Bodied Robot

#### Duncan Ru Chieh Lee

Design and Clinical Evaluation of a Digital Transtibial Prosthetic Interface

#### Allison Lenhard

Smooth Flow Control for On-Chip Pneumatic Micropumps

## Joshua James Malone

(See also Naval E., Course II) The Impact of Electrical Standards on MVDC Shipboard Cable Size

## James Christopher McRae

Development of an Ingestible Fluid Wicking Gastric Electrical Stimulation Platform for Hormone Modulation

## Andreas P. Mentzelopoulos

Learning Hydrodynamic Coefficient Databases for Vortex Induced Vibration Prediction of Marine Risers Using Sparse Sensor Measurements

#### Andrew William Moeller

(See also S.M.(N.A.M.E.), Course II) Extracting Electromechanical Signals for Icebreaker Insights

#### Healey Ann Montague-Alamin

(September, 2021) User Based Design of Medical Devices for Translation from Prototype to Clinical

#### Valerie L. Muldoon

Scalable Synthesis of Solid-State Electrolytes Using Flame-Assisted Spray Pyrolysis

#### Thanh Nha Nguyen

Development of Wireless Sensor Network to Detect Lameness in Dairy Cows

#### Michael Philip Nitzsche

(September, 2021) Molten Alkali Metal Borate/Carbonate Salts for High Temperature CO, Capture and Electrochemical Conversion

#### Sean Martin O'Donnell

(See also M.B.A., Course XV) Automotive Inventory Delivery Location Optimization

#### **Scott David Oberst**

(See also Naval E., Course II) Investigation into the Design of High-Power Plug-In Shipboard Electrical Connectors

## Ellen B. O'Connell

(September, 2021) Method for Continuous Inspection of Product Weight During Lyophilization

## Nicholas Ryan Page

(See also M.B.A., Course XV) Enabling Growth in a Middle-Market Job Shop Environment

## Simo Pajovic

(September, 2021) Nonreciprocal and Exotic Radiative Transfer in Type-I Magnetic Weyl Semimetals

## Subeen Pang

(September, 2021) Machine Learning Regularized Solution of the Lippmann-Schwinger Equation

## Sanghyun Park

Bioresorbable Osmotic Pump for Long-Term Contraception

#### Tae Joong Park

(September, 2021) Climate and Air Quality Impacts of Electric Vehicles and Comparison to U.S. Tax Credits

#### Natasha Monet Patterson

(See also S.M.(N.A.M.E.), Course II) Integration of System Templating into the Rapid Ship Design Environment

#### Elizabeth Marie Barna Pedlow

(September, 2021) Ultra-Wideband Error Modeling for Improved Localization

## **Tamir Peleg**

(See also M.B.A., Course XV) Waste Reduction in Amazon Robotics Sortable High Velocity Fulfilment Using Six-Sigma and Product Design Methods

#### Alexander I. Peraire-Bueno

(February, 2022) A Damped Double Dipole UHF RFID Antenna with Application to Wireless Chemiresistive Gas Sensing

#### Heidi Victoria Peterson

(September, 2021) Design of a Novel Mechatronic System to Test Prosthetic Feet Under Specific Walking Activity Loads and Evaluate Their Lower Leg Trajectory Error

#### Devin Wayne Quinn

Shipboard Fault Detection Methods for Condition-Based Maintenance

#### Felipe Quintella Correia

(See also M.B.A., Course XV) Optimizing Demand Re-Allocation under Fixed Capacity Commitments

#### Lyle Regenwetter

Data-Driven Bicycle Design using Performance-Aware Deep Generative Models

## Ivan Andres Reves

(See also S.M.(N.A.M.E.), Course II) Design and Modeling of the Navy Integrated Power and Energy Corridor Cooling System

#### **Christopher Matthew Antonio Reynolds**

(See also Naval E., Course II) Relationship of Mechanical Deformations and Electrochemical Properties of Lithium Ion Batteries-An Experimental Study

#### Simon Béat Rufer

Technoeconomic Analysis and Design of CO2 Capture and Conversion Systems

#### **Dionysios Sema**

Predicting Material Properties with Machine-Learned Interatomic Potentials

#### Julie Shen

A Novel Trajectory Vector Approach for Characterizing Dynamic Changes in the Performance-Load Representation of Cardiac State

#### Ben Andrew Sidell

(See also M.B.A., Course XV) Advancing Replenishment Efficiency Utilizing Unit of Measure and Planogram

#### Kurran Singh

Active Simultaneous Localization and Mapping in Perceptually Aliased **Underwater Environments** 

## Stephanie Hope Smolinski

(See also M.B.A., Course XV) Effects of Standardization in a Developing Manufacturing Environment

## Rika Sugimoto Dimitrova

Towards Perturbation-free Identification of Human Standing Balance

#### Neha Sunil

(September, 2021) Deformable Object Manipulation with a Tactile Reactive Gripper

## Hannah Jacqueline Szapary

Mechanical and Biologic Impact of Cyclic Loading on Bovine and Human Models of Osteoarthritis

#### Lisa Tang

An Evaluation of Household Energy Systems in the Himalayan Region

#### Christopher R. Tomlinson

(See also S.M.(N.A.M.E.), Course II) Design of Securing Mechanism for Power Converter in Navy Integrated Power and Energy Corridor

#### Andrew Christopher Tresansky

(See also M.B.A., Course XV) Assessment and Operationalization of Automation in Final Product Manufacturing

#### Pranav Vangala

(See also M.B.A., Course XV) Operations Strategy for Evolving Customer Profiles

#### Kelli Michelle Waterman

(See also Naval E., Course II) Microchannel Thermal Management Analysis and Simulation Tool for Integration into Electronic Component Design

#### Dakota Lee Wenberg

(September, 2021) Method for Kalman Filtering Pose Estimates from LIDAR Scans During the Landing Phase

#### James Han Zhang

(September, 2021) Electrolyte Structure with Explicit Solvent in Nanoslit Capacitors Using Classical Density Functional Theory

#### John Zhongyuan Zhang

(September, 2021) An Intracochlear Hydrophone and Amplifier

#### Xinlin Zhong

Developing a Data-Driven Digital Twin Model for Lubricant Oil Transport and Oil Consumption Study in Internal **Combustion Engines** 

## Yang Zhong

(September, 2021) (See also S.M., Course VI) Understanding and Characterizing Thermal Transport in 2D van der Waals Nanoelectronics

#### Lara Zlokapa

An Integrated Design Pipeline for Tactile Sensing Robotic Manipulators

## Master of Science in Naval **Architecture and Marine Engineering**

Course II

Department of Mechanical Engineering

#### **David Elatov**

(February, 2022) (See also S.M.(Ocean Eng.), Course II) Radiated Noise Assessment of Shipboard Systems Using Vibration Analysis

#### Anthony C. Kriezis

Ship Power Prediction Using Machine Learning

#### Andrew William Moeller

(See also S.M., Course II) Extracting Electromechanical Signals for Icebreaker Insights

#### Natasha Monet Patterson

(See also S.M., Course II) Integration of System Templating into the Rapid Ship Design Environment

#### Ivan Andres Reyes

(See also S.M., Course II) Design and Modeling of the Navy Integrated Power and Energy Corridor Cooling System

#### Christopher R. Tomlinson

(See also S.M., Course II) Design of Securing Mechanism for Power Converter in Navy Integrated Power and **Energy Corridor** 

## Master of Science in Ocean **Engineering**

Course II

Department of Mechanical Engineering

#### Clara Elisabeth Green Berry Sage Dahill-Baue

Time-Optimal Path Planning in the Portugal-Azores-Madeira Ocean Region

#### **David Elatov**

(February, 2022) (See also S.M.(N.A.M.E.), Course II) Radiated Noise Assessment of Shipboard Systems Using Vibration Analysis

#### Nikolai Gershfeld

Adaptive Collaborative Channel Finding Approaches for Autonomous Marine Vehicles

## Master of Science in Materials Science and Engineering

Course III

Department of Materials Science and Engineering

#### Andres F. Badel

Low-Cost Electrochemical Approaches to Deep-Decarbonization

#### **Brooks Todd Clingman**

Sodium-Ion Battery Cathode Active Material Cost Drivers and Manufacturing Scale-Up Barriers

#### Qiaohao Liang

(September, 2021) Benchmarking the Performance of Bayesian Optimization across Multiple **Experimental Materials Science Domains** 

## Gillian Kay Micale

Integrated Photonic Spectroscopy

## Changhwan Oh

Investigating Dislocation Behavior in High Entropy Alloys Using Atomistic Simulations

## Master of Engineering in **Electrical Engineering and Computer Science**

Course VI-P

Department of Electrical Engineering and Computer *Science in conjunction with the* Schwarzman College of Computing

## Marwa Abdulhai

(September, 2021) Factored State Abstraction for Option Learning

## Anisha Agarwal

Text-Free Audio Captions of Short Videos from Latent Space Representation

#### Vibha Agarwal

(September, 2021) Image Registration and Bias Evaluation for a COVID-19 Pulmonary X-Ray

Severity (PXS) Score Prediction Algorithm

#### Elaheh Ahmadi

(September, 2021) Hyperparameter Optimization for Opaque Models

#### Yodahe Kinsew Alemu

Entwine VR: A Toolkit for Creating Behavioral Experiments that Utilize Virtual Reality

#### Christian Omar Altamirano Modesto

(September, 2021)

Formal Verification of an Implementation of the Roughtime Server

#### Md Sanzeed Anwar

(September, 2021) Seeding with Time Constrained Queries

#### Julia Marshall Arnold

(See also S.B., Course VI-1) Ground Station Mixed-Signal PCB and SFP Ethernet-to-Optical Connector for the Deployable Optical Receiver Aperture (DORA) CubeSat

## Fadi Atieh

(February, 2022) A Novel Statistical Procedure Towards the Discovery of the Higgs Boson

## Amadou Yaye Bah

Electromagnetic Printhead Core for Programming Magnetic Pixels

## Cole S. Baker

Hyperbolic Graph Embedding of Magnetoencephalography Brain Networks to Study Brain Alterations in Patients with Subjective Cognitive Decline

## **Avital Baral**

(February, 2022) Continuous Measured Improvement: A New Approach to Meeting the Municipal Cybersecurity Challenge

## David A. Bau IV

Interactions Between Syntax and Semantics in Language Models

#### Scott C. Becker

(See also S.B., Course XVIII) Analyzing a Computer's Ability to Monitor Data Provenance Events

## Abigail C. Bertics

(February, 2022)

How Linguistic Exposure Modulates the Acceptability of Long-Distance Dependencies

#### Jack Bouhanna

Comparative Analysis of an Armenian Hymn Through Digital Signal Processing and Music Information Retrieval

## Terryn Diane Brunelle

(See also S.B., Course VI-3) Parallelizing Tree Traversals for Binomial Option Pricing

#### Katarina M. Bulovic

Designing for Tinkerability for Accessibility

#### Ruidi Cao

Local Algorithms for Sparsification of Average-Case Graphs

## Grace C. Cassidy

(February, 2022)

Advancing the Performance of a Switched-Mode Radio Frequency Power Generation Architecture

## Rishabh Chandra

(September, 2021)

Relating Racial Disparities to Financial Concerns and Shared Decision Making in Opioid Prescriptions

## Rhian A. Chavez

(February, 2022)

Design of a Precision, Very Low 1/f Noise, Low Power, Rail-Rail I/O, Integrated Bi-CMOS Operational Amplifier

## Eric R. Chen

(September, 2021) Understanding Exploration in Reinforcement Learning

## Emily S. Cheng

(February, 2022)

Understanding Symbolic Communication in Humans and Robots

#### Katherine Y. Cheng

(See also S.B., Course VI-3) Frame Field Guided Hexahedral Meshing

#### Leon Cheng

(September, 2021) Coordinated Planning and Visualization for an Electromagnetically Actuated Reconfigurable Robot

#### Lok Hin Cheng

(February, 2022) Digital Control for Dynamic Efficiency Optimization in Switching Regulators

#### Christopher W. Cheung

(February, 2022) Augmented Reality-Based Interactive Game-Editing Interfaces

#### Caroline M. Chin

(September, 2021) How Do Pretrial Judges Respond to Election Cycles?

#### Samuel B. Chinnery

TCAD-Informed Surrogate Models for Semiconductor Devices

#### Erica J. Chiu

Uniform Sampling over Level Sets

#### Jeana Choi

(February, 2022) Automatic, Careful Online Packing of Groceries Using a Soft Robotic Manipulator and Multimodal Sensing

## **Isabelle Paris Chong**

Ally: Designing Interfaces for Human + AI Collaborative Creativity for Computer Aided Design (CAD) Applications

#### Cecelia C. Chu

(February, 2022) PowerML: Loop Gain Identification for DC-DC Converters from Load Step Transient

#### **Spencer Compton**

(See also S.B., Course VI-3) Information-Theoretic Algorithms and Identifiability for Causal Graph Discovery

## Van R. Coykendall

(February, 2022) Scene Text Localization and Recognition for Images of Serial Numbers and Odometer Readings

#### Ria A. Das

Combining Functional and Automata Synthesis to Learn Causal Reactive Programs

#### Alexander Dimitrakakis

(September, 2021)

Refinement of the Computational Vaccine Optimization Framework (OptiVax) through the Development and Analysis of a Better Algorithm for Vaccine Design Choice

## Dylan D. Doblar

(February, 2022) Meta-learning and Enforcing Useful Conservation Laws in Sequential Prediction Problems

#### Samuel Joseph Dorchuck

(September, 2021) Goal-Directed Systems Testing: Automated Execution of Intelligently Generated Cyber Attack Plans

#### Robert Benjamin Durfee

Enabling True Concurrency in Architectures for Speculative Execution of Ordered Irregular Parallelism

## Ramya A. Durvasula

(February, 2022)

Interactive User Interface for SQL Code Generation from Natural Language

#### Ahmed Nimir Elbashir

Improving Police and Criminal Court Data Transparency in the United States: A Case Study

#### Jonathan E. Esteban

(February, 2022)

Simulating Network Lateral Movements through the CyberBattleSim Web Platform

#### Andrés Fábrega Gerbaud

Voter Registration: A Security and Cryptography Perspective

#### Violet Celeste Felt

(See also S.B., Course VI-3) Machine Learning Models for On-Orbit Detection of Temperature and Chlorophyll Ocean Fronts

#### Julia M. Fiksinski

(September, 2021)

Practica: A Music Education Application for Learning Jazz Improvisation

## Suyash Pradeep Fulay

(February, 2022)

Creating and Interpreting a Cultural Landscape on Twitter to Understand People and Audiences

#### Joanna J. Gerr

The Comic Artist's Tools Suite: Centralized and Intuitive Non-Photorealistic Computer Graphics Renderings

#### Yianni Giannaris

(September, 2021) Securing Operating Systems Using Hardware-Enforced Compartmentalizaiton

#### Charvi Gopal

Network Visualization and Anomaly Detection in International Timber Trade Flows

## Darnell S. Granberry, Jr.

(February, 2022)

Deep Neural Networks for Learning Protein Vibrational Behaviors to Characterize Structure and Function

## Zackary J. Gromko

Accelerated Channel Operating Margin and Applications to Design Optimization

#### Joshua A. Gruenstein

(September, 2021)

Residual Model Learning for Microrobot Control

## Alexander F. Gu

Generating Code Skeletons from Natural Language

## Deepankar Gupta

(February, 2022)

Interpretable Machine Learning Methods for Landslide Analysis

#### Jeanne L. Harabedian

Modeling the Arterial System to Improve Ultrasound Methods for a Non-Invasive **Blood Pressure Measurement** 

#### Elizabeth M. Harkavy

(February, 2022)

Accesssible AI That's Out of This World: Globalizing AI Literacy through Problem-Based Learning and Deep Learning Models in a Low Code Environment

#### Peter Kimball Hart

(February, 2022)

Comparative Study of Computer Vision Methods for Infant Gaze Detection

#### **Emmanuel Havugimana**

(September, 2021)

Augmenting Data for Urban Metabolism of Cities Tool Using Machine Learning and Satellite Image Analysis of City

#### Alex Herrera

Spatial Optimization of an Existing, Low-Cost, Sensor Network for Air Pollution in London

#### Luis Fernando Herrera Arias

(September, 2021)

An Experimental Evaluation of Learning-Based Methods for Loop Closure Detection in Simultaneous Localization and Mapping

#### Nancy Yahel Hidalgo

(February, 2022)

A Basic Isolated Half-Bridge Silicon Carbide Gate Driver for Electric and Hybrid Electric Vehicles

#### Adeline F. Hillier

(See also S.B., Course VI-2) Supervised Calibration of Ocean **Boundary Layer Parameterizations** 

#### Chessa N. Hoekstra

(September, 2021)

Learning from Experience: Interactive and Ethical Curricula for Teaching Reinforcement Learning

#### Amanda Elisabeth Horne

(See also S.B., Course VI-2) Optimizing Memory-Corruption Security Defenses for Real-Time Systems

#### Henry Hu

Transforming Dependency Parses into Ternary Expressions for Enhanced Indexing and Matching

## Stephanie M. Hu

(September, 2021)

A Recurrent Network Approach to G-Computation for Sepsis Outcome Prediction Under Dynamic Treatment Regimes

#### Ivy Y. Huang

(February, 2022)

Synthesizing Tabular Time Series Data Using Transformers

## Vivian Huang

(February, 2022)

Warm-Starting Networks for Sample-Efficient Continuous Adaptation to Parameter Perturbations in Multi-Agent Reinforcement Learning

#### Saadiyah B. Husnoo

(September, 2021)

A Scalable Server Platform and API Design for Real-Time Health Monitoring and Diagnostics

#### Nada Hussein

(September, 2021)

Machine Audition Curriculum and Real-Time Music Accompaniment

#### Yow Shiuan Hwang

Identifying, Characterizing, and Mitigating Wind and Solar Resource Shortages Across the Continental United

#### Spencer David Hylen

Primary Market Dynamic Pricing for Sports Tickets: Theory and Application

#### Andrea Jessica David Jaba

Random Sequential Encoders for Private Learning in NLP

## Finnian P. Jacobson-Schulte

A First Step Towards Understanding Sperm Whale Communication and Behavior

#### Satvat Jagwani

(September, 2021)

Map Inference from Satellite Segmentation Data through Reinforcement Learning: A Novel Approach

#### Kriti Jain

Federated Learning for Resource Constrained Devices

#### Eric Jiang

Automating the Generation of Attack Trees and Improvements to the Attack Planner

## Stacia Edina Johanna

Generating Coding Exercises for Language Concepts by Searching, Simplifying, and Annotating Existing Code

#### Brandon V. John

Algorithm-Agnostic System for Measuring Susceptibility of Cryptographic Accelerators to Power Side Channel Attacks

#### Jaeyoung Jung

Low-Power Communication Circuits for Net-Zero-Energy IoT Nodes

#### Luann C. Jung

(See also S.B., Course VI-3) Gradient Subgroup Scanning for Distributionally and Outlier Robust Models

## Violetta Jusiega

Designing a User Interface for Counterfactual Simulations of Adaptive Treatment Strategies

## Patrick D. Kao

(See also S.B., Course VI-3) Robust Flight Navigation with Liquid Neural Networks

## Arpan Kaphle

An Intent-based Neural Monte Carlo Tree Search Framework for Synthesis of Printed Circuit Boards

## Shreyas Kapur

Human-Level Learning in Novel Environments

#### Mihir Prasad Khambete

Development and Evaluation of Generative Adversarial Networks for Predicting Central Hemodynamics

#### Evan M. Kim

Towards Data-Driven Cognitive Disease Classification Using Machine Learning and the Digital Symbol Digit Test

#### Hyunji Kim

(See also S.B., Course VI-3) Safe Exploration for Dynamic Computer Systems Optimization

#### Yo-whan Kim

(See also S.B., Course VI-3) How Transferable are Video Representations Based on Synthetic Data?

#### Silvia Elena Knappe

Sensing String Displacement as a Control Modality: Sensor Design and Implementation

#### Vedaant P. Kukadia

(September, 2021)

The Development and Deployment of Mobile Apps and Server Platform for Real-World Screening of Pulmonary and Cardiovascular Disease in Low-Resource Areas

## **Madison Kimberly Landry**

(February, 2022) Benefits of Branches in Sparsely Connected Networks

## Maximillian S. Langenkamp

How Open Source Machine Learning Software Shapes AI

## **Dylan Robert Lewis**

Towards Automated Assessment of Crowdsourced Crisis Reporting for Enhanced Crisis Awareness and Response

## David Daiyun Li

(February, 2022) Agent-Based Approach to Simulating Mobility as a Service

## Tingyu Li

Modeling Income Segregation and Accessibility Using Large-Scale Mobility

#### Wanlin Li

(See also S.B., Course XVIII) Contention Bounds for Locking Computations

#### Yanlin Li

Building a Cross-Platform Bridging Library for Native Mobile SDKs

#### Yunxing Liao

Dataset Deduplication with Datamodels

#### Gloria Zhi-Xian Lin

(February, 2022) (See also S.B., Course VI-3) Bayesian Active Structure Learning for Gaussian Process Probabilistic Programs

#### Kun Lin

(September, 2021) Learning to Ground Multi-Agent Communication with Autoencoders

#### Xin Yu Lin

(See also S.B., Course VI-2) Measuring Image Difficulty Under Limited Presentation Time: Towards Building Better Test Sets for Object Recognition

#### **Emily Liu**

(September, 2021) A Metastudy of Algorithm Lower Bounds

## Emma J. Liu

(See also S.B., Course VI-3) Self-Training and Calibration for Learning with Limited Data

#### Renbin Liu

Real-Time Social Media Content Recommendation for Live Sports Events

#### Sabrina Liu

Generating Gaseous Emboli Mimics in an ECMO Flow Phantom

#### Kerri Lu

(See also S.B., Course VI-2) Learning Boiling Properties of Materials

## Mindren D. Lu

(See also S.B., Course VI-3) Enhanced Potts Models for Improved Computational Protein Design

#### Haokuan Luo

(February, 2022)

Increasing the Success Rate for Indoor Object Navigation by Accurate Object **Detection and Efficient Exploration** 

#### Rami Manna

(September, 2021)

Constructing Low Resource Approaches to Improve Speech-to-text Translation from Modern Standard Arabic to English

## Christopher G. Mauck

(February, 2022)

Impact of Covid Pandemic on Student Participation in Intro CS MOOC

#### Jacob T. McGuire

(See also S.B., Course VI-2) Hybrid Computational Framework for Real Time Foliage-Penetrating Geiger Mode LiDAR Data Processing

#### Lingjie Mei

Falcon: Fast Visual Concept Learning by Integrating Images, Linguistic Descriptions, and Conceptual Relations

## Enrico J. Micali

(February, 2022)

Optimal Reinforcement Learning with Black Holes

## Mubarik M. Mohamoud

Software and Hardware Infrastructure for Visual Inertial Navigation

#### Tammam Mustafa

Parallel and Distributed Just-in-Time Shell Script Compilation

## Bhavik V. Nagda

(September, 2021)

CHuff: Conditional Huffman String Compression

## Mostafa H. Negm

(September, 2021)

Current Shuttling Cell Voltage Balancer: Design, Evaluation, and Modeling

## Susan Ni

(September, 2021)

Hardware Implementation of a Complete Vision-Based Navigation Pipeline

#### Sara Katherine Nicholas

Long Term Policy Goals Under Electoral Competition Given Varied Temporal Discount Rates Among Voters

#### Maya Katherine Nielan

Quantifying Exertion for American Football Linemen via Force, Acceleration, and Heart Rate Measurements

#### Caleb B. Noble

Automated Assessment of Environment Diagrams

#### Joe Collins O'Connor

Syntactic Transfer for Low-Resource Machine Translation with Contextual Parameter Generation

## Clemente Ocejo Elizondo

Modeling with Attention in Demand Forecasting and Beyond

#### Juan M. Ochoa Ortiz

(February, 2022)

Pre-trained Language Models for Clinical Systematic Literature Reviews

#### Carolina Ortega Pérez

FlexC: Flexible Compartmentalization Through Automatic Policy Generation

#### Stephen E. Otremba, Jr.

SmartPitch: Applied Machine Learning for Professional Baseball Pitching Strategy

#### Nassim Oufattole

Optimizing Tabular Data Synthetic Data for Regression/Classification

## Gregory M. Pailet

(February, 2022)

Using Sports Videos to Showcase **Exciting Content to Viewers** 

## Hannah Hailan Pang

Computational Action in Action: Process and Tools that Empower Students to Make a Real-World Impact Using Technology

## YeonHwan Park

Generating Differentially Private Synthetic Text

#### Fjona Parllaku

Longitudinal Biomarkers for Onset Dementia Diagnosis: The Case of Emotion and bvFTD

#### **Shwetark Patel**

Non-Interactive Cross Chain Atomic Swaps & Transformable Discreet Log Contracts

#### Yixuan Pei

(September, 2021)

Language Grounding: Probing and Augmenting Transformers for Procedural Text Comprehension

## Angelos Pelecanos

Non-Asymptotic t-Wise Independence of Substitution-Permutation Networks

#### Eric John Pence

Beyond Cryptography: Deniable Privacy for Secure Data Aggregation

#### Brandon A. Perez

Design Optimizations for Action Recognition Applications

#### Áron Ricardo Perez-Lopez

(September, 2021)

Puppetmaster: A Certified Hardware Architecture for Task Parallelism

## Isaac S. Perper

(September, 2021)

A Low-Cost, Scalable Platform for Sub-Centimeter UHF RFID Positioning

## Jacob D. Phillips

(February, 2022)

Unsupervised Latent Debiasing of Language Models

## Joshua J. Piel

(February, 2022)

(See also S.B., Course VI-2) Closed Loop Control for a Piezoelectric-

Resonator-Based DC-DC Power Converter

#### Stuart D. Powell

Bio-Signal Analysis for Personalized Pilot

#### Magdalena A. Price

Open Coding for Machine Learning

#### Jacob W. Pritzker

(February, 2022)

Transmit Precoder Design for Dual-Function Radar-Communication Systems

## Sai Sameer Pusapaty

(February, 2022)

Combining Task Parallelism and Multithreaded Concurrency

#### **Eric Ding Qian**

(September, 2021)

Novel View Synthesis from Casually Recorded Videos

#### Jessica A. Quaye

Sensor Localization Using Measured Signals

#### Saumya Rawat

Multi-Dimensional Evaluation Metrics for Chest X-Ray Reports

#### Robert L. Redmond

Graphical User Interface for Anomaly Detection in DBOS

## Victor M. Reyes Espinoza

Text-Driven Video Manipulation

#### **Holly Anne Rieping**

(February, 2022)

Audio Segmenting and Natural Language Processing in Oral History Archiving

#### Anthony C. Roman

(See also S.B., Course VI-3) Interactive Audience-Controlled Live Storytelling Technologies

#### **Alexander James Root**

Optimizing Vector Instruction Selection for Digital Signal Processing

## Isabel Sarah Hokuao Rosa

Performance Engineering of Directional Message-Passing Algorithms Through a Stencil-Based Approach for Applications in Molecular Dynamics

## Premila Rowles

(February, 2022)

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#### Juan A. Salazar

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#### Pachara Sawettamalya

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## Christabel J. Sitienei

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#### Ashwin Srinivasan

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#### Matthew Joseph Stallone

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#### Patroklos N. Stefanou

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#### Mihir Yatin Trivedi

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#### Julia Jiaye Wang

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#### Ming Wang

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#### Danielle Marie White

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## Christien S. Williams

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Automated Optimal Ultrasound Transducer Simulator

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Beatty: Automatic Tempo Curve Synthesis for Expressive MIDI Track Playback

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(February, 2022) CommunAir: Building Low-cost Community Data Infrastructure with Sensors, Spreadsheets, and Open

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#### Helen J. Xu

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#### Steven Yang

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## Rahul V. Yesantharao

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#### Lisa Y. Yoo

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#### Albert S. Yue

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#### Mikaeel M. Yunus

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#### Timothy D. Zavarella

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(February, 2022)

Optimal Control of a Novel Wave Energy Converter

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(See also S.B., Course VI-3) Perception and Motion Planning for Autonomous Surface Vehicles in Aquaculture

## Sammy W. Zhang

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(September, 2021)

The Power of Social Information in Distributed Consensus in Ant-Colonies: Model and Analysis

#### Elizabeth Y. Zou

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Course VI-7

Department of Electrical Engineering and Computer Science in conjunction with the Schwarzman College of Computing

#### Tiwalayo Terrence-Luke Aina

(See also S.B., Course VI-7) Deep Learning for Visualization of Velocity-Enriched RNA-Seq Data

#### Ruiwen Fu

Single Cell Landscape of Innate and Adaptive Immunity in Metastatic Melanoma Treated with Immunotherapy

#### Karthik Nair

(See also S.B., Course VI-7) Bladder Cancer Histopathology Embeds Maps of Heterogeneity Predictive of Treatment Response

#### Lawrence C. Wong

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#### Sayed Saad Afzal

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Longest Common Subsequence Over Constant-Sized Alphabets: Beating the Naive Approximation Ratio

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(See also S.M., Comp. Sci. & Eng) Orion: A Machine Learning Framework for Unsupervised Time Series Anomaly Detection

#### Abdullah Omar M Alomar

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(See also S.M., Comp. Sci. & Eng) Multivariate Singular Spectrum Analysis; A Principled, Practical, and Performant Solution for Time Series Imputation and Forecasting

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#### **Taylor Elise Baum**

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## Akhilan Boopathy

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#### Isaiah August Brand

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## Yuan Cai

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#### Peng Cao

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#### Minghan Chao

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All Analog CNN Accelerator with RRAMs for Fast Inference

## Kristin YiJie Chen

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A Systematic Approach for Cyber Risk Management

#### Tao Chen

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#### Yishen Chen

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#### **Axelle Clochard**

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## Lalita Devadas

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#### Yuqin Duan

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## Mohamed Elsheikh

A 2-D Scalable Third Harmonic Radiator at 291.3 GHz with -2 dBm of Radiated Power in 22 nm FinFET Technology

## Taylor L. Facen

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## Wei Fang

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#### Xiaolin Fang

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#### Faraz Faruqi

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#### Xiang Fu

Simulate Time-integrated Coarse-grained Molecular Dynamics with Geometric Machine Learning

#### Farri Gaba

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#### Seyed Khashaiar Gatmiry

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#### Bilha-Catherine Githinji

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## Xinyi Gu

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## Chenghao Guo

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## Zhen Guo

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## Poorya Habibzadeh

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## Pouya Hamadanian

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#### Alexandra M. Henzinger

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#### Evan Michael Hernandez

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#### **Brice Huang**

(February, 2022) The Algorithmic Phase Transition of Random k-SAT for Low Degree Polynomials

#### Jacob Minyoung Huh

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#### Yuka Ikarashi

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#### Thavishi Harindi Illandara

Active Keyframe Learning (AKL): Learning Interaction and Constraint Keyframes from a Single Demonstration of a Task

## Athul Paul Jacob

Learning Effective and Human-Like Policies for Strategic, Multi-Agent Games

#### **Dustin Isidore Jamner**

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#### Patricia Helena Jastrzebska-Perfect

On-Site Synthesis of Halide Perovskite Nanocrystals with Sub-50 nm Positional Accuracy

#### Tejas Kumar Jayashankar

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#### Zeyu Jia

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#### Wonki Kang

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#### John Alexander Keszler

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## Muhammad Ibrahim Wasiq Khan

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#### Ching-Yun Ko

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## ByeongJo Kong

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## **Thomas Charles Krause**

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## Cheng-I Lai

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## Aaron William Langham

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## Thien Le

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#### Hyun Ryong Lee

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#### Eric Lehman

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#### Theodore Peter Letsou

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#### Yifei Li

DiffCloth: Differentiable Cloth Simulation with Dry Frictional Contact

#### Yi-Lun Liao

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#### Amanda Yulin Liu

Verified Scheduling Via High-Level Scheduling Rewrites

#### Boyu Liu

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#### Markos Markakis

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#### Christopher Michael McNally

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#### **Owen Anthony Medeiros**

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#### Safa Can Medin

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#### Christina Kathleen Michaels

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## Luke Scott Murray

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## Arash Nasr-Esfahany

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#### **Amir Nouripour**

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## Eleni Styliani Oikonomaki

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#### Basak Ozaydin

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## Marianne Rakic

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#### Aaron Castagna Ray

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## Philip Harris Rich

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## James Maxwell Salamy

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#### Noah James Salk

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#### Nikola Samardzic

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#### Olivia Wen Seow

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#### Ticha Melody Sethapakdi

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## Pratyusha Sharma

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## **Anthony Simeonov**

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## Nouran Soliman

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## Ragini Sreenath

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## Madison M. Sutula

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#### Zhi Xuan Tan

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#### Andrew John Tindall

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#### Elizaveta Tremsina

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#### Peiqi Wang

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## Wei-Chen Wang

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## William Wei Wang

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A Minimax Approach to Learning Gaussian Mixtures

## Jessica Kimberly Weaver

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#### Hallee Erica Wong

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#### Alice Qianlan Wu

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## Eric Michael Wynne

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#### Shangjie Xue

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#### Sravani Yajamanam Kidambi

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#### Lisa L. Yang

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#### **Matthew Yeung**

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## Shangdi Yu

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#### Kaiwen Zha

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## Annan Zhang

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## Xinyi Zhang

Integration of Spatial Transcriptomics with Chromatin Images Using Graph-Based Autoencoder Identifies Joint Biomarkers for Alzheimer's Disease

## Yang Zhong

(September, 2021) (See also S.M., Course II) Understanding and Characterizing Thermal Transport in 2D van der Waals Nanoelectronics

#### Jiadi Zhu

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#### Yuan Zhu

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## Andrew C. Mikkelson

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#### Lois Eileen Nersesian

(See also M.B.A., Course XV) Text Analytics to Inform Deviation Root CauseAnalysis in Biomanufacturing

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### Giulio Alighieri

(February, 2022) (See also Ph.D., Course X) Attended School of Chemical Engineering Practice in Lieu of Thesis

## Ronghua Bei

(February, 2022) Attended School of Chemical Engineering Practice in Lieu of Thesis

#### Marc Dylan Berliner

(September, 2021) Attended School of Chemical Engineering Practice in Lieu of Thesis

#### Ruoqing Cai

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#### Jianqiao Cui

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## Weiran Gao

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## Arjun Shivam Zutshi

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# Master of Science in Aeronautics and Astronautics

Course XVI

Department of Aeronautics and Astronautics

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Computational Zoning Assessment of Unconventional Aircraft

#### Nicholas Gerald Belsten

(February, 2022) Magnetic Cleanliness, Sensing and Calibration for CubeSats

## Harsh Girishbhai Bhundiya

Bend-Forming: A Deformation Process for In-Space Manufacturing of Truss Structures

#### Daniel John Borchik

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#### Yang Chen

Effects of Fuel Stage Proportion on the Emission Performance of a Lean-Burn Internally-Staged Combustor for Aircraft Gas Turbine Engine

#### Matthew Nicholas Corrado

Active Thermal Augmentation and Ultra Dense MEMS-Based Electrospray Thrusters

#### Mary Dahl

Development of Structures and Methods for Safe On Orbit Robotic Assembly of Small Satellites

## Annick Jade Dewald

(September, 2021) A Multidisciplinary Analysis of a Stratospheric Airborne Climate Observatory for Key Climate Risk Areas

#### Rakesh Dubey

Performance Evaluation of a Lithium-Ion Pouch Battery Cell in Simulated Space Environment for a Pico-Satellite Concept (PicoSat)

#### Allegra Danae Farrar

Incorporating Uncertainty into the Mars Entry Problem

#### Titilayo Opedola Fasoro

Trajectory Design Optimized Profile Descents

## Amelia T. Gagnon

(February, 2022) Formation of RAAN-Spread CubeSat Constellations Utilizing Onboard Low-Thrust Propulsion

## Chloé Gentgen

Hybrid Chemical-Electric Propulsion Systems for CubeSats

## Nathan Harold Hughes II

Hydra: A Spatial Perception Engine for Constructing and Optimizing 3D Scene Graphs in Real-time

#### Madeleine Christine Jansson

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#### Rebecca Hanna Hacker Jiang

Shape and Motion Optimization of Rigid Planar Manipulators

#### Shreeyam Kacker

Optical Performance and Prototyping of a Liquid Lens Laser Communications Transceiver

#### Walter Thomas Kelso III

(September, 2021) Cost Optimization of US Sustainable Aviation Fuel Supply Chain Under Different Policy Constraints

#### **Evan Laith Kramer**

Towards the Advancement of Rotating Synthetic Aperture Space Telescope Technology

## Alexander J. Kunycky

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#### Zhenyu Liu

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#### Trevor V. Long

(September, 2021) An Investigation of Blown Flapped Wings

#### Yanbin Long

Airline Revenue Management with Segmented Continuous Pricing: Methods and Competitive Effects

#### Michael James Lunny

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#### Ara Mahseredjian

A Data-Driven Approach to Departure and Arrival Noise Abatement Flight Procedure Development

## Jeffrey William Miller

(See also M.B.A., Course XV) Application of an Agile Framework in Assessing and Aligning Digital Twin Use Cases Across Product Classes in a Large Organization

## Adam Munekata

Safety in US Air Force Tandem Seat Pilot Training Applying STAMP Processes

## Siddharth Nagar Nayak

Learning Based Scheduling

#### Nils Pachler de la Osa

A Complete Resource Allocation Framework for Flexible High Throughput Satellite Constellations

#### William Ellis Parker

Learning-Based Methods for Spacecraft Dynamics Modeling, State Estimation, and Control

#### Duc Ngoc Pham

A Framework of a Power Management System for a Hybrid Electric VTOL Aircraft Using Optimal Control

#### Daniel N. Pickard

Dynamic Eruptions on Soft Hydrogel Surfaces

#### **Justin Poh**

(February, 2022) A Top-Down, Safety-Driven Approach to Architecture Development for Complex Systems

#### Justine Nikole Schultz

Steady-State and Transient Thermal Modeling of Solid Electrolysis (SOXE) within the Mars Oxygen In-Situ Resource Utilization Experiment

## Peter David Sharpe

(September, 2021) AeroSandbox: A Differentiable Framework for Aircraft Design Optimization

## Elwyn Sirieys

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#### Maya Elizabeth Slavin

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## **Connor Thomas Stehr**

(See also M.B.A., Course XV) Accelerating Adoption of Large-Format Additive Manufacturing in Aerospace Tooling

#### June Shelby Stenzel

Implementing Model-Based Verification for The Large Lenslet Array Magellan Spectrograph

## **Delia Stokes Stephens**

(See also S.B., Course XVI) RikerSat: An Architecture for Solving Constraint Satisfaction Problems under Uncertainty

#### **Spencer Vinh Taylor**

Energy Absorption and Dynamic Behavior of Architectured Interpenetrating Phase Composites

## Albert Quang-Thong Thieu

On-Orbit Pointing Risk Mitigation for the Agile MicroSat (AMS) CubeSat Laser Guidestar Payload

#### Sophia K. Vlahakis

On-orbit Characterization of a Microelectromechanical Systems (MEMS) Deformable Mirror (DM): Mission Results from the Deformable Mirror Demonstration Mission (DeMi) CubeSat

## Carter John Waligura

Investigation of Spalart-Allmaras Turbulence Model Modifications for Hypersonic Flows Utilizing Output-Based Grid Adaptation

#### Charity Wangari

Emission Capabilities of Nafion-Based Ion Emitting Surfaces

## Jerrod Alexander Wigmore

(September, 2021) Network Reliability and Routing under the MVN Model

## Michelle Xu

Computational Modeling and Validation of the Deformation and Failure Response of Human Metastatic Vertebrae

## Syed Shayan Zahid

Impact of Water Injection on Emissions of Nitrogen Oxides from Aircraft Engines

## Master of Science in Biological **Engineering**

Course XX Department of Biological Engineering

#### Shelbi Nicole Parker

Creating a New Malaria Vaccine Design that uses a Blood Stage P. falciparum Chassis for Non-Blood Stage Antigen

## Master of Science in Nuclear Science and Engineering

Course XXII

Department of Nuclear Science and Engineering

#### Jacob Lazer Adams

(September, 2021) Drawn Polymer Fiber Recuperative Heat Exchangers

#### Ali Saleh Aljefri

(September, 2021) Technical and Economic Feasibility of Crushed Rock with Synthetic Oil Heat Storage Coupled to Light Water Reactors in the United Arab Emirates

#### Brandon A. Aranda Ocampo

Assessment of Multi-Phase CFD Frameworks for High Void Fraction Flow in Large Diameter Systems

#### Justin Michael Knoll

Alarm for Autonomous UAV Radiation Mapping Algorithm

#### Peninah Lise Levine

(See also S.B., Course XXII) Feasibility Study of Compact Neutron Resonance Transmission Analysis using a Linac, a Fusion-Based Neutron Generator, and an Isotopic Source

#### Xinyao Liang

(September, 2021) Advanced Thermal-Fluid Solutions for Underwater Diving Suit and COVID-19 Facial Mask

#### Can Pu

(September, 2021) (See also S.M., Course VI) Non-Gaussian Factor Graph Inference for Robotic Navigation

#### Jefferson Braxton Sesler

Simulating Properties of Scintillating Integrated Fibers as Conformal Radiation Detectors

#### Shangjie Xue

(September, 2021) (See also S.M., Course VI) Machine Learning Aided Aerial Radiation Mapping

#### Yuan Zhu

(See also S.M., Course VI) Digital Noise Reconstruction with a Quantum Sensor

## Master of Applied Science in **Supply Chain Management**

Program in Supply Chain Management

Ibrahim Mohammed AlArfaj

Katherine Renee Arnold

Ankita Arora

Yalcin Arslan

Pedro Alejandro Benitez Nuñez

Grace Leigh Caza

Vikas Chandra

Muhammad Sohaib Chaudhry

Felicia Suat Teng Chen

Meiling Chen

Ashish Chhabria

Rachael Grace Clark

Kenneth Adam Critchlow

Didi Dai

Lisandro de Latorre

Matias Escuder Rebori

Karim Farran

Lauren Jennifer Fellin

Elise Nicole Fredericks

Kai-Wei Lin Miguel Angel Garcia Gonzalez Tejinder Singh

Danniel Gonzalez Siqing Liu Sandeep Kumar Sirikande

**Daniel Granados Nicholls** Jason Andrew Maen Alejandro Souza Bosch

Frances Elizabeth Gremillion Alexandros Mamakos Alex St. Lifer

Ricardo Guadarrama Arias Lauren Nicole Matz Maksat Taibek

Michael Wai-En Tchen Jesús Guajardo Ramos Jennie Waterfall May

**Timothy Edward McCormack** Avanika Gupta Nan Wang

Abdulrahman S S Gweder David Esteban Mera Taryn Ashley Wenske

Himanshu Halbe Andrew Scott Miller Nicholas Shiverick Winters

Christine Maria Mueller Joaquin Andres Hidalgo Liam James Woolley-MacMath

A H M Shahidul Hoque Sanjay Kumar Naithani Huisi Wu

**Brody Will Hughes** André Nascimento Costa Jessica Yao Xiong

Lili Yao So Ikeya Paula Ochsenius Olhaberry

Aravindan Jayantha Irene Obianuju Ogbuefi Chukwujekwu

Jinwoo Je Mykola Oleksyn

Sai Supraja Rao Karanam Weiqian Pan

Soon Kiat Ker Maria del Pilar Pardo Rodriguez

Lauren Mae Konopinski Pai Peng

Tony Seong Kook **Taylor Marie Peterson** 

Emre Muzaffer Kulluk **Pranav Prakash** 

Debra Shun-Yuh Lee Shah Akibur Rahman

Kun-Zhe Lee Michelle Stephanie Ramírez Moreno

Nora Lestari Varun Shekhar Rasiti Chandrashekhar

Xiaoyue Li Karoline Rueckerl

Yulu Li Hasan Ahmed Suleiman Shinar

Jui Han Lin Deviana Ferdinanda Sia Master of Engineering in **Supply Chain Management** 

Program in Supply Chain

Management

Jia Kai Samuel Chin

Solving the Traveling Salesman Problem via Semantic Segmentation with Convolutional Neural Networks

Master of Science in

Computational and Systems

**Biology** 

Bruna Romila Lima

Defining the Molecular Basis for the β-catenin and CDC73 Interaction

Master of Science in

**Engineering and Management** 

Program in System Design and

Management

#### **Robert Bruce William Andrais**

(September, 2021) Probabilistic Production Forecasts Using Machine Learning

## Gloria Jesica Bahl Chambi

(September, 2021) Technology Roadmapping for Energy Storage Using ZEBRA Batteries

#### Elizabeth White Baker

(February, 2022) Safety in Hospital Medication Administration Applying STAMP Processes

## Nicholas Joseph Borge

Deep Pockets: The Economics of Deep Learning and the Emergence of new AI Platforms

#### Louis Caliwag Catalan

(September, 2021) Shaping of Strategic Staffing System

#### Kristin YiJie Chen

(September, 2021) (See also S.M., Course VI) A Systematic Approach for Cyber Risk Management

## Angélica Graciela Chíncaro Donayre

The Story behind the Output: Enhancing Trustworthiness in Design Research through Visual Strategies

## Michelle Marie Chung Chung

Designing for Informational Needs Among Small Producers in Panama: A Human-Centered Approach

## **Elliot James Collins**

(See also Naval E., Course II) A Method for Organized Institutional Learning in the Navy Shipbuilding Community

## **Christian Emerson Dowell**

(September, 2021) Machine Learning for Downstream Oil and Gas Refineries: Applications for Solvent Deasphalting

## Eric John Ehn

(February, 2022) Multidisciplinary Architectural Study of On-Orbit Space Vehicle Refueling

#### Joshua Wayne Fant

(September, 2021) 'Firefighting' within the U.S. Coast Guard's Shore Infrastructure Capital Investment Program

#### Evan Batman Joseph Feldman

The Economic Impact of the Coronavirus Pandemic in the USA

#### Nestor V. Figueroa

(February, 2022)

Using a System and Design Thinking Approach to Improve Citizen Utility from Open Data Initiatives within the Government of Puerto Rico

#### Christopher Anders Garcia

Creating New Value from Laboratory Testing and Services in Value-Based Healthcare: Investigating Data Monetization Strategies from Clinical Laboratories

#### Jeremy S. Goodwin

(September, 2021) Impact of Transformational Leader Behaviors on Diverse Team Performance and Persistence

## **Thomas Cowart Fleming Goolsby**

(September, 2021) System of Systems Composition and Course of Action Pathfinding Tool

## Vignesh Gopalakrishnan

Modeling the Trajectory of Bitcoin Using System Dynamics

## Harsh Gupta

(CNCPT)

Using Product, Processes and Gamification to Motivate Users for Positive Habit Formation

#### Allison MacKenzie Harris

Designing an Educational Mindfulness **Experience for Future Leaders** 

## Christopher Nicholas Hein

(See also Naval E., Course II) Quantifying Flexibility in Naval Ship Design

## Matthew John Hernandez

(September, 2021) Learning Through Others for System Level Performance

#### **Javier Herrero**

(February, 2022) A System Architecture for the Digital

Thread in the Design of Commercial Airplanes

#### R. Chadwick Holmes

(September, 2021) **Exploration and Production Risk** Mitigation for Geothermal Adoption in the Energy Transition

#### Ricardo Bortot Hopker

A Canonical Experiment on System Complexity Metric and Its Impact on **Engineering Management** 

#### Chieh Hsieh

An Integrated Design and Management Program for Taiwan

#### Kritisha Jain

(September, 2021) Making Makerspaces More Accessible for People with Visual Impairment: Understanding User Needs to Reimagine Solutions

## Sudhir Jain

Multiclass 3D Segmentation of Progressive Damage in Advanced Composites using Deep Learning.

## Nicholas Albertus Jansen van Rensburg

(February, 2022)

Design of a Market Exchange for Climate Risk

## Cristian Alfredo Junge Bascur

(September, 2021)

Deep Decarbonizaion of Texas: Impacts of High Electrification Scenarios

## Zahra Kanji

(See also S.M., Course II) Classification of Auscultation Sounds Using a Smart System

#### Jitt Kasemsri

Exploring the Impact of Play: Designing for Wellbeing through Digital Mediums for Older Adults in Thailand

## Matthew Allen Kieke

(September, 2021)

Architecting a Corporate Venture Capital Firm for a Commodity Enterprise

#### Lakshmi Amrutha Killada

Understanding the Attitudes of **Incumbent Manufacturing Workers** toward Training Opportunities

#### Naoki Kobayashi

The Effect of Providing Subsidies for Vehicles and Infrastructures to Shift toward a Low Carbon Passenger Car Mix

#### Byeong Jo Kong

(See also S.M., Course VI) Analyzing Student's Problem-Solving Approaches in MOOCs Using Natural Language Processing

## Nathan Eugene Krehbiel

Stakeholder Mental Model Alignment Influence on Mid-Stage Performance of New Product Engineering Teams

#### Aparna Ravikumar Kulkarni

Improving Electricity Supply in the Indian State of Odisha Using Under-the-Grid Micro-Grid Technology

## **Hemant Kumar**

(February, 2022) Hydrogen-Powered Cars: Is There a Role for Them in the Electrified U.S. Future?

## Nihara Rachel Kurian

**Empowering Caregivers: Design** Solutions to Enhance Knowledge and Confidence in Care by Improving Communications with Health-Care Providers

## John Nathan Landsberg

Systems Architecting a Space Force Enterprise

## Rachel Helen Le Vély

(February, 2022) Utilizing Enterprise Architecture Frameworks to Enable Successful Enterprise Transformation and Intended Enterprise System Emergence

## Wei-Ching Lin

(February, 2022)

Socioeconomic Implication of Circular Economy: The Impact on Employment and Local Economy in the United States

## John Chen-Chun Liu

Rethinking Consumption & Production -Systems and Lifestyle Emergence

#### Yuanbo Liu

(February, 2022) When Technology Meets Patient Needs: Designing Mental Health Technology

#### Alessandro Lucioli

(February, 2022)

Exploration of Disruption from Digital Transformation through the ARIES Framework Enterprise Element Model

#### **Jacob Timothy Lueders**

Investigating Opportunities to Improve Service Member Access to Non-Clinical Mental Health Resources

#### Xueni Luo

(February, 2022)

Application of Agile Development and Innovative Technology in the Structural Engineering

## Elias Augusto Machado Roberty

(September, 2021)

Predictive Analytics Applications for Oil and Gas Processing Facilities

#### Gautam Madhivanan

(February, 2022)

Applying Tradespace Exploration Methods to Remote Sensing System of Systems for Wildfire Detection and Management

#### Yuya Makino

Systems Thinking for Prioritizing Technology Research & Development in Public Administration

#### Indrayud Biswas Mandal

(September, 2021)

A Systems Approach for Creation of Cost-Effective Tactile Graphics for Use by Students with Visual Impairments from Low-Income Backgrounds for Greater **Educational Outcomes** 

#### Cierra Danielle Martin

Everyone Needs a Seat at the Table: the Role of Participatory Design in Creating More Resilient & Equitable Food Systems

#### **Javanth Mohan Kumar**

Evaluation of the Architecture for a Cable Actuated Robotic Platform for Agriculture as an Alternative to Existing Platforms

#### Mieko Murao

Designing Immersive Art Experience - An Exploration of Visuals and Sounds

#### Tyler C. Niday

Enabling Disruptive Technology in High Growth Organizations when Architecting an Enterprise

## Hye Yeon (Hannah) Oh

No Pressure!: Designing Mobile Interventions to Improve Pressure Relief Adherence for Individuals with Spinal Cord Injury through Diary Studies

#### Tomohisa Okamoto

(September, 2021)

Comparative Analysis of Japanese and Western Corporate Venture Capital

#### Chinelo Shirley Onuoha

Telehealth in Sub-Saharan Africa: A Human-Centered Design Approach on Bridging Gaps in Healthcare and Wellbeing Across the African Diaspora

#### Monthep Parimontonsakul

(September, 2021)

An Analytical Approach to Automate Stratigraphic Correlation Using Well Logging Information

## David Sejin Park

Characterizing and Evaluating Student Dropout through Understanding Student Journey in a MicroMasters Program

## **Liane Christine Peng**

Encouraging Civic Engagement Through Playful Participatory Design

## **Stephen Jeffrey Pickett**

(February, 2022)

Applying the Design Structure Matrix to Streamline the Development Process: Lessons from Marine Renewable Energy Development

## Allison Mae Polly

(September, 2021)

Toward Achieving the Energy Transition Through Corporate-University **Partnerships** 

## Kelsey Lynn Prestidge

(February, 2022)

Digital Transformation in the Oil and Gas Industry: Challenges and Potential Solutions

#### Cassie Ann Raazi

(February, 2022) (See also S.M., Real Estate Development) The Value of Flexibility in Lease Duration

## Karthik Rajasekaran

Integrated Design of Small Scale Third Generation Concentrated Solar Power Plants under Uncertainty

#### María Risueño Domínguez

Part of the Furniture: Envisioning Furniture Futures Through Qualitative Research and Design

#### Maxwell T. Robinson

(February, 2022) Technology Roadmap for Mobile Early Detection System for Devastating Crop Diseases

#### Devaki Rani Sakhamuru

Techno-Economic Analysis and Strategic Decarbonization of the Indian Cement Industry

#### Tareq Saqr

(February, 2022) Unsupervised Anomaly Detection with Application to Electric Motors

## Olivia Wen Seow

(See also S.M., Course VI) An Intuitive Tool for 3D Design Creation

## Jennifer Elizabeth Shafer

Creating a Cross-Disciplinary Understanding of Legacy Stories - What Does It Mean to Share a Legacy and What Do Storytellers Need?

## Yoshiki Shoji

Digital Transformation (DX) Ecosystem in Japan

## Yuya Sugio

Investigating the dDsign of the Retail Payment System: Focusing on the Retail Payment Sector in Japan

#### Chun Hern Tan

(September, 2021) Enterprise Architecting for Tacit Knowledge Transfer: Sustaining Competitive Advantage

#### **Bagdat Toleubay**

(September, 2021) Process Improvement and Policy Analysis in Oil and Gas Well Development and Construction through Applications of System Engineering and

System Dynamics Concepts

#### Yash Trivedi

Smart Home Technology Platform for the Aging Population

#### Jared D. Tuinstra

(February, 2022) Speed Through Flexibility: Shortening the Acquisition Timeline of U.S. Defense Capabilities Using Flexible Systems

#### Ekaterina Tyshchenko

Designing Cooperative Data Exchanges: Overcoming Privacy and Business Challenges When Corporations Want to Collaborate Using Privacy-Preserved

#### **Matthew Thomas Valcourt**

(See also Naval E., Course II) Naval Submarine Maintenance: An Examination of Areas of Potential Availability Execution Risk

#### Preeti Varma

Systems Thinking for Social Change

#### Anahí Vega Sanchez

From Linear to Exponential: How SMEs Can Define the Future of Emerging Markets

#### Kristen Marie Vilcans

Towards a Digital Engineering Initialization Framework

## John Kirkpatrick Ward

(September, 2021)

A Systems Engineering Approach to Carbon Accounting Using System Theoretic Process Analysis (STPA)

## Mengke Wu

Delving the "Self-Construction" in the Era of Social Media

## Kerry Yujing Xie

Addressing Deficiencies in Asian American Pacific Islander (AAPI) Hate Crime Reporting: Designing a Solution for Community Needs

#### Kiyohide Yasuhara

A Study on the Impact of Collaboration between Power Systems and Electric Vehicles on the Costs and CO2 Emissions of Energy System

#### Serhiy Y. Yemets

(September, 2021)

Comparison of Discounted Cash Flow, Decision Analysis, and Flexibility in Design for Handling Uncertainty in Oil and Gas Capital Projects

## Edmund Jiekwon Yoon

Autonomous Vehicle Implementation into Existing Garrison Infrastructure

#### Catherine Yu

Informational Analysis on US & China Platform Strategy: A Comparative Analysis

#### Yuru Zhang

Innovation Dynamics between Original Equipment Manufacturers (OEMs) and Tier-1 Suppliers in the Automotive Industry

#### Jonathan Pu Zhou

An IoT-based Pressure Injury Prevention System

#### Ye Zhu

Smart Remote Personal Health Monitoring System: Addressing Challenges of Missing and Conflicting

## Master of Science in **Transportation**

## Lauren Elspeth Craik

Course I

(See also M.C.P., Course XI) Congestion Pricing: Moving from Equity Analysis to Transportation Justice

## Ehab A. Ebeid

Course XI

(See also M.C.P., Course XI) The Invisible Hand or the Handgun: Ride Hailing, Violence, and Political Settlements in the South African Urban Mobility Market

## Patrick Stephen Meredith-Karam

Course XI

(September, 2021)

(See also S.M., Technology and Policy Program)

**Exogenous Drivers of Public Transit** and Ride-Hailing Ridership: A Study of Policy Intervention, COVID-19, and the Relationship between Ride-Hailing and Public Transit in Chicago

#### John Takuma Moody

Course I

(September, 2021)

An Optimization-Based Qualitative/ Algorithmic Approach to Transit Service Planning: Addressing the MBTA Green Line Extension

#### Joseph R. Noszek

Course I

Measuring Backtracking on Delivery Routes through Community Detection

#### Alexander Michael Salz

Course I

(September, 2021)

The Potential for Using Transportation Network Companies as an Alternative to Transit Station Parking

## **Naval Engineer**

Course II

Department of Mechanical Engineering

## **Elliot James Collins**

(See also S.M., Engineering and Manage-

A Method for Organized Institutional Learning in the Navy Shipbuilding Community

## Megan Jené Hagen

(See also S.M., Course II) Feasibility Analysis for a Nuclear-Powered Commercial Merchant Ship

#### **Christopher Nicholas Hein**

(See also S.M., Engineering and Manage-

Quantifying Flexibility in Naval Ship Design

#### Dayne Michael Howard

(See also S.M., Course II) Quantifying Extreme Event Statistics for Ship Motions and Loads Using Low-Fidelity Models and Recurrent Neural Networks

#### Joshua James Malone

(See also S.M., Course II) The Impact of Electrical Standards on MVDC Shipboard Power Cable Size

#### **Scott David Oberst**

(See also S.M., Course II) Investigation into the Design of High-Power Plug-In Shipboard Electrical Connectors

#### Christopher Matthew Antonio Reynolds

(See also S.M., Course II) Relationship of Mechanical Deformations and Electrochemical Properties of Lithium Ion Batteries-An Experimental

#### Matthew Thomas Valcourt

(See also S.M., Engineering and Manage-Naval Submarine Maintenance: An Examination of Areas of Potential Availability Execution Risk

## Kelli Michelle Waterman

(See also S.M., Course II) Microchannel Thermal Management Analysis and Simulation Tool for Integration into Electronic Component Design

## **Engineer in Computer Science**

Course VI

Department of Electrical Engineering and Computer Science

## Matthew Arthur Kilgore

(February, 2022) Fast Reducer Hyperobjects

## SCHOOL OF HUMANITIES, ARTS, AND SOCIAL SCIENCES

## Master of Applied Science in Data, Economics, and Development Policy

Course XIV
Department of Economics

Pavarin Bhandtivej (September, 2021)

Raúl A. Castro Corona (September, 2021)

Juan Carlos Cisneros (September, 2021)

Megan Nicole Farrell (September, 2021)

Jannis O. Hamida (September, 2021)

Sui Yuan Han (September, 2021)

Wonjae Lee (September, 2021)

Adrienne Boehlert Luczkow (September, 2021)

**Devin Whetstone Mauney** (September, 2021)

Andrés L. Parrado (September, 2021)

Adrien Paul Marius Rose (September, 2021)

Ashley Vicary (September, 2021)

John Henry Walker (September, 2021)

# Master of Science in Political Science

Course XVII
Department of Political Science

Emma Mary Campbell-Mohn

(February, 2022) Paying for the Bomb

In Hee Kang

(September, 2021) Group Heterogeneity and Affective Polarization within the Democratic Party

Helen Landwehr

(See also S.M., Technology and Policy Program) Analyzing the Usability of Natural Language Processing for Detecting Disinformation Tactics, Techniques, and Procedures

## Master of Science in Science Writing

Course XXIW
Program in Writing and
Humanistic Studies

Anna Derby Blaustein

(September, 2021) The Long Run: Inside the Race to Keep Young Female Runners Healthy and Performing at the Top of their Game

Robert M. Davis III

(September, 2021) I, Dentist: Is Artificial Intelligence the Future of Oral Healthcare?

Alison Jordan Gold

(September, 2021) Battle for the Dinner Table: Can Vegan Analogues Curb America's Reliance on Meat?

Elizabeth Anne Gribkoff

(September, 2021) Caught in the Crosswinds: Rural America Could be Renewable Energy's Nemesis — or Its Savior

Kelsey Danielle Harper

(September, 2021)
"That Could Have Killed Me." How Anti-Fat Bias Can be Dangerous, Even Deadly, for Heavier Patients

**Zain Humayun** (February, 2022) Building a Better Internet Alice Downing McBride

(September, 2021) As the Starling Flies

Saima May Sidik

(September, 2021) Humans Among the Clouds

Nafisa Syed

(September, 2021) Bridging the Gaps between Screens: Can Telehealth Bring Mental Healthcare to Those Who Need It?

## Master of Science in Linguistics

Course XXIV
Department of Linguistics and
Philosophy

**Devon Brett Denny** 

Diné Bizaad Bitsisiléí Bóhoo'aah: A Basis for Learning Navajo.

# Master of Science in Comparative Media Studies

Program in Comparative Media Studies

**Laurel Anne Carney** 

Wall-Walking and Other Bannable Offenses: Discipline and Deviant Play in World of Warcraft

**Emily Elizabeth Grandjean** 

Bodies, Land, and Instagram: Networked Foraging and Infrastructural Media in the United States

Tomás Andrés Guarna

Trust Machines: Cryptocurrencies, Blockchains, and Humans In Cultures of Mistrust

Jay Jaeger Hawke

Creation Through Destruction: Artifacts of Worldbuilding in Experiential Legacy Games

Alison Katrina Lanier

The Rendered Body: Queer Utopian Thinking in Digital Embodiments

## G. R. Marvez

Controversial Science Argumentation Skills for Teachers in the Digital Clinical Simulation *Discussion Leader* 

## SLOAN SCHOOL OF MANAGEMENT

Master of Business	Daniel Cástulo Chávez Paniagua	Hisaya Hirose	
Administration Course XV-A (Sloan Fellows)	Yoon Young Chung	<b>Daisuke Ikegami</b> Can Traditional Japanese Companies	
Sloan School of Management	Danilo Gabriel Ciccola	Reinvigorate Middle Managers to Improve Their Competitive Advantages	
Arvindan Badrinarayanan	Paul Aaron Cole III	in a World of Uncertainty?	
Toluwase Olaolu Adesina	Candice Dawn Creecy	Jordan Bradley Jakubovitz	
Gideon Majiyebo Adogbo	Jose Alfonso de la Campa	Adela Spring Jamal	
Rajan Aggarwal	Pablo Delclaux Aznar	Oloruntosin Tolulope Joel	
Omolara Olusola Ajele	Gaurav Shekhar Deshpande	Clayton Graham Jones	
Guillermo Altenhordt	Anupam Dey	Anuja Kadian	
Mohammad Jamal Ashraf	Michael Thomas Ernst	Takeshi Kai	
Bhuvan Prasad Atluri	Boaz Fachler	Pedro Esteban Kam Paw Molina	
Purushottam Ram Nath Awasthi	Lindelwa Farisani	Maneet Kamboj	
Tomas D Andrea Balistiero	Benedicte Olivia Febe	Ali Khedery	
Yitzhak Balmas	Omer Feller	Sho Kikuchi	
Sebastian Julio Barriga Bermeo	Carolina Soares Porto Fonseca	Hiroki Kiyoto	
Mohamed Riad Benchabane	Alon Elazar Fooks	Amara Mohamed Konneh	
Omar Benzit	Christopher Glen Locandro Fort	Edgar Andrés Lazo Paz	
Partha Biswas	Carmelo Graziano Gallitto	Sea Young Ethan Lee	
Chelsea Holland Borchers	Nayelli García Ávalos	Wei Yang Lee	
Gonzalo Brahm, Sr.	Felipe Gaviria	Arthur Rodrigues Lima	
Mario Carandente	Ruben Ramon Grau Pujol	Yanbin Lin	
Mark Andrew Ballard Castleman	Amit Gupta	Michael William Lipton	
Gaurav Chadha	Erasmus Gyabaah-Frempah	Kay Yin Regina Low	
Samuel Christian Sy Chan	Shiro Hatase	Huimin Ma	
Manuel Gonzalo Chavez Anyosa	Iunichi Hirokawa	Ko Maeda	

Junichi Hirokawa

Mohit Malhotra Philippe Anton de Castro Ricafort Tarunpreet Walia

Salvador Enrique Martínez Corona Juan Sebastián Roda Vivas Taro Watanabe

Patrick Daniel Wegner Supriya Medapati Efren Romero Benavente

Javier Enrique Méndez Bonilla **Bryan Robert Rother** Sara Elena Williams

Ashlea Ann Meyer Jaime Rubén Sáez Galleguillos Aileen Wong

Paul Joseph Miller Yukari Saiki Itay Yehuda Yamin

Taizo Miyato Satoru Saito **Rodrick Ybanez** 

Friedrich Andreas Moeckel, MD Yu Sakamoto Seungho Yoon

Roberto Molina Hiroyuki Sera Sosuke Yoshikawa

**Puneet Shah** Clifford Reginald Nau Luyang Zhang

Vikram Vikas Sharma Guillaume A. E. G. Navez Yuqing Zhang

Hidefumi Nogami **Evgeny Sheenko Master of Business** 

**Administration** James Michael O'Mara Charles Sutton Siedlecki, Jr. Course XV-E (Executive)

Sloan School of Management Gemma Odena Bultó Vitor Silveira Bueno

Heba Samy Abdelbaky Kazumi Ohno Adam Robert Sinovsky

Hardeep Singh Ahluwalia John Bosco Acot Okello Tomohito Soyama

Jose Alonso Albarracin Rodriguez Hock Boon Ong Padmapriya Srinivasan

Cedric François Alexanian **Ioannis Stathis** MingHsin Pai

Sabreen Syeda Alikhan **Nishant Pandey** Alexandra Isabel Suarez

Jean Carlos Alonso Gomez **Gyorgy Paris** Takuya Takagi

Harsha Vardhini Pogunul Srinivasalu

(February, 2022)

Toshio Taki William Adam Parrish

Teruhisa Tsuji Mikael Petrosyan

Allen Todd Atchley Horacio Manuel Vaccare Fuster

Alexey Vladimirovich Avdokhin Manuel Jesus Velasquez Ruiz, Sr.

**George David Potts** Saurabh Awasthi Meera Venu

Meera Ravi Ryan Joseph Bachman

Ricardo A. Villalba Shuyang Ren

**Adil Bahadoor** 

Bharatheesh K. Ananth

Franklin Enrique Angulo Fernandez

Krishna Chaitanya Balantrapu Melissa Anne Estok Ramalingam Konduru

How Can You Take a Business Model and **Antonio Jermaine Barnes** Cleidy Liborio Fernandes

Apply across Different Industry?

Ahmed Samir Mady

Kengo Makita

Kenneth Kyung-il Kwak **Justin Alexander Bass Belen Fraile Ortiz** 

Mark Andrejs Laivins Ryan Raymond Beaudry Phani Gadde

Lien Hong Le Jeffrey Beligotti Cayetano Gea-Carrasco

Stephanie Christine Licata Miriam A. Bredella Naji Gehchan

**Rhie-young Lim Robert Douglas Bruce** Erin-Michael Gill

Anton Lisnychyi Alejandro Canete Baez Jason Aaron Gluck, DO

James Bradford Lupton Rachel Peters Card Lisa Goel

Megan Cora Luu Kala Chandramouli Ismael Gomez Charles

Nicola M. Lynch Melissa Roberts Chapman Julie Diana Grosvenor

Ian Douglas MacGregor Che-Wen Chen Daphne Adele Haas-Kogan

Celine Kaouthar Cherif Torzsok Mar-Ellen Catherine Handly

siglia

Matthew Boyd Harrington **Kevin Cheung** 

James Christopher Malone III Melissa Lee Herman

Irina Mandzhieva Amy Lynn Herzog

**Christy Fernandez Cull** 

Thomas Arthur Seydou Coulibaly

Andrea Nicole Matison Optimizing Pricing for Smart Garments Christopher Hoye

Mitu Dahiya Michael Edward McLaughlin Jillian J. Irizarry

Joseph Henry Dayan **Christopher Meewes** Casey Adam Jackman

Vanessa M. DeGennaro Andrew Jackson Miller III Farukh Javed

Lauren Nahir De Jesús Justin Murray Moore Jennifer Johns

Gaurav Dhir Tonika Morgan Richard J. Johnson

Abid Ali Dobani Joseph Richard Mundinger Stephen Ellison Johnston

Tolga Durak Santosh Gopal Nachu Hélène Juillard

Yosuke Nakashima Brian Aden Edge Maheen Junaid

Rhamey Abdelmonem Elhosseiny Kaveh Nedamat Naveed Khawar

Anthony Angelo Enzor-DeMeo Paul Linh Nguyen Dane Christian Nielsen Jeloni Musa Shabazz John Jiang Yu

Advanced Strategy & Innovation

Ravisankar Ramadas

Rahul H. Rathod

Anar Jyotindra Shah

**Master of Business** Amre Mohamed Nouh Administration

**Bijal Sheth** Course XV Mark Alexander Novas

Rajiv Srivastava

Sloan School of Management Kartik Sinha

Kent William Nygren Jeanelle Lauren Ackerman Romel Somavat

Mojolaoluwa Ola Oluwabukunmi Adabonyan Manish Srivastava

Francisco Antonio Olmos Taleen Marie Afeyan

**David Matthew Ortiz** Danielle Catherine Ager

Joe Louis Stanford III Nelson Ossorio Flores

Joseph Philip Starzec **Edward Padula** 

Yousef Waleed Al-Humaidhi José Antonio Suaya Grezzi Vassiliki Papadimitrakopoulou

Jacob Gordon Alchek Vyshnavi Suntharalingam

Genevieve Paquette Beatriz Aldereguia Pons

Sripriya Thinagar Ramya Parameswaran

Mishary Y. Alessa **Ponnarathneary Ting** 

**Sheetal Naveen Patel** (February, 2022) Sarah Allibhoy

Fiton Peja Heidi A. Toland

(See also S.M., Course VI) **Ahmet Omer Poroy** Nitin Tyagi Enabling Proactive Quality in

Commercial Airplanes Using Natural

Ram Kumar Puppala Cheerag Dipakkumar Upadhyaya Language Processing

Alexander Grigorios Ragias Praveen Tiruchirappalli Vaidyanathan Jennifer Marie Amlani (See also S.M., Course II)

Equipment Installation Quality Rajesh Ramachandran Dario Cesar Valdizan Improvement

Julien Vandewalle

Lily Kang Wang

Faidon Anagnostopoulos

Nkiruka Sophia Anizoba

Peter John Roeber Leslie Weber Thomas Glen Ankenbauer

Daniel Alejandro Rosales Roche Yue Wang Webster Shilpa Dilip Apte

Sumantra Roy Maxwell Jeffrey Wilson Yaw Benjamin Asamoah

Blaire Kelvin Ryan Fei-Shiuann Clarissa Yang Alex Aserraf Bentata

Michael John Schmidt **Robert Yunchuan Yang** Abenezer Nardos Awlachew

Oxana Serebrennikova Nora Yousif Harrison Chapman Bacon

Patrick C. Akujobi

Christian Alexander Allinson

Basant M. Badr Patrick Roycroft Campbell Mauro Alessandro Colantonio Yasmin Mohamed Badr Amanda Carbonneau Jonathan C. Conway Yousaf Nadir Bajwa **Daniel Cardenes Estelles Deirdre McNary Corley** Moises Jaime Baly Rodriguez Louisa Wilde Carman Benjamin McNab Crawford **Christopher Ryan Banks** Sebastian Carreno Leandro **Anthony Alexander Cruz** Kaylie Barger **Taylor Bryce Carter** Christopher Michael Cubra (See also S.M., Course II) Automating Data-Driven Decisions to Edward S. Becker IV Seamus Patrick Cassidy Improve Key Financial and Operational Metrics in Semiconductor Manufacturing Francesca Bencini Vivar Gustavo Castillo, Jr. (See also S.M., Course II) Ian Alloway Culver Using Electric Vehicles for Grid Services: **Alexander Scott Berry** Capacity Available and Applications for Electric Utility Commercialization Tomás Pedro Bexiga Roque da Cunha Claire Victoria Beskin Matilda Fatoumatta Ceesay Robert Alan Cunningham Ruchie Bhardwaj **Emily Darwin Cetlin Emma Currier** Mihir Bhushan Bo Yu Chan Patrick Ryan Curtis Sarah Lisanne Black Ying-Ju Alice Chen John Matthew Chao Cusick John Michael Blasberg, Jr. Yudou Chen Hung Dinh Dang Maya Sara Bobrovitch Maria Alejandra Chia Garcia **Supratim Das** Charles H. Bolton (See also Ph.D., Course X) Erica Chiang Daniel John Borchik Gabriel de Abreu Rabello (See also S.M., Course XVI) Luke Chung-I Chiang Exploring the Application of Lean (See also S.M., Course II) Jose Tomas De Gregorio Processes Enhanced by Digital Archiving Framework and Analytics for Emissions in Precision Subtractive Manufacturing Forecasting and Planning Carlos Maria de Palacio Gaytan de Ayala John Scott Bowers Arthur Yoonhwan Choi Inigo Javier de Palacio y Gaytan de **Brittany Rachel Brody** Jung Hwan Choi Ayala Samuel Turner Brown **Brittny Chong** Tarina De Rito **Kurt Thomas Bullard** Alex Christofferson Alexandre de Villiers de La Noue Ryan Michael Byrne **Kasidis Chutima** Francisco Decrescenzo Cortes Analysis on the Effectiveness of the Cesar Caixeta Ferreira Estate Tax in the United States James Michael Clarizio Patricia Camarero Ruiz Luis De la Torre Fernández Joshua Oren Cohen

James Thomas Camp

Austin C. de Maillé Santiago Falcão Veer Gangwal (See also S.M., Course II) Operations Strategy for the Mass Olivia D. Farrell Richard Bradley Ganz Customization of Additively Manufactured Anatomical Models, Patrick Erickson Fay Sophie Weiwei Gao Surgical Guides, and Implants Eric Feddersen Andres Garza Villarreal Devika Dhawan Francesco Di Fonzo Michelle Angela Feole John Francis George (See also S.M., Course I) Optimizing the Supply Chain Design for Nikhil Thomas George Nestor Alexander Diaz-Ordaz Sourcing and Supply of Critical Materials Dan Ding Alexander Philip Gerszten Melanie M. Ferreira **Robert William Doles** Kabreya Ghaderi Fulvio Ferretti Anna Maria Gil Fuster Amanda Regine Dominguez Cinar Fidan Emma Catherine Gilman Jordan A. Dominguez John Harrison Fields Steven G. Gluckman Lichi Dong Theodore Johannes Fields Mariana Gomez Arrunategui Maria Ignacia Donoso Bernales Elizabeth Fireman Matias Rodrigo Gonzalez-Bunster **Cory Dowless** Bryan Banka Fondufe Ron Peretz Grader Lauren Elizabeth Egan Rafaella Mollerstrand Fontes Tyler J. Eggleston James Butler Graham III **Riley Candice Foreman** (See also S.M., Course II) Capacity Multipliers: Rapidly Scaling Marcus Weihe Grand Melissa Nicole Forstell Production through Line Balancing and Critical Path Reduction Jamal Grant **Kevin James Fox** (See also Ph.D., Course X) James Elgin **Charles Joseph Graves** James H. Frauen Olivia Maged Elsaid **Christopher Marcellus Gray** David Gordon Frost, Jr. Jana Margaret Kalustian Epstein Ken Groszman (See also S.M., Operations Research) Yohei Fujii Jane Bieral Esslinger Sequential Optimization for Prospective Customer Segmentation and Content Ryan Stephen Gaertner Clare McDonald Everts Targeting Amit Galgali Ravisara Grover Taylor L. Facen (See also S.M., Course II) (See also S.M., Course VI) How Enhanced Data Availability Affects Prototyping of Injection EVA Foam Katherine Marie Gunson Footwear Midsoles Multi-Channel Marketing Attribution

Naman Galhotra

Michael Angelo Gangemi IV

Jared Doxey Facer

David Afolabi Fagbola

**Amrit Gupta** 

**Apoorv Gupta** 

Laya Haddad

Alexander Hughes Hadik Grant Marshall Hosinski Michael Oliver Stearns Johnsen (See also S.M., Course II) IoT at Amgen - Evaluating and Lena Meshia Hairadin **Emily Brady Johnson** Piloting Industry 4.0 Technology in Biomanufacturing **Brittney Page Joyce** John Hajjar Drekha Jeffrey Hsiao Cameron George Halliday Ali Jumabhoy (See also Ph.D., Course X) Christina Hu Anna Perlmutter Kamen Caitlin Elizabeth Haner Manqian Lillie Huang Monchen Wesley Kao Alexandra Hardin Yu Huang (See also S.M., Course I) (See also S.M., Course II) Lydia Cornelia Kaprelian Supply Chain Sustainability Directed Energy Deposition Additive Opportunities in the Utility Industry Manufacturing Supplier Sourcing for Marlyn Karim Aerospace Drew Joseph Harger Emma Rose Kaye Christopher Martin Huffstetler Han-Ching Elizabeth Hau Trevor Scott Rizika Keith (See also S.M., Course VI) Brendan Will Souza Hughes Digital Thread and Analytics Model to Improve Quality Controls in Surgical Christopher James Keshian Stapler Michael James Hutchinson Haley Katharine Ketterer Michael T. Haughey Jennifer Lee Hwang Shruti Khandekar Claire Alexandra Hawkins Dana Hwu Anish Dhananjay Khare Kara Louise Hedges Azzah Maryum Hyder Shahar Kidron Shamir Andrea Danielle Herbin Olatunji O. Idowu Hunjoo Kim Delia Gabriela Hernandez Reza Alex Neil Iselin (See also S.M., Course II) Development of Industrial Internet Katherine Boe Heuck Akihiko Izu of Things Architecture and Business Strategy for Digital Substation Asset Management Samuel Douglas Heuck **Courtney Lielle Jacobovits** Ryan J. Kim Renzo Hidalgo Pooja Shah Jain Jeffrey J. Knox Lu Luke Richard Higgins Andres Jarpa Lagos (See also S.M., Course II) Colton Andre Koeniguer The Playbook - A Novel Approach to Juan Sebastian Jauregui Lopez Identifying Opportunity for on Machine Measurement and Adaptive Machining Vladyslav Kondratiuk **Projects** Alvin Jeng Julfri Kosasih Run Jiang **Nathaniel Charles Hitchcock** (See also S.M., Course II) Kalina Stefanova Kourdova Oversized Package Placement Michael Asher Hoffer-Hawlik Optimization in Warehouses **Aaron Owen Kovar** Richard Phillips Hogan III Meichen Jin

Connor Jay Kozin

Hyang Jo

Jerry Hong

Ryota Kozuki Molly Stark Little Edward Reed McDonough Anjali M. Krishnamachar Jennifer Fang Liu Peter Joseph McHale IV (See also S.M., Course VI) Fulfillment Simulation and Inventory Tianbo Liu John Newton McNiff Location Optimization Yupeng Liu Mimi Juazlin Binti Md Jaini Megan Krishnamurthy **Timothy Power Livingston** Roshni Mehta Sakshi Kumar (See also S.M., Course VI) Streamlining Financial Analysis for Novel Zhi Mei Valerie Joyce Kutsch Robotics Concepts John Joseph Merkovsky, Jr. Lillian H. Kwang Rosemburg Lopes Neto **Boris Meyerovich** Vanessa Labrador Jarron Bostick Lord Qing Qing Miao Samuel Charles Lambert **Daniel Malone Lorence** Christina Kathleen Michaels Thomas Philip Lane III Nicolás Lorenzini Raty (See also S.M., Course VI) Short Duration Job Scheduling and Rebecca Susan Lang Assignment Using Staged Mixed Integer James Alden Lough Programs Francisca Larraguibel Rubio Michael James Lunny (See also S.M., Course XVI) **David Thomas Mickle** Automation of NC Programming with Diego Pablo Laso Olivares Artificial Intelligence Andrew C. Mikkelson (See also S.M., Course X) Benjamin Brindle Lauer William Lockwood Lynch Biomanufacturing Automation Plug and Joseph Lavin Nicholas John Lyons Jeffrey William Miller Arielle Marie Lawrence (See also S.M., Course XVI) Mariann Sun Engelbrecht Lysholm Application of an Agile Framework in Assessing and Aligning Digital Twin Use Aymeric Gilbert Joseph Leboulanger Vito Campelo de Macedo Cases Across Product Classes in a Large Organization Melinda Grace Lee Kendall Catron MacRae **Kevin Francis Mills** Alexandros Frixos Letsas Lorenzo Mambrini Nasser Mohamed **Brian Edward Lewis Garrett John Maples** Aulo Riccardo Morini Cobo Ang Li Diane Patricia Martin Rachel Kristen Morpeth Daniel Li Colton Ryne Martinez William Albany Mulholland Qiyang Li Raquel Mascarenhas Hornos Alexander Ray Muller Summer Siman Li (See also S.M., Course I) Lydwien Mathijssen Leveraging Analytics for Improved Supply Chain Operations Jonathan Qi Yang Lim Dubem Raphael Mbeledogu

Christopher Aynesworth McDonough

Nicole Eunhae Lim

Jessica L. Mulvihill

Ferran Muntaner Virgili Nicholas Ryan Page Sophie Zi Yi Qian (See also S.M., Course II) Enabling Growth in a Middle-Market Job Johana Muriel Grajales Felipe Quintella Correia Shop Environment (See also S.M., Course II) Optimizing Demand Re-Allocation under Kayemba Elie Mvula **Dionysios Panagiotopoulos** Fixed Capacity Commitments Meaghan McLean Nader Hrishikesh Chintamani Paranjape Matthew Radandt Nikita Nadkarni Angela Heejoo Park Norally Franceska Radas Kovalchuk Ana Navarro Lafuente Elgun Pashazade Santiago Raffo Lois Eileen Nersesian **Emily Ann Pate Manuel Ramirez Palacio** (See also S.M., Course X) Text Analytics to Inform Deviation Root Jessica Helen Pedersen CauseAnalysis in Biomanufacturing **Evan Saura Ramsey** Aaditya Niranjan **Tamir Peleg** Sophie Elizabeth Ranen (See also S.M., Course II) Waste Reduction in Amazon Robotics Shannon Alicia Nolte Sushmitha Ravikumar Sortable High Velocity Fulfilment Using Six-Sigma and Product Design Methods Eduardo Novato Silva Boratto Martin Reindl Luis Peral Ferré Nagela Nukuna Rio Richardson Angelo Picciuto Nnamdi Fredrick Nwabudike Alexandra Rigobon Marinella Josefina Piñate Milanese Sean Martin O'Donnell Jovinson Ripert (See also S.M., Course II) Jonatan Podhorzer Automotive Inventory Delivery Location Benjamin Murschel Rocci Optimization Colin M. Poler (See also S.M., Course VI) Yvette Rodriguez-Acosta Jakob Gerwin Obersriebnig Improving Operational Efficiency of a Small Manufacturing Maintenance Amanda Jean Rohrer Mariko Ogawa Organization (See also S.M., Course I) Sebastián Rojas Restrepo Building a Carbon Allocation Julia M. Pomerantz Methodology across Multiple Business Teams and Activities with Isabella Teresa Rolla Interdependencies William Axel Pontoppidan Benjamin Max Rosenblum Temitope Ewannole Ohiomoba Juan Camilo Posada Brandon Scott Rosenblum Kentaro Ohuchi **Alexander Winslow Potter** Evan Herman Rosenfield Michael Chidinma Okolo Hannah Rose Potter **Austin Lorenz Roth** Tomohito Okuda Alexandra Nicole Prather Souvik Roy Samara Rose Oster John Jefferson Prince

Clara Isabel Purroy Ortega

**Christopher Prospero Puryanto** 

Eduardo Enrique Ruffo Rodriguez

Rachel Alexandra Ruha

Moritake Ota

Adekunle Lukman Oyewole

James Elbridge Russell Tommy Tianqi Shi **Kelsey Stone** Lauren M. Sakerka Keith William Shields Joshua Strauss (See also S.M., Course I) **Evaluating Strategies for Wide Scale** Shinya Shinoda Ryan Edward Strobel Replacement of Human Inspection with Machine Vision Caitlin Shufelt Rona W. Sun **Daniel Sákovics Matutes** Maria Mercedes Sidders Vaishnav Sunil Kunal Manoj Sanghani (See also S.M., Course I) Ben Andrew Sidell Adam Swartzbaugh (See also S.M., Course II) Advanced Functionality of Digital Advancing Replenishment Efficiency Mining Predictive Analytics & Insights Thierno Sylla Utilizing Unit of Measure and Planogram Platform Settings Sho Tanaka Carolina Santiago Morales David Michael Siegel Carnegie Tee An Tang Jean Edwardo Santos Philipp Simons **Shivang Tayal** Production Network Capacity Modeling Lakshmi Sita Savaram for Strategic Network Planning Faraz Tayyab Debora Scalabrin Holanda Jessica Singh **Edward David Tepper** Leandro Oscar Schlottchauer Graham McCloud Skinner Sirachat Thamrongsak Alyssa Kaitlin Schmid Pierre-Olivier Smith Attasith Tienwuttinun Maria Eugenia Schmitt Rauh **Robert Rex Smith** Michelle Bryck Timmerman Adam Marc Schneebaum Stephanie Hope Smolinski (See also S.M., Course II) Andrew John Tindall **Andrew Wong Schroeder** Effects of Standardization in a (See also S.M., Course VI) Developing Manufacturing Environment Analytics to Make Hybrid Work, Work Christopher Schroeder Gabriela Silva Soalheiro Maximiliano Tommasi Elizabeth Atwood Schubauer Marc Solsona Bernet Deoye Olatunji Tonade, PhD Anna Kathryn Senko David H. Song Lexie Allison Tonelli Felipe Serrano Hoogsteyns Yaniv Spektor Jaipaul Singh Toor Paras Sethi Clinton Logan Spencer Andrew Christopher Tresansky (See also S.M., Course II) **Emily Devora Sharfman** Assessment and Operationalization **Shelby Spencer** of Automation in Final Product Riddhima Sharma Manufacturing **Connor Thomas Stehr** (See also S.M., Course XVI) Mengshu Shen Megan McCloskey Tschirch Accelerating Adoption of Large-Format Additive Manufacturing in Aerospace Adam Michael Sherman Tooling

Allegra Alicia Stennett

**Zachary Benjamin Sherman** 

Lampros Tsontzos Francis Lorenzo Wilson **Master of Business Analytics** (See also S.M., Course I) Course XV-N Dynamic Algorithm for Target Inventory Adam William Wilver Sloan School of Management and the Impact on Replenishment Strategy Jared Dreier Wishnow Tatdanai Asavamongkolkul (September, 2021) Kasie Natasha Uddoh Raymond K. Wong Aarushi Bagga Ugochukwu E. Ume (September, 2021) Cameron Jon Woodruff Nicholas Ovide Murray Vachon Haocheng Bi Paige Melendy Wyler (September, 2021) (See also S.M., Operations Research) Pranav Vangala Developing a Decision-Making (See also S.M., Course II) Framework for Carbon: Incorporating Pierre-Louis Bourlon Operations Strategy for Evolving Carbon into Optimized Business (September, 2021) **Customer Profiles** Objectives Jean Bouteiller Sharon Jacqueline Velasquez-Soto Nancy Chen Xia (September, 2021) Carolina Andrea Abigail Veneros Vera Jenny Jie Xu **Robert Tristan Breyer** (September, 2021) **Anthony Maurice Verleysen** Yue Xu Yizhou Cao Luis Guillermo Vernet (September, 2021) Sravani Yajamanam Kidambi (See also S.M., Course VI) Daniel Victoria Dionicio End-to-End Artificial Intelligence Xiaotong Chen Lifecycle Management (September, 2021) Thomas Vieth **Zhen Yang** Raphael Chew Wen Jie (September, 2021) Juan Carlos Villalonga de Roda Lefei Ye Riccardo Coato Luis Miguel Vinke Fernández (September, 2021) Robert Kipng'eno Yegon Michelle Laurel Volz **Imane Farhat** Jo-Hannah Yeo (September, 2021) John Anthony Vroom Yael Yoffe Derby Keith Robert William Fleming Stephanie Catherine Wade (September, 2021) Ryota Yoshino **Brooke Noel Wages** Stephanie Gabrielle Franklin Jacqueline Elizabeth Young (September, 2021) Eric Hollister Wainman Jonathan Daniel Yu Shaun Fendi Gan (September, 2021) Mark Donald Wallner Clark Jiun Yuan Matthew Brian Robert Garbecki Austin Wanandi (September, 2021) Franco Giulio Zambra Ramos **Bryan Wang** Zachary Matthew Garberman Adrian Zambrano Garcia (September, 2021) Samantha Yu Wang Inbar Zilber Kiran S. Gite

Eliane Isabelle Zumtaugwald

(September, 2021)

Matthew Carl White

Lu Han (September, 2021)

Aniruddh Hari (September, 2021)

Jiani He (September, 2021)

Nassim Helou (September, 2021)

Armando Jesus Hermosilla Forneron (September, 2021)

Brian Hsu (September, 2021)

Edoardo Alessio Salvatore Italia (September, 2021)

Xiaming Jin (September, 2021)

Victor Gabriel Jouault (September, 2021)

Pei-Pei Kuo (September, 2021)

Olga Kyriazi (September, 2021)

John Thomas Lazenby (September, 2021)

Chloe Ka Yee Lee (September, 2021)

Ming Da Li (September, 2021)

Yumin Lin (September, 2021)

David Leonard Liszewski (September, 2021)

Jacob P. Martin (September, 2021)

Noé Mikati (September, 2021)

Xinhui Mo (September, 2021) Anirudh Murali (September, 2021)

Michelle Ong (September, 2021)

Yueying Pan (September, 2021)

(September, 2021)

Alexandros Vasilis Psichas

Jorge Alejandro Quintanilla Decrescen-

(September, 2021)

Charlson Ro (September, 2021)

Skandere Hassine Sahli (September, 2021)

Denis Sai (September, 2021)

Arnaud Simon Sarfati (September, 2021)

Jack Henry Schooley (September, 2021)

Rebecca Hsiang-Yun Schubertrügmer (September, 2021)

Arié Lev Samuel Selinger (September, 2021)

Yuhan Sima (September, 2021)

Saksham Soni (September, 2021)

Arkira Tanglertsumpun (September, 2021)

Sumiran Singh Thakur (September, 2021)

Nancy Knight Thomas (September, 2021)

Yurui Tong (September, 2021) Annita Vapsi (September, 2021)

**Aaron Lin Wang** (September, 2021)

Simon Weill (September, 2021)

Shane Chamberlain Gathrid Weisberg (September, 2021)

Peijun Xu (September, 2021)

Yihua Xu (September, 2021)

**Master of Finance** Course XV-F

Sloan School of Management

Salman Aamer (February, 2022)

Nikunj Agarwal (February, 2022)

Sheikha Abdulaziz Bin Ayyaf Al-Mogren

Saeed Binmarran Aldhaheri (February, 2022)

Kaidi An (February, 2022)

Raj Kumar Anand (February, 2022)

Bernardo Araujo Azevedo

Gauri Bahul (February, 2022)

Leonard Henri Maurice Bessis (February, 2022)

Raphael Bokobza (February, 2022)

Luigi Camilli (February, 2022)

Jian Chen (February, 2022)	Corentin Claude Raymond Cornil Gatellier (February, 2022)	Sijie Jiang (February, 2022)
Junyou Chen (February, 2022)	Danilo Gavronov	Wenyang Jiang (February, 2022)
Qiaohao Chen (February, 2022)	Ryan Joseph Gebhardt	Xinyan Jiang (February, 2022)
Yiming Chen (February, 2022)	Zeyu Geng (February, 2022)	Zongyan Jiang (February, 2022)
Ziyun Cheng	Hippolyte Gisserot-Boukhlef	Lian Jin (February, 2022)
Yan Qi Chiang	Hongzhao Guan (February, 2022)	Raghav Kedia
Teck Yan Chua	<b>Dongqi Guo</b> (February, 2022)	(February, 2022)  Louis Labat
Jincheng Cui (February, 2022)	Jing Guo (February, 2022)	Chester Lee
Michael Cole Dady	Sitao Guo	Aiqi Li
Yuri Dai (February, 2022)	(September, 2021)  Tianyi Guo	(February, 2022) Boyao Li
Pietro Olmo Decio	(February, 2022)	(February, 2022)
Apolline Deroche	Jiahui Han (February, 2022)	Haoyu Li (February, 2022)
Giacomo Edoardo Filippo di Gioia  Benjamin Samuel Dimant	Jingyi He (February, 2022)	<b>Huizhi Li</b> (February, 2022)
	Yawei He	Songhao Li
Henry Donnelly (February, 2022)	(February, 2022)	(February, 2022)
Wenting Du	Boning Huang (February, 2022)	Yunze Li (February, 2022)
Ziwei Fan (February, 2022)	<b>Jiazhen Huang</b> (February, 2022)	Ruilin Liao (February, 2022)
Hussein Fellahi (February, 2022)	Jinhan Huang (February, 2022)	Chloe Huiyi Lim (February, 2022)
Lun Feng (February, 2022)	Yinan Huang (February, 2022)	Min Lim
Yohan Fis	Yixuan Huang (February, 2022)	Xingyuan Liu (February, 2022)
Jules Frank (February, 2022)	Chang Jiang (February, 2022)	Shunli Lu (February, 2022)

Sen Gao

Ce Luo Yutong Song Zane Yu Jun Wong (February, 2022) (February, 2022) Jessie Jingqi Wu Hao Lyu Zixian Song (February, 2022) (February, 2022) Ninglu Ma Xixian Wu Shreyas Vignesh Srinivasan Francesco Maulini Zichao Xi (February, 2022) (February, 2022) Xinjie Sun (February, 2022) Sergio Miguel Moya Jiménez Ke Xie (February, 2022) Xiyan Sun (February, 2022) **Dayang Xing** He Pan (February, 2022) (February, 2022) Cheng Hin Tan Lingli Xu Qian Pan Yukai Tan (February, 2022) (February, 2022) (February, 2022) Xiaoming Xu Pataraporn Peechapol **Fuyu Tang** (February, 2022) (February, 2022) (February, 2022) Minglang Yang Warot Phuangmarayat Mingcheng Tang (February, 2022) (February, 2022) (February, 2022) Xiaonuo Yang Christian Nygard Pusterla Yuanjie Tao (February, 2022) (February, 2022) Ashwin Xavier Ringadoo Jiayi Yao (February, 2022) You Tian (February, 2022) (February, 2022) Alessandro Rossi Polvara Lingyun Ye Ling Tong (February, 2022) Kaivue Ruan (February, 2022) **Hugues Walter** Banglu Yu (February, 2022) Matthew Chungwon Seh Ruiqin Wan (February, 2022) (February, 2022) Huiwen Zhang (February, 2022) Jingfan Shangguan Haoyu Wang (February, 2022) (February, 2022) Lanxin Zhang (February, 2022) Shuyuan Sheng Junzhang Wang (February, 2022) (February, 2022) Xitong Zhang (February, 2022) Alina Shestiaeva Kaidi Wang (February, 2022) (February, 2022) Yujia Zhang Yuchen Shi Luxi Wang Yuqing Zhang (February, 2022) (February, 2022) (February, 2022) Saumya A. Singh Ruiqi Wang Zhibo Zhang (February, 2022) (February, 2022) (February, 2022) Yan Song Zixuan Wang Junxiang Zhao (February, 2022) (February, 2022) (February, 2022)

#### Yayu Zhu

(February, 2022)

#### Tian Zhuang

(February, 2022)

## Master of Science in **Management Studies**

Course XV-S Sloan School of Management

#### Hendrik Bründermann

Managing Diversity in the Modern European Workplace

#### Cheng Cheng

How to Improve the Performance of M&As: From the Cultural Clash Perspective

#### Marie Destailleur

Biodiversity and Business: Who Will Save Whom?

## Gaspard Benoit Gilles Fouilland

Sigma Ratings Case Study

#### Xiaojing Guo

Accounting Frauds of Chinese Public Companies on the US and Chinese Stock Exchanges

#### Liuning He

Mobile-Payments in U.S. and China

## Thanasak Hoontrakul

Review of US Business Models in Longevity Economy and Strategy Recommendation for the Thai market

## Sharan Iammanahalli Mahesh

Agritech Innovations in India

#### Shu Ran Li

A Study of Livestream Shopping's Role in the Customer Journey

#### Sipei Li

Cloud Service Strategies and Competition in the Chinese Market Among Major **Technology Companies** 

#### Boyan Liu

Artificial Intelligence and Machine Learning Capabilities and Application Programming Interfaces at Amazon, Google, and Microsoft

#### Dahai Liu

Redesigning Marketing for Traditional Chinese Medicine Clinics in China

#### Kaiwen Liu

Price Competition Reduction Strategies in Chinese B2C E-Commerce Markets: A Case Study

#### Jizheng Luan

Reform of Chinese-Stated Entities in Financial Sector

## Margaret Wright McLeod

Venture Capital and Human Capital Patterns in Dual Use Hardware Startups in the United States and United Kingdom

#### Maximilian Pagel

Meat No Longer Requires Animal Slaughter – Valuing an Alternative Protein Player

#### Pedro Alonso Sanabria Pardo

New Growing Businesses: Vendors Call Option to Sustain Growth

## Inderpreet Singh

Integrating ESG Factors to Equity Valuation

#### Chongyang Wang

The Attraction of China's Deep Tech Entrepreneurial Ecosystem for Chinese STEM Ph.D. Students Studying in the United States to Start Their Own Businesses Back Home

#### Cong Wang

A Financial Model to Assist New Therapeutics Development Decision Making

## Miao Xu

Analysis of Changes in the Investment Strategies of Real Estate Funds for Multi-Family /Single-Family Houses After the Pandemic

Internet Hospitals in China - Exploration of Business Models and Marketing Strategies

## Master of Science in **Management of Technology**

Course XV-A

Sloan School of Management

#### James Yin Bon Man

Towards the Future of Work: Managing the Risks of AI and Automation

#### Saraswatula Venkata Aditya

Business Value of Enterprise Digital

## Master of Science in **Management Research**

Course XV Sloan School of Management

#### **Patrick Augustine Adams**

Jünger Can't Borrow: Demographic Imbalances and Currency Risk Premia

#### Jennifer Nancy Lee Allen

Scaling Up Fact-Checking Using the Wisdom of Crowds

#### Samuel Sobel Anderson

(February, 2022) Reading Between the Lines: The Information Content of Financial Statement Disaggregation

#### Kunho Baik

(September, 2021) Private Equity, Disclosure Quality, and **Audit Quality** 

#### Marat Ibragimov

Customer Search and Product Returns

Targeting Seasonal Marketing Campaigns: Rebalancing Exploration and Exploitation

## Alex Vernon Moehring

(February, 2022) News Feeds and User Engagement: Evidence from the Reddit News Tab

## Fiona Paine

Big Data and Firm Risk

#### Eppa Rixey V

Legitimacy-Centric Regulatory Disruption: Revitalizing Communities and Competition in a Mature, Regulated Market

# Mariia Tiurina

Tornado in Credit Desert: the Role of Consumer Credit Access in the Disaster Recovery, Evidence from Arkansas

#### Emma Benz van Inwegen

More Choices or Help Choosing?: Experimental Evidence on Helping Firms Hire

# Gabriel Medaglia Voelcker

Persistent Costs of Disclosure Exemption Regulation

#### Rachel Seou Yoon

Taxes and Product Market Outcomes: Asymmetric Effects of Tax Cuts on Winners v. Losers

# Alan Zhang

(September, 2021) Regenerative Coordination: Working for a Living Service

# Master of Science in Operations Research

Sloan School of Management in conjunction with the Schwarzman College of Computing

## **Lindsey Blanks**

Operational Scheduling of Deep Space Radars for Resident Space Object Surveillance

## Ken Groszman

(See also M.B.A., Course XV) Sequential Optimization for Prospective Customer Segmentation and Content Targeting

# Samuel Stone Humphries

Analytics for a Carbon-Free World

# Yumeng Niu

Optimal Targeting Under Gender Fairness

## Stanislav Ivaylov, Slavov

Causal Inference: Heterogeneous Effects and Non-stationary Environments

## Paige Melendy Wyler

(See also M.B.A., Course XV) Developing a Decision-Making Framework for Carbon: Incorporating Carbon into Optimized Business Objectives

# **SCHOOL OF SCIENCE**

# **Master of Science in Chemistry**

Course V

Department of Chemistry

#### Aaron Liu

Site-Selective C-H Bond Diversification of Glycosides

#### Alexander Edward Seim

Catalytic Reactions of Organoboranes

# **Master of Science in Biology**

Course VII

Department of Biology

# Kathleen Whitmore Higgins

(September, 2021)

PRMT5 Inhibitors in Merkel Cell Carcinoma

# Master of Science in Microbiology

Course VII

Department of Biology

## Samantha Leigh Edelen

(September, 2021)

Exploring Protoheme IX

Farnesyltransferase as an Antimalarial Drug Target.

# Master of Science in Physics

Course VIII

Department of Physics

# Suzannah Alcyone Fraker

(February, 2022)

Deep Learning for the KamLAND-Zen Search for 0νββ

Yuki Tatsumi

(September, 2021)

Magneto-Thermal Transport and Machine Learning-Assisted Investigation

of Magnetic Materials

# Master of Science in Brain and Cognitive Sciences

Course IX

Department of Brain and Cognitive

#### Paloma Sánchez-Jáuregui Ramírez

(September, 2021)

Microfluidics for Calcium Imaging of C.elegans Neurons During Temporally Precise Odor Stimulation

# Master of Engineering in Computation and Cognition

Course VI-9

Department of Brain and Cognitive Sciences

#### An Jimenez

Predicting Cognitive Reflection from Digital Fingerprints

#### Jason Madeano

Learning to Solve Complex Tasks by Growing Knowledge Culturally across

# Master of Science in Earth and Planetary Sciences

Course XII

Department of Earth, Atmospheric, and Planetary Sciences

# **Elise Margaret Cutts**

Marine Carbohydrate-Active Enzymes Illuminate Microbial Ecology, Evolution, and Carbonate Precipitation

# Megan Elisabeth Guenther

Origin of the Lunar Ultramafic Glasses Constrained by Experiments and Models

# Mathilde Emilie Pauline Wimez

Systematic Exploration of a Volcanic Long-Period Earthquake Swarm with a Recursive Matched-Filter Search

# AWARDED JOINTLY WITH THE WOODS HOLE OCEANOGRAPHIC **INSTITUTION**

# Master of Science in Mechanical **Engineering**

#### Daniel Wilson Goodwin

Course II (September, 2021) Environmental Effects of the Beaufort Lens on Underwater Acoustic Communications during Arctic Operations

#### Jacob Peter Heuss

Course II (September, 2021) Reduced Order Modeling for Stochastic Prediction and Data Assimilation Onboard Autonomous Platforms at Sea

#### **Bradli Anne Howard**

Course II (September, 2021) Multi-Path Penalty Metric in Underwater Acoustic Communication for Autonomy and Human Decision-Making

#### Jesse Rowe Pelletier

Course II (February, 2022) Human-Autonomy Teaming for Improved Diver Navigation

# Master of Science in Marine **Geology and Geophysics**

## Faith Joan Duffy

Course XII An Inverse Modeling Approach to Investigate Deep Ocean Ventilation from Radiocarbon Records

# Master of Science in Physical Oceanography

# **Timothy Ryan Getscher**

Course XII (September, 2021) Observing and Quantifying Kinematic Properties and Lagrangian Coherent Structures of Ocean Flows using Drifter **Experiments** 

# Kyle Robert Kausch

Course XII (September, 2021) Characterizing the Impact of Underwater Glider Observations on the Navy Coastal Ocean Model (NCOM) in the Gulf Stream Region

#### Peter Albert Roemer

Course XII (September, 2021) Stratification Dynamics in the Beaufort

# SCHOOL OF ARCHITECTURE AND PLANNING, DOCTORAL

## Doctor of Philosophy

School of Architecture and Planning

#### Ishwarya Ananthabhotla

(February, 2022) Thesis in the field of Media Arts and Sciences: Cognitive Audio: Enabling Auditory Interfaces with an Understand

#### Yu Qian Ang

of How We Hear

Thesis in the field of Architecture: Building Technology submitted to the Department of Architecture: Using Urban Building Energy Modeling to Develop Carbon Reduction Pathways for Cities

#### Isadora Araujo Cruxên

(February, 2022)

Thesis in the field of Political Economy, Development and Planning submitted to the Department of Urban Studies and Planning: Disordering Capital: The Politics of Business in the Business of Water Provision

#### Alpha Yacob Arsano

(February, 2022)

Thesis in the field of Architecture: Building Technology submitted to the Department of Architecture: Climate--Carbon--Equity: Making Sustainable Design Concepts Accessible for All

# Norhan Bayomi

(September, 2021)

Thesis in the field of Architecture: Building Technology submitted to the Department of Architecture: Heat Vulnerability and Risk Analytics for the **Built Environment** 

## Andrew David Richmond Binet

(September, 2021)

Thesis in the field of Urban and Regional Planning submitted to the Department of Urban Studies and Planning: Making the City Livable: Caregiving and Health in Gentrifying Boston

#### Johnna Cressica Brazier

(September, 2021)

Thesis in the field of Urban and Regional Planning submitted to the Department of Urban Studies and Planning: Mobile Carbon Footprinting: Sensing and Shaping the Carbon Emissions of Daily Activities Using Digital Technologies

# Joy Adowaa Buolamwini

(February, 2022)

Thesis in the field of Media Arts and Sciences: Facing the Coded Gaze with **Evocative Audits and Algorithmic Audits** 

## Colleen Chiu-Shee

(September, 2021)

Thesis in the field of Urban and Environmental Planning and Design submitted to the Department of Urban Studies and Planning: Ecological City Design and Planning: How China Expands Urban Ecology, Institutional Learning, and Cultural Shifts through the Evolving Eco-Developments

#### Eric Chu

(February, 2022)

Thesis in the field of Media Arts and Sciences: Learning Human Beliefs with Language Models

## Walker Peterson Downey

Thesis in the field of Architecture: History and Theory of Art submitted to the Department of Architecture: Resonant Bodies: Pauline Oliveros, David Tudor, and Music Mediated, 1950-1980

#### Abhimanyu Dubey

(February, 2022)

Thesis in the field of Media Arts and Sciences: Private and Provably Efficient Federated Decision-Making

#### **Jesse Noah Feiman**

(February, 2022)

Thesis in the field of Architecture: History and Theory of Art submitted to the Department of Architecture: Adam von Bartsch (1757-1821) and the Invention of the Original Printmaker

# Paloma Francisca Gonzalez Rojas

(September, 2021)

Thesis in the field of Architecture: Design and Computation submitted to the Department of Architecture: Machine Learning Simulation of Pedestrians Exploring the Built Environment

#### **Daniel Robert Goodwin**

(February, 2022)

Thesis in the field of Media Arts and Sciences: Highly Multiplexed Molecular Mapping of Biological Samples via Integrated Experimental and Computational Technologies

# Alexis Hope Gottlieb

(September, 2021)

Thesis in the field of Media Arts and Sciences: Designing Hackathons for Justice and Joy: Participatory, Narrative, and Artistic Approaches

#### Charles Joseph Holbrow

(September, 2021)

Thesis in the field of Media Arts and Sciences: Fluid Music

## Kristina Teresa Johnson

(September, 2021)

Thesis in the field of Media Arts and Sciences: Foundations of Full-Stack Neuroscience for Neurodiverse Individuals via Personalized, Naturalistic Studies

# Shannon Leigh Johnson

Thesis in the field of Media Arts and Sciences: Simultaneous, Large Multi-Gene Delivery for Implementation of Fluorescent Reporter Spatial Multiplexing to Image Signaling Pathways

# Johnathan J. Kongoletos

Thesis in the field of Architecture: Building Technology submitted to the Department of Architecture: Airflow in Interior Spaces: Implications on Comfort and Health

## Eman Abdelhalim Lasheen

Thesis in the field of Urban Planning and International Development submitted to the Department of Urban Studies and Planning: Against the Grain: A History and Policy Analysis of Rice, Water and the Edible Landscape in Egypt

## Albert José Antonio López

(September, 2021)

Thesis in the field of Architecture: History and Theory of Architecture submitted to the Department of Architecture: The Integrated State: Architecture, Planning, and Politics in Mexico, 1938-1958

#### Mostafa Mohsenvand

(February, 2022)

Thesis in the field of Media Arts and Sciences: Classifying and Displaying Brain-Waves through Self-Supervised Learning

#### Ken Nakagaki

(September, 2021)

Thesis in the field of Media Arts and Sciences: 'Shells' and 'Stages' for Actuated TUIs: Reconfiguring and Orchestrating Dynamic Physical Interaction

#### Ariel Noyman

Thesis in the field of Media Arts and Sciences: CityScope: An Urban Modelling and Simulation Platform

#### Daniel David Oran

(September, 2021) Thesis in the field of Media Arts and Sciences: Implosion Fabrication: Rethinking 3D Nanofabrication from First Principles

# Athina Papadopoulou

(February, 2022)

Thesis in the field of Architecture: Design and Computation submitted to the Department of Architecture: Affective Matter: A Haptic Material Modality for Emotion Regulation and Communication

#### **Andrew Colin Payne**

(September, 2021) Thesis in the field of Media Arts and Sciences: Scalable Methods for Spatial Genomics

#### Rida Qadri

(February, 2022)

Thesis in the field of Computational Urban Science submitted to the Department of Urban Studies and Planning: Drivers of Disruption: How Jakarta's Mobility Platform Drivers Understand, Transform and Resist the Algorithms that Manage Them

#### Carlos Emilio Sandoval Olascoaga

(September, 2021)

Thesis in the field of Architecture: Design and Computation submitted to the Department of Architecture: Drawing Participation: Histories of Geospatial Computing, Professional Silos, and Computational Potentials for Collaboration in Planning and Design

# **Dorothy Shun Wai Tang**

Thesis in the field of Urban and Regional Planning submitted to the Department of Urban Studies and Planning: Infrastructural Landscapes: The Technopolitics of Watershed Planning in Asia

#### Laura Sara Wainer

(February, 2022)

Thesis in the field of Urban and Regional Planning submitted to the Department of Urban Studies and Planning: The Informalization of Formal Housing Projects in the Global South: Policy Failure or Counterhegemonic City-Making?

## ElDanté Christopher Winston

Thesis in the field of Architecture: History and Theory of Architecture submitted to the Department of Architecture: Power and Punishment: Architecture and Violence in the Italian Renaissance

# SCHWARZMAN COLLEGE OF COMPUTING, DOCTORAL

## Doctor of Philosophy

Schwarzman College of Computing

#### Paolo Mikael Bertolotti

(February, 2022) Thesis in the field of Social and Engineering Systems and Statistics submitted to the Institute for Data, Systems, and Society: Inference and Diffusion in Networks

#### Eaman Jahani

(February, 2022) Thesis in the field of Social and Engineering Systems and Statistics submitted to the Institute for Data, Systems, and Society: Network Effects on Outcomes and Unequal Distribution of Resources

#### **Bomin Jiang**

(September, 2021) Thesis in the field of Social and Engineering Systems submitted to the Institute for Data, Systems, and Society: Identification and Robustness in Central Banking and Supply Chain

#### Hanwei Li

Thesis in the field of Social and Engineering Systems submitted to the Institute for Data, Systems, and Society: Estimation and Optimization in Online Marketplaces

# Minghao Qiu

(September, 2021) Thesis in the field of Social and Engineering Systems submitted to the Institute for Data, Systems, and Society: Impacts of Energy and Environmental Policies on Air Quality: Bridging Observational Data, Statistical, and Atmospheric Models

# Manxi Wu

(September, 2021) Thesis in the field of Social and Engineering Systems submitted to the Institute for Data, Systems, and Society: Information, Learning, and Incentive Design for Urban Transportation Networks

#### Qi Yang

(September, 2021) Thesis in the field of Social and Engineering Systems submitted to the Institute for Data, Systems, and Society: Partisanship, Friendship, and Censorship in Online Social Networks

#### Yuan Yuan

(September, 2021) Thesis in the field of Social and Engineering Systems and Statistics submitted to the Institute for Data, Systems, and Society: Understanding and Reshaping Social Networks with Advanced Computational Techniques

# SCHOOL OF ENGINEERING, DOCTORAL

#### **Doctor of Science**

School of Engineering

#### Oliver Jia-Richards

Thesis in the field of Space Propulsion and Controls submitted to the Department of Aeronautics and Astronautics: Exploration of Planetary **Bodies with Electrospray Thrusters** 

#### Suhas Subramanya Kowshik

Thesis in the field of Electrical Engineering and Computer Science: Non-Asymptotic Behavior in Massive Multiple Access and Streaming System Identification

## Joshua Ka-Wing Lee

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Maximal Correlation Feature Selection and Suppression with Applications

# Benjamin Lienhard

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Machine Learning Assisted Superconducting Qubit Readout

#### Catherine Aiko Lockton

(September, 2021) Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Quantum State Discrimination with Overcompleteness

#### Aramael Andrés Peña-Alcántara

Thesis in the field of Civil Engineering and Computation submitted to the Department of Civil and Environmental Engineering: A Subject Based Methodology for Measuring Interclass Bias in Facial Recognition Verification Systems'

## Gianluca Roscioli

(February, 2022) Thesis in the field of Materials Science and Engineering: Failure of Martensitic Sharp Edges: A Micro-Mechanical **Exploration for Design Guidelines** 

#### Oscar A. Viquez Rojas

Thesis in the field of Mechanical Engineering: Vehicle Autonomy Under the Arctic Ice: Environmental Adaptation through Model-Aided Machine Learning

#### Shaolou Wei

(February, 2022)

Thesis in the field of Materials Science and Engineering: Overcoming the Limits of Strain-Induced Martensitic Transformation in Metastable Face-Centered Cubic Alloys

# Doctor of Philosophy

School of Engineering

#### Navid Abedzadeh

Thesis in the field of Electrical Engineering and Computer Science: Techniques for Reducing Beam-Induced Damage in Electron Microsco

#### Weeraratna Patabendige Maleen Hasanka Abeydeera

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Scalable and Broad Hardware Acceleration through Practical Speculative Parallelism

# Youssef Medhat Aboutaleb

(February, 2022)

Thesis in the field of Econometrics and Statistics submitted to the Department of Civil and Environmental Engineering: Theory-Constrained Data-Driven Model Selection, Specification, and Estimation: Applications in Discrete Choice Models

## Sara Achour

(September, 2021) Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Compilation Techniques for Reconfigurable Analog Devices

## Angela Josephine Acocella

(February, 2022)

Thesis in the field of Transportation submitted to the Department of Civil and Environmental Engineering: Alternative Freight Contracts: Data-Driven Design Under Uncertainty

# Adedayo Olumayowa Aderibole

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Power Line Communication for Low-Data-Rate Energy Control

#### Akshat Agarwal

(September, 2021)

Thesis in the field of Aerospace, Energy, and the Environment submitted to the Department of Aeronautics and Astronautics: Quantifying and Reducing the Uncertainties in Global Contrail Radiative Forcing

#### Anish Agarwal

Thesis in the field of Electrical Engineering and Computer Science: Causal Inference for Social and **Engineering Systems** 

#### Shashank Agarwal

Thesis in the field of Mechanical Engineering: Reduced-Order Modeling of Granular Intrusions Driven by Continuum Approaches

# Yash Agarwal

Thesis in the field of Biological Engineering: A Materials-Based Approach for Localized Delivery of Cancer Immunotherapy

# Alexa Christine Aguilar

Thesis in the field of Aeronautics and Astronautics: Multiple Simultaneous Optical Links for Space-Based Platforms

# Sebastian Gerd Ahling

(September, 2021) Thesis in the field of Mechanical Engineering: Elements of Lubricant Transport Critical to Piston Skirt Lubrication and to Leakage into the Piston Ring Pack in Internal Combustion **Engines** 

# Haluk John Akay

Thesis in the field of Mechanical Engineering: Representing Knowledge for Data-Driven Design

#### Karthik Akkiraju

(February, 2022)

Thesis in the field of Materials Science and Engineering: Trends in C-H Bond Dehydrogenation Energetics for Small Molecule Conversion

#### Mohammad S Kh F Sh AlAdwani

(September, 2021) Thesis in the field of Civil and Environmental Engineering: On Equilibria and Feasibility of Ecological Polynomial Dynamical Systems

# Keenan Eugene Sumner Albee

Thesis in the field of Autonomous Systems submitted to the Department of Aeronautics and Astronautics: Online Information-Aware Motion Planning with Model Improvement for Uncertain Mobile Robotics

#### Omar Abdulfattah AlDajani

Thesis in the field of Geotechnical and Geoenvironmental Engineering submitted to the Department of Civil and Environmental Engineering: Hydraulic Fracturing Behavior of Opalinus Shale: A Framework, Experimentation & Insights

#### Fahad Alhasoun

(September, 2021)

Thesis in the field of Computational Science and Engineering submitted to the Department of Civil Engineering and Environmental Science: Towards Generalization of Models on Streets Imagery: Methods and Applications

# Giulio Alighieri

(February, 2022) (See also S.M., Course X-A) Thesis in the field of Chemical Engineering: Scaling up Genetic Circuits in Mammalian Cells: A U1-snRNA-based Platform Enables Mammalian Cells to Compute the Bitwise Inversion of the Square Root of a Number

# Gregory William Allan

Thesis in the field of Aeronautics and Astronautics: Phasing of Ground-based Optical Arrays for Space Applications

## Tarfah Alrashed

Thesis in the field of Electrical Engineering and Computer Science: Systems to Democratize and Standardize Access to Web APIs

# Scott Thomas Alsid

Thesis in the field of Nuclear Science and Engineering: High-Sensitivity Nitrogen Vacancy Center Magnetometry: From DC

#### Alexander A. Amini

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: End-to-End Learning for Robust Decision Making

#### Wei An

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Guessing Random Additive Noise Decoding(GRAND), from Performance to Implementation

# Melodi N. Anahtar

(February, 2022)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Protease Activated Nanosensors for the Noninvasive Diagnosis of Community-Acquired Pneumonia

#### Daniel Allen Anderson

(September, 2021) Thesis in the field of Biological Engineering: Competition-Based CRISPR-dCas9 Transcriptional Control Mechanisms and Application of dCas9 Biosensors for Highthroughput, Cell-

Based Protease Inhibitor Screens

#### Nina Andrejevic

(February, 2022)

Thesis in the field of Materials Science and Engineering: Machine Learning-Augmented Spectroscopies for Intelligent Materials Design

#### Ian Wayne Andrews

Thesis in the field of Biological Engineering: Approaches to Investigating Antibiotic Efficacy and Discovery of Treatment Strategies against Antibiotic Tolerance

#### Marc-Joseph Antonini

(September, 2021)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Customizing Multifunctional Bidirectional Neural Interfaces through Fiber Drawing

#### Minoru Brandon Araki

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Learning to Plan by Learning Rules

#### Sujay Dilip Bagi

(September, 2021)

Thesis in the field of Mechanical Engineering: High-Throughput Synthesis of Metal-Organic Frameworks in a Continuous Flow Reactor

#### Nathaniel K. Bailey

Thesis in the field of Transportation submitted to the Department of Civil and Environmental Engineering: Dynamic Ridesharing under Travel Time Uncertainty: Passenger Preference and Optimal Assignment Methods

#### Akash Bajaj

(February, 2022)

Thesis in the field of Computational Materials Science and Engineering submitted to the Department of Materials Science and Engineering: Improving First-Principles Based Methods for Correlated Materials Modeling

## Sean Bozkurt Ballinger

Thesis in the field of Applied Plasma Physics submitted to the Department of Nuclear Science and Engineering: Modeling of Boundary Transport and Divertor Target Heat Flux - Implications for Advanced Divertor Concepts

## Yujia Bao

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Efficient and Robust Algorithms for Practical Machine Learning

# Ricardo Miguel Santos Baptista

Thesis in the field of Computational Science and Engineering: Stochastic Modeling and Likelihood-Free Inference Using Triangular Transports

#### Marc Barbar

Thesis in the field of Electrical Engineering and Computer Science: Decision-Making Under Uncertainty for Electric Power System Operation and **Expansion Planning** 

## Favyen Bastani

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Label-Efficient and Compute-Efficient Video Analytics

#### David Bau III

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Dissection of Deep Neural Networks

## Aaron S. Baumgarten

(September, 2021)

Thesis in the field of Aerospace Computational Engineering submitted to the Department of Aeronautics and Astronautics: Development of Models for Mixtures of Fluids and Granular Sediments

#### Cenk Baykal

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Sampling-based Algorithms for Fast and Deployable AI

#### Ashley Lynne Beckwith

(February, 2022)

Thesis in the field of Mechanical Engineering: Rethinking Plant-Based Materials Production: Selective Growth of Tunable Materials Using Cell Culture Techniques

#### Marc-André Bégin

Thesis in the field of Aeronautics and Astronautics: Perception and Control Methods for Improving the Autonomy of Off-Road Robots

# Jonathan Kyle Behrens

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Performance Implications of Mitigating Transient Execution Side Channel Attacks

#### Mohammed Benzaouia

(February, 2022)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: On Applications of Resonances, from One to Infinity

#### Brii M. Bhushan

(February, 2022)

Thesis in the field of Mechanical Engineering: Electrostatically Levitated Object Handoff to Minimize Wear and Particle Generation

#### Andrew Michael Biedermann

Thesis in the field of Chemical Engineering: An Integrated Approach to Enable Rapid Scalable Upstream Production of Subunit Vaccines with Pichia pastoris (Komagataella phaffii)

#### Rebecca Mae Black

Thesis in the field of Biological Engineering: Understanding the Differential Effects of Dexamethasone on the Metabolism of Healthy and Diseased Articular Cartilage

# William George Boag

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Evidence-Based AI Ethics

## Carles Boix

Thesis in the field of Computational and Systems Biology: Gene-Regulatory Circuitry of Disease Risk and Progression

# Jacob de Riba Borrajo

(February, 2022)

Thesis in the field of Biological Engineering: New Biological Pathways

# **Andrew Thomas Bouma**

Thesis in the field of Mechanical Engineering: Thermodynamically Driven Advances in Efficient and Cost-Effective Desalination and Brine Treatment

# **Brenden Andrew Butters**

(February, 2022)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Digital and Microwave Superconducting Electronics and **Experimental Apparatus** 

## Ki-Jana B. Carter

Thesis in the field of Materials Science and Engineering: Computational Methods for Small-Molecule Transparent Semiconductors

## Orhan Tunç Çeliker

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: Automated Cellular Identity Assignment in C. elegans Using Differential Gene Expression

#### Woo Hyun Chae

Thesis in the field of Materials Science and Engineering: Development of Solution-Processed Stable Silver Nanowire Networks for Transparent Electrodes

#### Tej Chajed

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Verifying a Concurrent File System with Sequential Reasoning

## Nisha Chandramoorthy

(September, 2021)

Thesis in the field of Mechanical Engineering and Computation submitted to the Department of Mechanical Engineering: An Efficient Algorithm for Sensitivity Analysis of Chaotic Systems

# Cecile Anne-Carole Frederique Chazot

Thesis in the field of Materials Science and Engineering: Spatially Directed Interfacial Polymerization

# Yifeng Che

(February, 2022)

Thesis in the field of Nuclear Science and Engineering: Application of Data-Driven Methods in Nuclear Fuel Performance Analysis

# Benson S. Chen

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Molecular Graph Representation and Generation for Drug Discovery

#### Changchen Chen

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: High-Dimensional Quantum Key Distribution with Frequency Encoding

#### Sitan Chen

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Provable Algorithms for Resilient Data Science

#### Siyu Chen

(February, 2022)

Thesis in the field of Transportation submitted to the Department of Civil and Environmental Engineering: Efficient and **Equitable Travel Demand Management** Using Price and Quantity Controls

#### Yen-Ting Chi

Thesis in the field of Materials Science and Engineering: External Field Effects on Defects in Functional Oxides: **Experiments and Simulations** 

#### **Rohan Sunil Chitnis**

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Learning State and Action Abstractions for Effective and Efficient Planning

## Jaclyn Leigh Cho

(September, 2021)

Thesis in the field of Materials Science and Engineering: Design of Superelastic Secondary-Phase-Toughened Alloys

## Jae Hyung Cho

Thesis in the field of Mechanical Engineering: Microscopic Characterization of Macroscopic Colloidal Gel Rheology

## Chanyeol Choi

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Memristor-Based AI Hardware for Reliable and Reconfigurable Neuromorphic Computing

## Hyeongrak Choi

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: Strong Light-Matter Interaction with Cavities for Quantum Information

#### Kyungyong Choi

(September, 2021)

Thesis in the field of Electrical Engineering and Computer Science: Versatile Biological Sample Preparation Platform Using Microfluidic Cell Sorting Device

#### Nadim Chowdhury

Thesis in the field of Electrical Engineering and Computer Science: GaN Complementary Metal-Oxide-Semiconductor (CMOS) Technology on GaN-on-Si

#### Ty Christoff-Tempesta

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: Design of Ultra-Robust Supramolecular Assemblies and Their Application to Water Remediation

#### Yu-An Chung

Thesis in the field of Electrical Engineering and Computer Science: Self-Supervised Learning for Speech Processing

# Alexandra Churikova

Thesis in the field of Materials Science and Engineering: Spin Hall Magnetoresistance and Current-Induced Magneto-Transport in Insulating Antiferromagnetic Oxides

#### Pierre Colombe Dromel

(February, 2022)

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: A Biomaterial-Based Stem Cell Therapy for Retinal Regeneration

#### Rachel Clare Connick

Thesis in the field of Nuclear Science and Engineering: Assessing Differential Scanning Calorimetry as a Retrospective Dosimetry Method for the Verification of Uranium Enrichment Activities

# Nathan Stuart Corbin

Thesis in the field of Chemical Engineering: Electrocatalytic Conversion of Carbon Dioxide to Value-Added Chemicals

#### Sarah Clare Cowles

Thesis in the field of Chemical Engineering: An Affinity Threshold for Maximum Efficacy in Anti-PD-1 Cancer Immunotherapy

#### Samuel Steven Cruz

Thesis in the field of Mechanical Engineering: Capillary-Driven Condensation for Heat Transfer Enhancement in Steam Power Plants

#### Siyu Dai

Thesis in the field of Mechanical Engineering: Learning to Make Decisions in Robotic Manipulation

#### Mina Dalirrooyfard

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Finding Patterns, Short Cycles and Long Shortest Paths in Graphs

#### Neil Chandra Dalvie

Thesis in the field of Chemical Engineering: Product and Host Engineering for Low-Cost Manufacturing of Therapeutic Proteins in the Yeast Komagataella phaffii

# Phillip Howard Daniel

(February, 2022)

Thesis in the field of Mechanical Engineering: Analysis, Design, and Control of Supernumerary Robotic Limbs Coupled to a Human

# Paul Dannenberg

(September, 2021)

Thesis in the field of Health Sciences and Technology submitted to the Harvard-MIT Program in Health Sciences and Technology: Scalable Development of Multiplexed Microparticle Technologies for Optical Single-Cell Barcoding

# Shoshana Lea Das

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Engineering Three Dimensional In Vitro Approaches to Study Cardiac Injury and Repair

#### **Supratim Das**

(See also M.B.A., Course XV) Thesis in the field of Chemical Engineering: Learning the Electrochemistry of Degradation and Safety in Graphite Porous Electrodes for Lithium-ion Batteries

#### Christopher Lee Dean

Thesis in the field of Electrical Engineering and Computer Science: Advances in Hierarchical Probabilistic Multimodal Data Fusion

#### Ismail Degani

(February, 2022) Thesis in the field of Electrical Engineering and Computer Science: Signal Processing Techniques Applied to Biomedical Diagnostics

#### Joseph Jeff DelPreto

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Robots as Minions, Sidekicks, and Apprentices: Using Wearable Muscle, Brain, and Motion Sensors for Plug-and-Play Human-Robot Interaction

#### Paula do Vale Pereira

Thesis in the field of Space Systems submitted to the Department of Aeronautics and Astronautics: Experimental Validation of Melt Probe Models for the Exploration of Ocean Worlds

## Connor Dobson

(February, 2022) Thesis in the field of Biological Engineering: Lentiviral Vector Engineering for High-Throughput Immune Profiling

## Zijing Dong

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: MRI Techniques for Quantitative and Microstructure Imaging

## Aidan Patrick Dowdle

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Design of a High Specific Power Electric Machine for Turboelectric Propulsion

#### Jianyi Du

(February, 2022) Thesis in the field of Mechanical Engineering: Advanced Rheological Characterization of Nanofilled Materials for Automotive Applications

#### Rebecca R. Du

Thesis in the field of Biological Engineering: Designing 3D Wireframe DNA Nanoparticles for Programmable Innate Immune Activation

#### Tao Du

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Differentiable Simulation Methods for Robotic Agent Design

#### Surya Effendy

Thesis in the field of Chemical Engineering: Corrosion and Corrosion Prevention Technology: Revisiting the Fundamentals and Looking Forward

#### Erik Roger Eisenach

Thesis in the field of Electrical Engineering and Computer Science: Vector Magnetometry Using Cavity-Enhanced Microwave Readout of Solid-State Spin Sensors

# Sally Ibrahim El-Henawy

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: Statistical Modeling of the Effects of Process Variations on Silicon Photonics

# Natalie Suzanne Eyke

Thesis in the field of Chemical Engineering: Automating Reaction Development: Hardware and Software for Fully-Automated High-Fidelity Navigation of High-Dimensional Chemical Reaction Space

#### Takian Fakhrul

(February, 2022)

Thesis in the field of Materials Science and Engineering: Iron Garnet Thin Films for Integrated Photonics and Spintronics

# **Cheng Fang**

(September, 2021)

Thesis in the field of Aeronautics and Astronautics: Efficient Algorithms and Representations for Chance-Constrained Mixed Constraint Programming

#### Olumurejiwa A. Fatunde

Thesis in the field of Operations Management & Decision Sciences submitted to the Department of Civil and Environmental Engineering: The Impact of Interpersonal Relationships and Incentive Structures on the Performance of Actors in Informal Supply Chains

#### Samuel James Faucher

Thesis in the field of Chemical Engineering: Dynamics and Phase Behavior of Fluids inside Isolated Carbon Nanotubes

#### Sarah C. Fay

(September, 2021)

Thesis in the field of Mechanical Engineering: Optimizing Shoe Midsoles for Running Performance

## Álvaro-Miguel Fernández Galiana

(February, 2022)

Thesis in the field of Mechanical Engineering: Development of Precision, Field-Deployable, Opto-Mechanical Instrumentation: Accessibility as a Functional Requirement

## Michael Forsuelo

Thesis in the field of Chemical Engineering: Investigations into Message Passing Neural Networks and Polymer Fouling

## **Kevin James Fox**

(See also M.B.A., Course XV) Thesis in the field of Chemical Engineering Practice submitted to the Department of Chemical Engineering: Carbon Catabolite Repression Relaxation: Approaches for Sugar Co-Utilization in Escherichia coli

#### Thibaud Fritz

(February, 2022)

Thesis in the field of Aeronautics and Astronautics: Plume to Global-Scale Atmospheric Impacts of Aviation Emissions

## Luke Benjamin Funk

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Image-Based Pooled Genetic Screens for Complex Cellular Phenotypes

#### Hayley Jayne Gadol

(September, 2021)

Thesis in the field of Environmental Chemistry submitted to the Department of Civil and Environmental Engineering: Cycling of Iron and Manganese (Oxyhydr) oxides in the Presence of Organic Matter

# Amit A. Gandhi

(February, 2022)

Thesis in the field of Mechanical Engineering: Sensor-Based Methods for Characterizing Technology Impact in Low-Resource Settings

#### Haining Gao

Thesis in the field of Materials Science and Engineering: Tailoring Fluoride/ Fluorine Bond Activity for High-Energy Li and Li-ion Batteries

#### Wei Gao

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Representing Unstructured Environments for Robotic Manipulation: Toward Generalization, Dexterity and Robustness

#### Caelan R. Garrett

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Sampling-Based Robot Task and Motion Planning in the Real World

#### **Clement Gehring**

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Efficient Reinforcement Learning via Singular Value Decomposition, End-to-End Model-Based Methods and Reward Shaping

# Jacqueline Sophie Gerritsen

Thesis in the field of Biological Engineering: Mechanistic Characterization of RTK Signaling Networks Using Phosphoproteomic Approaches

#### Albert Reuben Gnadt

Thesis in the field of Aeronautics and Astronautics: Advanced Aeromagnetic Compensation Models for Airborne Magnetic Anomaly Navigation

#### Peter T. Godart

(September, 2021)

Thesis in the field of Mechanical Engineering: Mechanisms of Liquid-Metal-Activated Aluminum-Water Reactions and Their Application

#### Jordan A. Goldstein

(September, 2021)

Thesis in the field of Electrical Engineering and Computer Science: Technologies for Room-Temperature Mid-Infrared Photodetection Using Graphene

# Gustavo Nunes Goretkin

(February, 2022)

Thesis in the field of Computer Science and Engineering submitted to the Department of Electrical Engineering and Computer Science: Visibility-Aware Motion Planning

#### Prateesh Goyal

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Congestion Control in Highly Variable Networks

# Elizabeth Erin Grace

(September, 2021) Thesis in the field of Biological Engineering: Characterization of Anti-Tumor T Cell Specificities to Inform Engineering of Antigen-Targeted Immunotherapies

# Katharine Virginia Greco

(September, 2021) Thesis in the field of Chemical Engineering: On the Impact of Electrode Properties and Their Design for Redox Flow Battery Performance

# Daisy Hikari Green

Thesis in the field of Electrical **Engineering and Computer** Science: Electrical Monitoring of Electromechanical Systems

#### Chongjie Gu

(September, 2021)

Thesis in the field of Mechanical Engineering: A Deterministic Model for Wear of Piston Ring and Liner and a Machine Learning-Based Model for Engine Oil Emissions

#### Fengdi Guo

(September, 2021)

Thesis in the field of Civil and Environmental Engineering: Improving Pavement Networks through Performance-Based Planning with Optimal Treatment Strategies and Management Policies

#### **Manuel Gutierrez**

(September, 2021)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Stability Methods for Regulated Loads

#### Seung Kyun Ha

(September, 2021)

Thesis in the field of Chemical Engineering: Engineering the Synthesis and Properties of Two-Dimensional Colloidal Perovskite Nanoplatelets

#### Cameron George Halliday

(See also M.B.A., Course XV) Thesis in the field of Chemical Engineering Practice submitted to the Department of Chemical Engineering: Molten Alkali Metal Borates for High Temperature Carbon Capture

# Jennifer Lynn Hammelman

(September, 2021)

Thesis in the field of Computational and Systems Biology: Chromatin Accessibility Informs Cell Identity: Studies in Silico, In Vitro and In Vivo

#### Jiahao Han

(February, 2022)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Harnessing Magnetic Switching and Dynamics Using Electron and Magnon Spin Currents

# Yining Hao

Thesis in the field of Chemical Engineering: Applications of Engineered Proteins in Redox Biology and Biomarker Detection Assay Development

#### Songtao He

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Enriching Digital Maps with Aerial Imagery and GPS Data

#### Tianxing He

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Towards a Deeper Understanding of Neural Language Generation

#### Shayna Lynne Hilburg

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: Computational Studies of Bio-Inspired Synthetic Random Heteropolymers

#### Eric Daniel Hinterman

Thesis in the field of Aeronautics and Astronautics: Multi-Objective System Optimization of a Mars Atmospheric ISRU Plant

#### **Charles Arthur Hirst**

Thesis in the field of Nuclear Science and Engineering: Quantifying Radiation Damage through Stored Energy Released during Defect Annealing in Metals

#### Dhiraj Holden

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Modern Interactive Proofs

#### **Dylan Alexander Holmes**

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Computing Moral Hypotheticals

#### Celestine Jia Huey Hong

Thesis in the field of Chemical Engineering: Engineering Materials for Non-Compressible Torso Hemorrhage and Internal Bleeding

#### Markus Attila Horvath

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: A Multimodal Approach to Investigate the Effects of Respiration on Fontan Flow to Inform Strategies for Circulatory Support

# MayLin Tian Howard

(September, 2021) Thesis in the field of Chemical Engineering: Layer-by-Layer Systems for Craniomaxillofacial Bone Repair

#### Jonathan Yee-Ting Hsu

(February, 2022)

Thesis in the field of Biological Engineering: Computational and Experimental Methods for CRISPR-based Saturation Mutagenesis Screens

#### Lucy Hu

(February, 2022)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Soft Robotics Applied to the Development of a Diaphragm Assist

#### Hejin Huang

(September, 2021)

Thesis in the field of Computational Materials Science and Engineering submitted to the Department of Materials Science and Engineering: Designing and Fabricating 3D Nanostructures through Directed Self-Assembly of Block Copolymers

# Brooke Donna Huisman

Thesis in the field of Biological Engineering: Tool Development for Studying and Manipulating Peptide-MHC Interactions in a Globally-Representative Manner

# In Young Hur

(February, 2022)

Thesis in the field of Air-Breathing Propulsion submitted to the Department of Aeronautics and Astronautics: Forced Response System Identification of Full Aero-Engine Rotordynamic Systems

#### Mohamed Ibrahim Mohamed Ibrahim

(September, 2021)

Thesis in the field of Electrical Engineering and Computer Science: Miniaturized Chip-Scale Quantum and Terahertz Systems Through Tight Integration of Electronics, Electromagnetics, and Qubits

#### Mirai Ikebuchi

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Applications of Homological Algebra to **Equational Theories** 

## Syed Muhammad Imaduddin

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: Ultrasound-Based Noninvasive Monitoring Methods for Neurocritical

#### Jeevana Priya Inala

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Neurosymbolic Learning for Robust and Reliable Intelligent Systems

#### Gregory R. Izatt

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Capturing Distributions over Worlds for Robotics with Spatial Scene Grammars

#### Vishnu Javaprakash

(February, 2022)

Thesis in the field of Mechanical Engineering: Engineering Physico-Chemical Interactions Across Drug Delivery, Agriculture and Carbon Capture

# **Zachary David Jensen**

(February, 2022)

Thesis in the field of Materials Science and Engineering: Data Driven Synthesis Planning Applied to Zeolite Materials

# Steven Joseph Jepeal

(September, 2021)

Thesis in the field of Nuclear Science and Engineering: Intermediate Energy Proton Irradiation: An Experimental and Analytical Foundation for Bulk Radiation Damage Testing

#### **Bo Jiang**

(February, 2022) Thesis in the field of Mechanical Engineering: System Design, Noise Reduction, and Improved Dimension Reconstruction for High Performance Ellipsometry

#### Menglei Jiang

(February, 2022) Thesis in the field of Mechanical Engineering: High-Strength Transformation-Induced Plasticity Steels with Reverted Interlath Austenite

## Wengong Jin

(September, 2021) Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Graph Representation Learning for Drug Discovery

#### Peiyu Jing

(February, 2022)

Thesis in the field of Transportation submitted to the Department of Civil and Environmental Engineering: Design and Evaluation of Urban Congestion Pricing Policies with Microsimulation of Passenger and Freight

# Seong Soon Jo

Thesis in the field of Materials Science and Engineering: Processing and Optical Uses of Van der Waals Layered Materials

# Hilary Anna Johnson

Thesis in the field of Mechanical Engineering: Adaptive Hydraulics for Improved Centrifugal Pump Efficiency

# Matthew Sean Johnson

Thesis in the field of Chemical Engineering: Automatic Generation and Analysis of Chemical Kinetic Mechanisms

# Byong Ha Kang

(September, 2021)

Thesis in the field of Biological Engineering: Identification and Knockout of Immunodominant Endogenous Retroviral Antigen in Murine Tumor Models

#### **Iksung Kang**

Thesis in the field of Electrical Engineering and Computer Science: Multi-Dimensional Computational Imaging from Diffraction Intensity Using Deep Neural Networks

#### Pritpal Singh Kanhaiya

Thesis in the field of Electrical Engineering and Computer Science: Carbon Nanotubes for Space Electronics: Enabling New Applications with **Emerging Technologies** 

#### Bharath Kannan

Thesis in the field of Electrical Engineering and Computer Science: Waveguide Quantum Electrodynamics with Superconducting Qubits

## Alexandre Kaspar

(February, 2022) Thesis in the field of Electrical Engineering and Computer Science: Garment Design Workflows for On-Demand Machine Knitting

## Karthik Kavassery Gopalakrishnan

(September, 2021)

Thesis in the field of Aeronautics and Astronautics: Modeling and Control of Networked Systems: Applications to Air Transportation

# Muhammad Ibrahim Wasiq Khan

Thesis in the field of Electrical Engineering and Computer Science: New Frontiers in Silicon Terahertz Electronics: Wirelessly Powered THz-ID and Secure THz Links

## Dongha Kim

Thesis in the field of Materials Science and Engineering: Understanding and Controlling the Surface Chemistry of Oxides to Enhance Catalytic Activity at **Elevated Temperatures** 

# Seunghyeon Kim

(September, 2021) Thesis in the field of Chemical Engineering: Boosting Biodetection Signals via Photopolymerization: Strategies for Photocatalyst Amplification

## Yoonho Kim

Thesis in the field of Mechanical Engineering: Magnetic Soft Continuum Robots for Telerobotic Stroke Intervention

# Younggyu Kim

Thesis in the field of Materials Science and Engineering: Understanding and Controlling the Degradation Mechanisms at Cathode-Electrolyte Interfaces in All-Solid-State Lithium-Ion Batteries

#### Eren Can Kizildağ

Thesis in the field of Electrical Engineering and Computer Science: Algorithms and Algorithmic Barriers in High-Dimensional Statistics and Random Combinatorial Structures

#### Ishwar N. Kohale

(September, 2021) Thesis in the field of Biological Engineering: Translational Phosphoproteomics Methods to Identify Biomarkers and Novel Therapeutic Targets

# Stephanie Mabel Kong

(September, 2021) Thesis in the field of Chemical Engineering: Layer-by-Layer Nanoparticles for Targeted Delivery and Treatment of Ovarian Cancer

## James Brandon Koppel

Meta-Metaprogramming

(September, 2021) Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science:

# Yosef S. Kornbluth

(September, 2021) Thesis in the field of Mechanical Engineering: Microplasma-Enabled Sputtering of Nanostructured Materials for the Agile Manufacture of Electronic Components

#### Artyom Kossolapov

(September, 2021)

Thesis in the field of Nuclear Science and Engineering: Experimental Investigation of Subcooled Flow Boiling and CHF at Prototypical Pressures of Light Water Reactors

## Konstantin Krismer

(September, 2021) Thesis in the field of Biological Engineering: Principled Methods and Models for Deep Learning Based **Functional Genomics** 

#### Joshua Moses Kubiak

(September, 2021)

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: Polymer Grafted Nanoparticles as Functional and Mechanically Robust Single-Component Composites

#### Yen-Ling Kuo

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Compositional Robot Learning for Generalizable Interactions

# Alim Ladha

(February, 2022) Thesis in the field of Biological Engineering: Characterization and Engineering of Transposons for Genome

#### Hsin-Yu Lai

(September, 2021)

Thesis in the field of Electrical Engineering and Computer Science: Tracking of Eye Movement Features for Individualized Assessment of Neurocognitive State Using Mobile Devices

#### Madeleine Reynolds Laitz

Thesis in the field of Electrical Engineering and Computer Science: Light-Matter Interactions in High-Efficiency Photovoltaics, LEDs, and Strongly-Coupled Microcavities

# Christopher I. Lang

(February, 2022) Thesis in the field of Electrical Engineering and Computer Science: Applications of Probabilistic Machine Learning Models to Semiconductor Fabrication

#### Christian Lee Lau

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: A Manufacturing Methodology for Carbon Nanotube-based Digital Systems: from Devices, to Doping, to System Demonstrations

# Dongchan Lee

Thesis in the field of Mechanical Engineering: Robustness Verification and Optimization of Nonlinear Systems

#### Ethan Sukrae Lee

Thesis in the field of Electrical Engineering and Computer Science: Gate-Geometry Dependence of Enhancement-Mode p-GaN Gate High **Electron Mobility Transistors** 

#### Jongwoo Lee

(September, 2021)

Thesis in the field of Mechanical Engineering: Effects of Mechanical Interventions on Human Locomotion

## Margaret Sandra Lee

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: Nanoparticle Self-Assembly for the Synthesis and Processing of Ordered Nanocomposite Solids

# Meelim Jasmine Lee

Thesis in the field of Biological Engineering: Integrated Computational and Experimental Analysis of Non-Neuronal Cell Molecular Mechanisms Contributing to Alzheimer's Disease Progression

## Sangho Lee

(February, 2022)

Thesis in the field of Mechanical Engineering: Nanoscale Engineering for Mixed-Dimensional Heterostructure Growth and Integration

#### Szu-Yu Lee

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Imaging through Optical Multimode Fiber: Towards Ultra-Thin Endoscopy

#### Youngbin Lee

Thesis in the field of Materials Science and Engineering: Engineering Biomedical and Bioinspired Fiber Devices via Thermal Drawing

#### Eric Christian Lehnhardt

(September, 2021)

Thesis in the field of Biological Engineering: Engineering Biological Materials for Carbon Capture and the Electrochemical Reduction of Carbon Dioxide to Light Hydrocarbons

#### Arny Leroy

(September, 2021)

Thesis in the field of Mechanical Engineering: Subambient Passive Cooling Enabled by Polyethylene Aerogels

## Maxwell A. L'Etoile

Thesis in the field of Materials Science and Engineering: Effects of Crystalline Anisotropy on Solid-state Dewetting

#### **Graham Leverick**

(February, 2022)

Thesis in the field of Mechanical Engineering: Towards Comprehensive Design of Electrolytes for Electrochemical Energy Storage

#### Jonathan Li

(February, 2022)

Thesis in the field of Computational and Systems Biology: Systems Biology Approaches for Elucidating Early ALS Disease Processes

#### Matthew Tin Chun Li

(September, 2021)

Thesis in the field of Mechanical Engineering and Computation submitted to the Department of Mechanical Engineering: Applications of Deep Learning to Scientific Inverse Problems

# Max Zhaoyu Li

(September, 2021)

Thesis in the field of Aeronautics and Astronautics: Spectral Models for Air Transportation Networks

# Xinhao Li

(September, 2021)

Thesis in the field of Mechanical Engineering: Disordered Optics for Multidimensional Information Processing

# Yiliang Li

Thesis in the field of Materials Science and Engineering: Ionic Conductivity Transitions in Antiperovskite Ionic Conductors

## Ruizhi Liao

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Multimodal Representation Learning for Medical Image Analysis

#### Lucas Matthias Karl Liebenwein

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Efficient Deep Learning: From Theory to Practice

#### Jasper Z. Lienhard

Thesis in the field of Materials Science and Engineering: High-Velocity Impact of Metal Microparticles

## Aditya Madan Limaye

Thesis in the field of Chemical Engineering: Physical Models and Statistical Methods for Understanding **Electrochemical Kinetics** 

#### **Sharon Lin**

(September, 2021)

Thesis in the field of Chemical Engineering: Free Volume Manipulation Techniques of Polymer Membranes for Gas Separations

#### Ting-An Lin

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Strategies for High-Performance Solid-State Photon Upconversion

# Katherine Y. Liu

(February, 2022)

Thesis in the field of Aeronautics and Astronautics: Improving Autonomous Navigation and Estimation in Novel Environments

## Quanquan C. Liu

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Scalable and Efficient Graph Algorithms and Analysis Techniques for Modern Machines

#### Xinyue Liu

(February, 2022)

Thesis in the field of Mechanical Engineering: Hydrogel Machines -Design, Manufacturing, and Applications

#### Zhenyu Liu

(See also S.M., Course XVI) Thesis in the field of Networks and Statistics submitted to the Department of Aeronautics and Astronautics: Decentralized Inference and its Application to Network Localization and Navigation

## Julie Victoria Logan

(September, 2021)

Thesis in the field of Nuclear Science and Engineering: Uncovering the Fundamental Driver of Semiconductor Radiation Tolerance

#### Hyun-Chae Loh

(September, 2021)

Thesis in the field of Civil and Environmental Engineering: Time-Space-Resolved Raman Analysis of Structure-Property Relationships in Heterogeneous Structural Materials

#### Josué Jacob López

Thesis in the field of Electrical Engineering and Computer Science: On-Chip Planar Lens Architectures for Optical Beam Steering

## **Charlotte Emily Lowey**

Thesis in the field of Space Systems submitted to the Department of Aeronautics and Astronautics: Uncertainty-Based Design Optimization and Decision Options for Responsive Maneuvering of Reconfigurable Satellite Constellations

## Hongyin Luo

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Self-Training for Natural Language Processing

# Jiaming Luo

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Automatic Methods for Sound Change Discovery

#### Vamsi Viswanath Mangena

(February, 2022)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Human Brain Organoids for Studying Malignant Cell States and Intercellular Communications in Human Glioma

#### Lorenzo Masoero

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Prediction and Design in Experiments: a Bayesian Nonparametric Approach

#### **Abhilash Mathews**

Thesis in the field of Applied Plasma Physics submitted to the Department of Nuclear Science and Engineering: Physics-Informed Machine Learning Techniques for Edge Plasma Turbulence Modelling in Computational Theory and Experiment

# Samuel Westcott McAlpine

(February, 2022)

Thesis in the field of Nuclear Science and Engineering: Materials Design for Nuclear Energy Systems: High Entropy Alloys and Metallic Multi-Layer Composites

## William Connor McCarthy

Thesis in the field of Nuclear Science and Engineering: The Low Frequency Edge Oscillation in Alcator C-Mod and ASDEX Upgrade I-Mode

# Matthew Brian Andrew McDermott

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Leveraging Structure and Knowledge in Clinical and Biomedical Representation Learning

# Anthony Drew McDougal

Thesis in the field of Mechanical Engineering: In Vivo Imaging and Morphogenesis of Butterfly Scale Development

#### Jie Mei

(September, 2021) Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: An Optimal Scheduling Method for Multi-Energy System

#### Nicolas Meirhaeghe

(September, 2021)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Neural Encoding of Prior Experience in Sensorimotor Behavior

#### Rahul Prasanna Misra

(September, 2021)

Thesis in the field of Chemical Engineering: Multiscale Modeling of Electronic Polarization Effects in Interfacial Thermodynamics and Nanoscale Transport Phenomena

#### Katherine Mizrahi Rodriguez

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: Mixed-gas Transport in Microporous Polymer Derivatives for Energy-Efficient **Gas Separations** 

#### Sajjad Mohammadi Yangijeh

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: Modeling, Design, Identification, Drive, and Control of a Rotary Actuator with Magnetic Restoration

# Somesh Mohapatra

Thesis in the field of Polymers and Soft Matter submitted to the Department of Materials Science and Engineering: Designing Macromolecules using Machine Learning and Simulations

# **Noor Momin**

(September, 2021)

Thesis in the field of Biological Engineering: Engineering, Modeling, and Trialing Intratumoral Immunotherapies for the Treatment of Cancer

## Nathan McKay Monroe

(February, 2022)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: High Angular Resolution Beam Steering Terahertz Antenna Arrays for Imaging Applications

#### Sun Jin Moon

Thesis in the field of Chemical Engineering: Toward Quantitative Understanding of Compartmentalized NADPH Metabolism in Cancer Cells

#### Matthew Tyler Moraguez

(September, 2021)

Thesis in the field of Space Systems submitted to the Department of Aeronautics and Astronautics: Modeling and Optimization of In-Space Manufacturing to Inform Technology Development

#### Caris Mariah Moses

Thesis in the field of Electrical Engineering and Computer Science: Optimistic Active Learning of Task and Action Models for Robotic Manipulation

#### Joshua Alexandre Moss

(February, 2022)

Thesis in the field of Environmental Chemistry submitted to the Department of Civil and Environmental Engineering: Laboratory and Mechanistic Studies of Volatile Organic Carbon Oxidation Systems in the Atmosphere

#### Eric Michael Hanson Moult

(September, 2021)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Optical Coherence Tomography Angiography for Imaging and Analysis of the Choriocapillaris in Late Age-Related Macular Degeneration

# Vaikkunth Mugunthan

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: A Practical Approach to Federated Learning

#### Carlos Muñoz Royo

(September, 2021)

Thesis in the field of Mechanical and Oceanographic Engineering submitted to the Department of Mechanical Engineering: Sediment Plumes and Financial Modeling in the Context of Deep-Sea Polymetallic Nodule Mining

#### Richard Joshua Murdock

(September, 2021)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Modular Magnetic Relaxation Nanomaterial Biosensor Platform for Local, Integrative Chemical Monitoring

#### Dheeraj Mysore Nagaraj

(February, 2022)

Thesis in the field of Electrical Engineering and Computer Science: Expressivity and Structure in Networks: Ising Models, Random Graphs, and Neural Networks

## Anirudh Manoj Kumar Nambiar

Thesis in the field of Chemical Engineering: Automated Execution and Optimization of Flow Chemistry on a Robotic Platform with Integrated Analytics

# Jaya Narain

(September, 2021)

Thesis in the field of Mechanical Engineering: Interfaces and Models for Improved Understanding of Real-World Communicative and Affective Nonverbal Vocalizations by Minimally Speaking Individuals

# Akshay Krishna Narayan

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Enabling Configurable, Extensible, and Modular Network Stacks

## Thaneer Malai Narayanan

(September, 2021)

Thesis in the field of Mechanical Engineering: Prototype Development and Techno-Economic Analysis of Electrochemical Energy Storage Systems

#### Vikram Nathan

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Instance Optimized Database Indexing

#### Quan Minh Nguyen

Thesis in the field of Electrical Engineering and Computer Science: Accelerating Irregular Applications with Pipeline Parallelism

#### Cynthia Ni

Thesis in the field of Chemical Engineering: Multiplexed Transcriptional Control Strategies for Biosynthesis Using Mixed Substrates in Escherichia coli

# Caroline Jo Nielsen

Thesis in the field of Chemical Engineering: Nonsmooth Methods for Process Integration

#### Catherine Anna Nikiel

(February, 2022)

Thesis in the field of Hydrology and Climate submitted to the Department of Civil and Environmental Engineering: On the Climate-Agriculture-Water Nexus at the Regional Scale

# Anastasia Nikolakopoulou

(February, 2022)

Thesis in the field of Chemical Engineering: Automated Optimization and Control of Modular Chemical Systems

# Sarah Kate Nyquist

Thesis in the field of Computational and Systems Biology: Differential Analysis of scRNA-Seq Data to Characterize Epithelial Cells in Health and Disease

## **Christian Edward Oliver**

Thesis in the field of Materials Science and Engineering: Understanding and Optimizing Nanophase Separation Sintering

# Oguzhan Murat Onen

Thesis in the field of Electrical Engineering and Computer Science: Devices and Algorithms for Analog Deep Learning

# Daniel Oropeza Gomez

(September, 2021)

Thesis in the field of Mechanical Engineering: Testbeds for Advancement of Powder Bed Additive Manufacturing with Application to Reactive Binder Jetting of Ceramics

#### Matthew Ryan Overlin

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Methods for Parameter Estimation with Devices in Microgrids

#### Berk Öztürk

(February, 2022)

Thesis in the field of Aeronautics and Astronautics: Global and Robust Optimization for Engineering Design

#### Jonathan Edward Page

Thesis in the field of Design Engineering submitted to the Department of Mechanical Engineering: A Model for Set-Based Design at the System-of-Systems Scale with Approaches for Emergent Properties

## Menghsuan Sam Pan

(February, 2022)

Thesis in the field of Materials Science and Engineering: Aqueous Polysulfide Electrodes for Low-Cost Grid-Scale **Energy Storage** 

## Shalmalee Dhananjay Pandit

(February, 2022)

Thesis in the field of Biological Engineering: Towards Artificial Photosynthesis: Yeast-Inorganic Hybrid System

#### Christopher Louis Panuski

Thesis in the field of Electrical Engineering and Computer Science: Resonant Spatial Light Modulation: Optical Programming and Sensing at the Fundamental Limit

#### Clara Park

Thesis in the field of Mechanical Engineering: Development of a High-Fidelity Biorobotic Cardiovascular in vitro Simulator

#### Jimin Park

(February, 2022)

Thesis in the field of Materials Science and Engineering: Electrochemical and Magnetochemical Approaches for Neuronal Modulation

#### Minkyung Park

(February, 2022)

Thesis in the field of Chemical Engineering: Property-Structure Relationships and Design Rules for Carbon Nanotube Based Corona Phase Molecular Recognition for Biomolecules

#### **Molly Frances Parsons**

Thesis in the field of Biological Engineering: Methods to Program and to Probe RNA Tertiary Structure with Nucleic Acid Origami

#### Jiayu Peng

Thesis in the field of Materials Science and Engineering: Activity and Stability Design Principles of Transition Metal Compounds for Decarbonization

#### Pai Peng

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: NMR Studies of Quantum Thermalization

# Clément Pit-Claudel

(February, 2022)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Relational Compilation: Functionalto-Imperative Code Generation for Performance-Critical Applications

#### Bauyrzhan K. Primkulov

Thesis in the field of Civil and Environmental Engineering: Interfacial Fluid Dynamics in Porous Media

## **Victor Prost**

(September, 2021) Thesis in the field of Mechanical Engineering: Development and Validation of a Prosthetic Foot Design Framework Based on Lower Leg **Dynamics** 

#### Kuan Oiao

Thesis in the field of Mechanical Engineering: Gallium Nitride Remote **Epitaxy** 

#### Hanzhang Qin

Thesis in the field of Civil Engineering and Computation submitted to the Department of Civil and Environmental Engineering: Stochastic Control through a Modern Lens: Applications in Supply Chain Analytics and Logistical Systems

#### Divya Ramamoorthy

Thesis in the field of Biological Engineering: Developing Machine Learning Algorithms for Characterizing Disease Progression in Amyotrophic Lateral Sclerosis

#### Paul Louis Reginato

(February, 2022) Thesis in the field of Biological Engineering: In situ Genome Sequencing

# Miguel Arnold Silverio Reyes

(September, 2021) Thesis in the field of Biological Engineering: Profiling, Prototyping, and Perturbing Human Immune Responses

#### Luke Hyunsik Rhym

(February, 2022) (See also S.M., Course X-A) Thesis in the field of Chemical Engineering: Development and Applications of Peptide Barcoded Nanoparticles for High-throughput Screening of mRNA Delivery Materials in vivo

## Sean Gunn Robertson

Thesis in the field of Nuclear Science and Engineering: Evaluating Fluoride Molten Salt Thermophysical Properties with Transient Grating Spectroscopy

## Kara Rodby

Thesis in the field of Chemical Engineering: Bringing Redox Flow Batteries to the Grid: Techno-economic Modeling for Chemistry-Informed Design of Redox Flow Batteries

#### Andrew Rohskopf

Thesis in the field of Mechanical Engineering: Computational Methods for Studying Phonon Dynamics

## **Charles Roques-Carmes**

Thesis in the field of Electrical Engineering and Computer Science: Shaping Light-Matter Interactions for Free-Electron Radiation and Photonic Computing

#### Jonathan Shmuel Rosenfeld

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Scaling Laws for Deep Learning

#### Candace Cheronda Ross

Thesis in the field of Electrical Engineering and Computer Science: Learning Language with Multimodal Models

## Erin Byrne Rousseau

(February, 2022)

Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Tools for Monitoring and Modulating Cellular Communication

#### **Lucas Thorley Rush**

(September, 2021)

Thesis in the field of Nuclear Science and Engineering: Integrative Approach to Metal Extraction and Electrification

#### Kevin M. Sabo

Thesis in the field of Aeronautics and Astronautics: Application of Ab-Initio Quantum Chemistry Techniques to Hypersonic Flows for Plasma Blackout Alleviation

# Reyu Sakakibara

(September, 2021)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: A Practical, High Performance Metallodielectric 2D Photonic Crystal Emitter for Thermophotovoltaics

#### Erica Elizabeth Salazar

(September, 2021)

Thesis in the field of Nuclear Science and Engineering: Quench Dynamics and Fiber Optic Quench Detection of VIPER High Temperature Superconductor Cable

## Shibani Vinay Santurkar

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Machine Learning Beyond Accuracy: A Features Perspective on Model Generalization

#### Inés Sanz Morère

(February, 2022)

Thesis in the field of Aerospace, Energy, and the Environment submitted to the Department of Aeronautics and Astronautics: Constraining Climate Impact Uncertainties from Future Aviation

#### Morteza Sarmadi

(February, 2022)

Thesis in the field of Mechanical Engineering: Microscale Polymeric-Based Technologies for Controlled Vaccine Delivery

#### Andrea Scarinci

(February, 2022)

Thesis in the field of Aerospace Computational Engineering submitted to the Department of Aeronautics and Astronautics: Robust Bayesian Inference via Optimal Transport Misfit Measures: Applications and Algorithms

#### **Daniel Ervin Schemmel**

Thesis in the field of Electrical Engineering and Computer Science: Design of High-Power High-Frequency Coreless Transformer Systems

## **Kaylee Christine Schickel**

Thesis in the field of Chemical Engineering: Design and Analysis of Methods to Eliminate Oscillatory Behavior in Bioreactors for Continuous Viral Vaccine Manufacturing

## Zachary J. Schiffer

(September, 2021)

Thesis in the field of Chemical Engineering: Kinetic and Thermodynamic Aspects of Voltage as a Driving Force for Ammonia Activation

#### **Tal Schuster**

(September, 2021)

Thesis in the field of Computer Science and Engineering submitted to the Department of Electrical Engineering and Computer Science: Robust and Efficient Deep Learning for Misinformation Prevention

## Daniel Schwalbe Koda

Thesis in the field of Materials Science and Engineering: First-Principles Control of Zeolite Synthesis, Transformations, and Intergrowth

#### Nicholas Stearns Selby

(September, 2021) Thesis in the field of Electrical Engineering and Computer Science: Learned Lifting Linearizations

#### Jee Hyun Seong

(September, 2021) Thesis in the field of Nuclear Science

and Engineering: Investigation of Separate Effects of Surface Condition on Subcooled Flow Boiling Heat Transfer

## Arunkumar Seshadri

(February, 2022)

Thesis in the field of Nuclear Science and Engineering: Understanding the Impact of Nuclear Environment on the Hydrothermal Corrosion in SiC

# **Ankit Jayesh Shah**

(September, 2021)

Thesis in the field of Autonomous Systems submitted to the Department of Aeronautics and Astronautics: Interactive Robot Training for Complex Tasks

#### Darsh Jaidip Shah

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Contrastive Text Generation

# Sahil Rajesh Shah

(September, 2021)

Thesis in the field of Mechanical Engineering: Making Decentralized Desalination More Affordable Using Improved Process Design, Control, and **Energy Recovery** 

## Ariya Reza Shajii

(September, 2021)

Thesis in the field of Computer Science and Engineering submitted to the Department of Electrical Engineering and Computer Science: High-Performance Computational Genomics

#### Macheng Shen

Thesis in the field of Mechanical Engineering: Robust and Scalable Multiagent Reinforcement Learning in Adversarial Scenarios

#### Tianxiao Shen

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Controlling Neural Language Generation

#### Alvin Shi

(September, 2021)

Thesis in the field of Computational and Systems Biology: Computational Dissection and Prediction of Cancer Immunotherapy Response

#### Yoon Ah Shin

Thesis in the field of Materials Science and Engineering: Templated Solid-State Dewetting of Single Crystal Ni Thin

#### Kevin Stanton Silmore

(September, 2021)

Thesis in the field of Chemical Engineering and Computation: From Spheres to Sheets: Colloidal Hydrodynamics, Thermodynamics, and Statistical Inference

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(September, 2021) Thesis in the field of Chemical Engineering: Low Frequency Sonophoresis Assisted Cancer Immunotherapy

# **Dmitriy Smirnov**

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Deep Learning on Geometry Representations

# Micah Jacob Smith

(September, 2021)

Thesis in the field of Computer Science submitted to the Department of Electrical Engineering and Computer Science: Collaborative, Open-Source, and Automated Data Science

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(September, 2021)

Thesis in the field of Electrical Engineering submitted to the Department of Electrical Engineering and Computer Science: Noise-Centric Decoding

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Thesis in the field of Mechanical Engineering: Phonon and Electron Transport through Interfaces and Disordered Structures

## Youngsup Song

(September, 2021)

Thesis in the field of Mechanical Engineering: Mechanistic Understanding and Enhancing Pool Boiling Heat Transfer via Surface Property and Structure Design

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Thesis in the field of Electrical Engineering and Computer Science: Security Research for the Public Good: A Principled Approach

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Thesis in the field of Mechanical Engineering: Density-Shift Immunomagnetic Separation for Pathogen Retrieval from Complex Media

## Sandya Subramanian

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Under Anesthesia

#### Kriti Sarasa Subramanyam

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Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Chemotherapy-Eluting Intraperitoneal Implants for Advanced Stage Ovarian Cancer Treatment

## Won Kyu Calvin Sun

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Thesis in the field of Quantum Science and Engineering submitted to the Department of Nuclear Science and Engineering: Developing Small-Scale Quantum Information Processors Based on Electronic Spins in Diamond

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Thesis in the field of Biological Engineering: Technology Development for the Functional and Structural Analysis of the Brain

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#### Marco Turchetti

Thesis in the field of Electrical Engineering and Computer Science: Nano Vacuum Channel Devices for Electronics and Ultrafast Nanophotonics

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Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Device-Enabled Biomechanical Modulation of the Infarcted Heart

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Thesis in the field of Transportation submitted to the Department of Civil and Environmental Engineering: Strategic Infrastructure Planning to Enable Personal Vehicle Electrification

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Thesis in the field of Medical Engineering and Medical Physics submitted to the Harvard-MIT Program in Health Sciences and Technology: Metagenomic Sequencing for Viral Diagnostics and Discovery

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School of Humanities, Arts, and Social Sciences

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Thesis in the field of Economics: Essays in Health Economics

#### Richard Alexander Fadok

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Thesis in the field of History, Anthropology, and Science, Technology, and Society submitted to the Program in Science, Technology, and Society: In Life's Likeness: Biomimicry and the Imitation of Nature

# Suzana Fong

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Thesis in the field of Economics and Statistics: Methods to Improve Fairness and Accuracy in Machine Learning, with Applications to Financial Algorithms

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(September, 2021) Thesis in the field of History, Anthropology, and Science, Technology, and Society submitted to the Program in Science, Technology, and Society: Interstitial Intelligence: Human-Rodent Sensing, Cognition, and Work in Morogoro, Tanzania

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Thesis in the field of Economics: Essays in Spatial Economics

#### Shiyao Liu

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#### Jacob Moscona

(September, 2021) Thesis in the field of Economics: Technological Change and Agricultural Development

#### Elise S.B. Newman

(September, 2021) Thesis in the field of Linguistics submitted to the Department of Linguistics and Philosophy: The (In) Distinction between Wh-Movement and C-Selection

#### Rodrigo Ochigame

(September, 2021) Thesis in the field of History, Anthropology, and Science, Technology, and Society submitted to the Program in Science, Technology, and Society: Remodeling Rationality: An Inquiry into Unorthodox Modes of Logic and Computation

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Thesis in the field of Political Science: Labor Reform and Nativist Revolt: The Causes and Implications of Party Position Change on Immigration

# Sara Cristina Plana

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Thesis in the field of Political Science: The Proxy Paradox: Explaining (Lack of) Control over State-Sponsored Proxy Armed Groups

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Thesis in the field of Philosophy submitted to the Department of Linguistics and Philosophy: Inside The Moral Nexus: On Wrongs, Rights, and Normative Powers

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Sloan School of Management

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Thesis in the field of Mathematics: Integrability in Random Conformal Geometry

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Thesis in the field of Chemistry submitted to the Department of Chemistry: Structural and Biochemical Characterization of Glycyl Radical Enzymes Abundant in Mammalian Gut Microbiota

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Thesis in the field of Computational and Systems Biology submitted to the Department of Biology: Experimental Design and Analysis for High-Parameter Spatial Omics

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Thesis in the field of Chemistry submitted to the Department of Chemistry: Highly Efficient Superradiant Emission from Molecular J-Aggregates

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Thesis in the field of Biology: Nutrient Sensing by the mTORC1 Pathway in Physiology

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Thesis in the field of Biology: Translational Control of Programmed Cell Death

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Thesis in the field of Biology: Gene Expression Changes during Mammalian Male Meiotic Initiation

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# Aravind Devarakonda

(September, 2021)

Thesis in the field of Physics: Periodically Modulated Electronic States in Natural Superlattices

#### Frances Flewelling Diehl

(September, 2021)

Thesis in the field of Biochemistry submitted to the Department of Biology: Metabolic Regulation of Mammalian Cell Growth and Proliferation

#### Deepshikha Dogra

(September, 2021)

Thesis in the field of Biology: Investigating the Role of a JNK-like MAP Kinase Pathway in Dauer Entry in Caenorhabditis Elegans

#### Aurelio James Dregni

Thesis in the field of Chemistry submitted to the Department of Chemistry: Functional and Pathological States of the Protein Tau Investigated with Solid-State NMR

#### Margaret Louise Duffy

(September, 2021)

Thesis in the field of Climate Science submitted to the Department of Earth, Atmospheric, and Planetary Sciences: An Energetic Perspective of the Tropical Atmosphere and Its Response to Climate Warming

#### Ellen Duong

(February, 2022)

Thesis in the field of Immunology submitted to the Department of Biology: Elucidating the Functional States of Tumor-Resident Dendritic Cells that Drive Productive Anti-Tumor Immunity

## Joseph Ahmed Elsherbini

(September, 2021)

Thesis in the field of Microbiology submitted to the Department of Biology: High-Resolution Time Series Reveals Differential Behaviors of Closely-Related Microbes in Coastal Communities

# Daniel Masao Estandian

(September, 2021)

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Paths towards Next Generation Protein Sequencing

#### Samuel Isaac Etkind

Thesis in the field of Chemistry submitted to the Department of Chemistry: The Synthesis and Application of 1,4-Dithiins, Thianthrenes, and Other Sulfur-Rich Scaffolds

#### Ali Fahimniya

(September, 2021)

Thesis in the field of Physics: Bloch-Oscilliating Electrons in Moiré Superlattices

#### **Sheng Feng**

Thesis in the field of Chemistry submitted to the Department of Chemistry: Development of Copper(I) Hydride-Catalyzed Asymmetric Olefin Hydrofunctionalization Reactions

# Patrick John Fitzpatrick

(September, 2021)

Thesis in the field of Physics: Initial Conditions for Cosmic Inflation, the History of the Dark Sector, and Dark-Onium

#### Katelyn Michelle Flick

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Dopaminergic Regulation of Amygdala Circuits for Fear Extinction

#### Kristen Marie Flynn

(February, 2022)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Directed Palladium Catalyzed Acetoxylation of Indolines and Enantioselective Total Synthesis of (–)-Voacinol and (–)-Voacandimine C

#### Yibo Gao

Thesis in the field of Mathematics: Symmetric Structures in the Weak and Strong Bruhat Orders

# Matthias Ginterseder

Thesis in the field of Chemistry submitted to the Department of Chemistry: Synthetic Design of Optical **Emitters** 

# Michaela Anne Gold

Thesis in the field of Microbiology submitted to the Department of Biology: Mucin and Mucin Glycans Alter Behavior of Mucosal Pathogens

## Samuel Lukens Goldberg

(September, 2021)

Thesis in the field of Geology submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Climatic and Tectonic Controls on Continental River Systems

#### Jesse Gordon

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Exploring the Structural Dynamics of Bacterial Chemotaxis

#### Brian James Graham

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Catalytic and Biological Applications of Benzoxaborolones

#### Xin Gu

(February, 2022) Thesis in the field of Biology: How do Animals Sense and Integrate Nutrient Availability?

#### Shalini Gupta

Thesis in the field of Biochemistry submitted to the Department of Biology: An ORC Flip Enables Bidirectional Helicase Loading

#### **Linus Ulysses Hamilton**

Thesis in the field of Mathematics: Applications and Limits of Convex Optimization

# Dustin Jared Hayden

(February, 2022)

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Passive Experience-Dependent Plasticity in Mouse Primary Visual Cortex

## Samuel Joseph Hendel

Thesis in the field of Chemistry submitted to the Department of Chemistry: Continuous Directed Evolution in Mammalian Cells

## Luke Hewitt

(February, 2022)

Thesis in the field of Cognitive Science submitted to the Department of Brain and Cognitive Sciences: What's at Stake in Political Messaging?

## Kai Huang

Thesis in the field of Mathematics: K-stability of Log Fano Cone Singularities

## Joonseok Hur

Thesis in the field of Physics: Probing New Physics with Spectroscopy of Trapped Ions

#### Theresa Hwang

(February, 2022)

Thesis in the field of Biology: How Short, Degenerate Motifs across the Human Proteome Recognize the Actin Remodeling Factor ENAH

#### Andrei Ionov

Thesis in the field of Mathematics: Tilting Sheaves for Real Groups and Koszul Duality

## Sung Woo Jeong

(February, 2022)

Thesis in the field of Mathematics: Linear Algebra, Random Matrices and Lie Theory

#### Paul Niklas Jepsen

(February, 2022) Thesis in the field of Physics: Spin

Thesis in the field of Physics: Spin Dynamics in a Tunable Heisenberg Model Realized with Ultracold Atoms

# **Zhongling Jiang**

Thesis in the field of Chemistry submitted to the Department of Chemistry: Investigating the Role of Molecular Motors on Chromatin Organization

#### Pakawut Iiradilok

Thesis in the field of Mathematics: Inequalities and Asymptotic Formulas in Algebraic Combinatorics

## **Grace Eleanor Johnson**

(September, 2021)

Thesis in the field of Molecular Biology submitted to the Department of Biology: Redefining the Coordination of Gene Expression Machineries in *Bacillus subtilis* 

# Neel Vinayak Kabadi

(February, 2022)

Thesis in the field of Physics: Exploring Evolution of Multi-ion Effects and Electron Temperature in ICF Implosions at Omega and the NIF

# **Tobias Kaiser**

(September, 2021)

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Microglia and Myelin: Improved Tools for Their Study and Molecular Interactions between Them

## Jibril Fetu Kedir

(February, 2022)

Thesis in the field of Biology: Regulation of Amino Acid Transport across the Lysosomal Surface by the mTORC1 Pathway

#### Sora Kim

Thesis in the field of Biochemistry submitted to the Department of Biology: Structural Principles of Substrate Recognition and Unfolding by the ClpAP and ClpXP AAA+ Proteases

#### **Elena Ruth Kingston**

(September, 2021)

Thesis in the field of Biochemistry submitted to the Department of Biology: Regulation of microRNA Degradation Rates

#### Nathan Doyle Klein

(September, 2021)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Exciton Dynamics in Organic and Inorganic Nanoscale Materials

#### Ryan Edward Kohn

(February, 2022)

Thesis in the field of Biology: Comparison of Wild-Type and Hotspot Mutant p53 Interactomes

# **Linghang Kong**

(February, 2022)

Thesis in the field of Physics: Features And Applications of Random Unitaries

## Heather Lynne Kosakowski

Thesis in the field of Cognitive Science submitted to the Department of Brain and Cognitive Sciences: Interrogating the Infant Mind with fMRI

# Elaine Yih-Shuen Kuo

(February, 2022)

Thesis in the field of Biology: Elucidating the Role of BMI1 in Lung and Colon Tumor Maintenance and Progression

## Andrew P. Latham

Thesis in the field of Chemistry submitted to the Department of Chemistry: Maximum Entropy Optimization: a General Approach to Study Ordered and Disordered Proteins Reveals Key Features of Protein Phase Separation

#### Katherine Ruth Lawrence

(September, 2021)

Thesis in the field of Physics: Mapping Genotype to Phenotype with High-Throughput Empirical Approaches

#### Samuel Aaron Wehlau Leutheusser

Thesis in the field of Physics: Emergent Times in Holographic Duality

#### Gen Li

Thesis in the field of Chemistry submitted to the Department of Chemistry: Organophosphorus Catalyzed Reductive Transformation of Nitro Compounds via P(III)/P(V) Redox Couple

#### Jiarui Li

Thesis in the field of Physics: Electronic Structure and Emergent Orders in Correlated Nickelates

#### Rasia Li

Thesis in the field of Chemistry submitted to the Department of Chemistry: The C-Propeptide in Collagen Proteostasis

#### Ziwei Li

(September, 2021)

Thesis in the field of Atmospheric Science submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Understanding the Characteristics of Precipitation and Their Response to Climate Change

#### Halston Brandon Lim

Thesis in the field of Physics: Modeling the Dynamics of Black Hole Systems and the Ringdown of Black Hole Spacetimes

#### Jonathan Lin

(February, 2022)

Thesis in the field of Atmospheric Science submitted to the Department of Earth, Atmospheric, and Planetary Sciences: On Intraseasonal Variability in the Tropics: Tropical Cyclones, the Madden-Julian Oscillation, and Equatorial Waves

# Deena Al Mahbuba

Thesis in the field of Chemistry submitted to the Department of Chemistry: Roles for Cell Surface Glycans in Guiding Human Pluripotent Stem Cell Fate

#### Dan Mao

(September, 2021)

Thesis in the field of Physics: Strongly Correlated 2D Electronic Systems: Interplay between Band Topology and Electron-Electron Interaction

#### Shujuan Mao

(September, 2021)

Thesis in the field of Geophysics submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Monitoring and Imaging Seismic Velocity Changes across Temporal and Spatial

#### Travis Marshall-Roth

Thesis in the field of Chemistry submitted to the Department of Chemistry: Synthetic Molecular Models for the Oxygen Reduction Active Sites in Heteroatom-Doped Graphitic Electrocatalysts: Linking Heterogeneous and Homogeneous Electrocatalysis

# Harry Ray Matchette-Downes

(September, 2021)

Thesis in the field of Geophysics submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Some Studies on the Computation and Interpretation of Seismic Interface Waves and Modes in Earth's Mantle

# Clara Maurel

(September, 2021)

Thesis in the field of Planetary Sciences submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Magnetic Properties of Iron Meteorites and Their Parent Bodies

## Alexandra Ross McIsaac

(September, 2021) Thesis in the field of Chemistry

submitted to the Department of Chemistry: Semiconducting Devices and Nanomaterials: Insight from Computational Chemistry

# Saria Armena McKeithen-Mead

Thesis in the field of Biology: Interplay between an Integrative and Conjugative Element and Its Bacterial Host

# Sarah Jane Mear

Thesis in the field of Chemistry submitted to the Department of Chemistry: Stereoselective and Economical Methods for Chemical Synthesis of Essential Medicines

#### Rimsha Mehmood

(September, 2021)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Computational Investigation of the Catalytic and Structural Roles of Metals in Metalloenzymes

#### **Brian Cornier Michael**

(February, 2022)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Structural Characterization of Plague Seeded Amyloid-β Fibrils by Magic Angle Spinning NMR

#### Luis Rubén Millán-Barea

(February, 2022)

Thesis in the field of Biology: Stimulation of Chemotherapy-Induced Immunity by Targeting IL-6 in the Tumor Microenvironment

# Christine Anne Moomau

(February, 2022)

Thesis in the field of Biology: Exploring the Role of Aneuploidy in Phenotypic Variability

## Juhee Park Morehouse

Thesis in the field of Biochemistry submitted to the Department of Biology: Noncanonical Recognition and Degradation of a Stable Soluble Protein by E. coli AAA Protease FtsH

# Raymundo Moya III

(February, 2022)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Heterogenous Ultrafast Energy Relaxation in Photosynthetic Proteins

## Biswaroop Mukherjee

(February, 2022)

Thesis in the field of Physics: Homogeneous Quantum Gases: Strongly Interacting Fermions and Rotating Bosonic Condensates

## **Kyaw Hpone Myint**

Thesis in the field of Chemistry submitted to the Department of Chemistry: Understanding Cation Catalytic Effects in Electron Transfer Reactions at Molecular Scale

#### Ashwin Narayan

Thesis in the field of Mathematics: Similarity Metrics for Biological Data

#### Alexandra Patricia Navarro

(February, 2022)

Thesis in the field of Cell Biology submitted to the Department of Biology: Dynamic Roperties of the Constitutive Centromere Associated Network of Proteins

#### Andrew Warren Navia

Thesis in the field of Chemistry submitted to the Department of Chemistry: Discovery of Microenvironment Drivers of Cell States, Plasticity and Drug Response

# Maxwell Isaac Nye

(February, 2022)

Thesis in the field of Cognitive Science submitted to the Department of Brain and Cognitive Sciences: Search and Representation in Program Synthesis

#### Danielle Marie Orozco Cosio

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Development of Optical Tools and Techniques Toward a Functional Connectomic Understanding of C. elegans

# **Anthony Fidel Ortiz Lopez**

(September, 2021)

Thesis in the field of Microbiology submitted to the Department of Biology: Bacterial Interspecies Interactions and Microbial Community Assembly

# Jeremy A. Owen

Thesis in the field of Physics: Sensitivity and Memory in Physics and Biology

# Kwadwo E. Owusu-Boaitey

(September, 2021)

Thesis in the field of Biology: How, When, and Where: Fate Selection in Regenerative Planarians

# Afroditi Papadopoulou

Thesis in the field of Physics: Lepton-Nucleus Constraints for Neutrino Interactions and Oscillations

# Michał Papaj

(September, 2021)

Thesis in the field of Physics: Quantum Transport in Topological Phases of Matter

#### Watcharaphol Paritmongkol

(September, 2021)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Syntheses and Photophysical Studies of Two-Dimensional Hybrid Organic-Inorganic Semiconductors

#### Minjae Park

Thesis in the field of Mathematics: Random Surface Interpretations of Two-Dimensional Liouville Quantum Gravity and Yang-Mills Theory

# Parth B. Patel

Thesis in the field of Physics: Quantum Transport in Strongly Interacting, Ultracold Fermi Gases in Box Potentials

#### Matthew A. Pearson

Thesis in the field of Chemistry submitted to the Department of Chemistry: Controlling the Properties of Polymer Metal-Organic Frameworks and Cages Through Polymer Ligand Design

# Madeline C. Pelz

(September, 2021)

Thesis in the field of Cognitive Science submitted to the Department of Brain and Cognitive Sciences: Bootstrapping New Knowledge from Abstract Representations

# Huy Duc Phan

(September, 2021)

Thesis in the field of Physics: Precision Measurements of Neon, Magnesium, and Silicon Flux in Cosmic Rays with the Alpha Magnetic Spectrometer on the International Space Station

## **Grace Barker Phelps**

Thesis in the field of Biology: Establishment of MITF and TAZ as Major Determinants of Uveal Melanoma

# Julian Tesch Picard

(February, 2022)

Thesis in the field of Physics: High Power Microwave Generation for Advanced Particle Acceleration

# Luiz Gustavo Pimenta Martins

Thesis in the field of Physics: High-Pressure Studies of Atomically-Thin van der Waals Materials

#### Deborah Allison Pohlmann

(February, 2022)

Thesis in the field of Biology: Regulation of Active DNA Demethylation and Its Role in Fertility in Arabidopsis thaliana

#### Eli Barton Pollock

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Understanding Computation through Low-Dimensional Dynamics with Recurrent Neural Networks

## Yifeng Qi

(February, 2022) Thesis in the field of Chemistry submitted to the Department of Chemistry: Data-Driven Mechanistic of 3D Human Genome

#### Peng Qian

Thesis in the field of Cognitive Science submitted to the Department of Brain and Cognitive Sciences: Cause, Composition, and Structure in Language

#### Ke Qin

(February, 2022)
Thesis in the field of Chemistry
submitted to the Department of
Chemistry: Control of Network Topology
in Photopolymer Networks for Additive
Manufacturing

## Xiaoting Qin

(February, 2022)

Thesis in the field of Physics: Measurement of the Fluorine, Sodium, and Aluminum Fluxes in Cosmic Rays with the AMS Experiment on the International Space Station

#### John Michael Replogle

(February, 2022)

Thesis in the field of Genetics submitted to the Department of Biology: The Benefits and Detriments of Aneuploidy in Cancer

#### Nicholas H. Rivera

Thesis in the field of Physics: Light-Matter Interactions with Photonic Quasiparticles

# Daniel Rodan Legrain

Thesis in the field of Physics: Graphene-Based Nanodevices in the Superconducting and Strongly Correlated Regimes

#### Field Rose Rogers

Thesis in the field of Physics: Applications of X-ray Instrumentation for Dark Matter Searches with Cosmic-ray Antiparticles

#### Jaeyune Ryu

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Tuning Ĥeterogeneous Catalysis Using Interfacial Polarization

#### Mari Saif

(February, 2022) Thesis in the field of Chemistry submitted to the Department of Chemistry: Experimental and Computational Methods for Shortwave Infrared Imaging

#### Morteza Sarafyazd

(September, 2021)

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Hierarchical Reasoning in the Brain

## Joshua Clayton Saul

(February, 2022)

Thesis in the field of Molecular Biology submitted to the Department of Biology: Regulation of Cell-Identity Maintenance in *C. elegans* 

# Chad William Sauvola

(September, 2021)

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Investigating the Role of Drosophila Tomosyn in Synaptic Strength and Plasticity

## Carly Katherine Schissel

(February, 2022)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Design of Nuclear-Targeting Peptides for Macromolecule Delivery Using Machine Learning

#### Tajana Schneiderman

Thesis in the field of Planetary Sciences submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Probing Planetary System Histories via Observations, Experiments, and Modeling of Circumstellar Gas and Dust

## Martin Schrimpf

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Advancing System Models of Brain Processing via Integrative Benchmarking

#### Sarah Elizabeth Schwettmann

(September, 2021)

Thesis in the field of Cognitive Science submitted to the Department of Brain and Cognitive Sciences: Generalizable Representations for Vision in Biological and Artificial Neural Networks

#### Cauê Sciascia Borlina

(February, 2022)

Thesis in the field of Planetary Sciences submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Constraining Planetary Science Problems with Micro-Paleomagetism

#### Francesco Sciortino

(September, 2021) Thesis in the field of Physics: **Experimental Inference of Particle** Transport in Tokamak Plasmas

#### Rebecca Michelle Sebastian

Thesis in the field of Chemistry submitted to the Department of Chemistry: Leveraging HSF1 Chemical-Genetic Tools to Elucidate Mechanisms of Proteostasis

#### Haitao Shang

(September, 2021)

Thesis in the field of Earth, Atmospheric and Planetary Sciences submitted to the Department of Earth, Atmospheric and Planetary Sciences: Theory and Evolutionary Evidence of the Autocatalytic Oxygenation of Earth's Surface Environment

# Chengyang Shao

Thesis in the field of Mathematics: Long Time Dynamics of Spherical Objects Governed by Surface Tension

# Alexander Aleksandrovich Shcherbakov

(February, 2022) Thesis in the field of Chemistry

submitted to the Department of Chemistry: New Tools for Structural Biology and Biophysics: High-Throughput Fluorine Solid-State NMR and Applications to Membrane Proteins

#### Wenbi Shcherbakov-Wu

Thesis in the field of Chemistry submitted to the Department of Chemistry: Exciton Dynamics in Perovskite CsPbBr, Semiconductor Nanocrystals

#### Scott Michael Shepard

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Activated Phosphate Reagents for the Synthesis of Functionalized Oligophosphates

#### Zhaozhong Shi

(September, 2021)

Thesis in the field of Physics: Analysis of Beauty Ouark Hadronization in Vacuum and Quark-Gluon Plasma with CMS

#### Rohini Bhimsen Shivamoggi

(February, 2022)

Thesis in the field of Atmospheric Science submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Secondary Eyewall Formation as a Response to Evolving Tropical Cyclone Wind Structure

# Alexander F. Siegenfeld

Thesis in the field of Physics: Developments in Complex Systems Science with Applications to Political Systems and Pandemic Response

## Dominic John Skinner

Thesis in the field of Mathematics: Thermodynamic and Topological Characterization of Living Systems

# Grigorii Skorupskii

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Electrically Conductive Porous Catecholate Metal-Organic Frameworks

#### **Tyler Alan Smith**

Thesis in the field of Biology: High-Throughput Functionalization of the Toxoplasma kinome Uncovers a Novel Regulator of Invasion and Egress

## Mehdi Soleimanifar

Thesis in the field of Physics: Efficiently Learning, Testing, and Simulating Quantum Many-Body Systems

## Taweewat Somboonpanyakul

(September, 2021) Thesis in the field of Physics: Searching for Extreme-BCG Clusters at 0.2 < z < 1.3

#### Arun Sridharan

Thesis in the field of Chemistry submitted to the Department of Chemistry: Investigations of Iron– Nitrogen Bonding at Synthetic Iron– Sulfur Clusters

#### Eric Marshall Stansifer

(February, 2022) Thesis in the field of Geophysics submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Theory of the Growth and Shape of Laplacian Stream Networks

## Maya F. Stokes

(September, 2021)

Thesis in the field of Geology submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Dynamic Rivers Drive Landscape Change and Biological Evolution

#### Jules Michael Stuart

(September, 2021)

Thesis in the field of Physics: Integrated Technologies and Control Techniques for Trapped Ion Array Architectures

# Chenyue Sun

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Synthesis of Metal-Organic Frameworks and Crystalline Porous Polymers and Studies of Their Reactivity

## Hongyu Sun

Thesis in the field of Geophysics submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Learning Seismic Waves for Imaging the Earth

#### Madeleine Sutherland

Thesis in the field of Chemistry submitted to the Department of Chemistry: Coordination among Proteins, Lipids and Water in Membrane Fusion and Fission Probed by Solid-State NMR

#### Julie Sant'Anna Takagi

Thesis in the field of Biology: Analyzing the Role of Mucin O-Glycans in Regulating Microbial Virulence

#### Akira Tanushi

(September, 2021)

Thesis in the field of Chemistry submitted to the Department of Chemistry: Nonspectator Reactivity of Nontrigonal Tricoordinate Phosphorus Ligands

#### Allegra Louise Terhorst

(September, 2021)

Thesis in the field of Cell Biology submitted to the Department of Biology: The Role of the Environmental Stress Response in Aneuploid and Cell Cycle-Arrested Budding Yeast

#### **David Francisco Theurel**

Thesis in the field of Physics: A Closer Look at Classical Measurement, an Algorithm for Deliberation in Rodents, and a Conjecture on Intertemporal Chaice

# Mary Katherine Thompson

(September, 2021)

Thesis in the field of Molecular Biology submitted to the Department of Biology: Nucleoid Condensation in *Escherichia coli* by the DNA-binding Protein SymE

#### Jonathan B. Tidor

Thesis in the field of Mathematics: Higher-Order Fourier Analysis with Applications to Additive Combinatorics and Theoretical Computer Science

#### Maggie Tse

Thesis in the field of Physics: Squeezed Vacuum Injection in Advanced LIGO: Enhancing Gravitational-Wave Detection Using Quantum States of Light

## John Cameron Urschel

(September, 2021) Thesis in the field of Mathematics: Graphs, Principal Minors, and

# Aleksandra Utiralova

Eigenvalue Problems

Thesis in the field of Mathematics: Harish-Chandra Bimodules in Complex Rank

## Kaavya G. Valiveti

(September, 2021)

Thesis in the field of Mathematics: The Fock-Schwartz Spin Representation Space

#### Marie-Sophie Helene van der Goes

Thesis in the field of Neuroscience submitted to the Department of Brain and Cognitive Sciences: Cortico-Thalamic Interactions for Head Direction Coding

#### Shreya Vardhan

Thesis in the field of Physics: Chaos and Thermalization in Quantum Many-Body Systems and Gravity

#### Sahana Vasudevan

Thesis in the field of Mathematics: Large Genus Bounds for the Distribution of Triangulated Surfaces in Moduli Space

# Zachary Vendeiro

(September, 2021)

Thesis in the field of Physics: Raman Cooling and Rydberg Cavity QED

# **Qingyang Wang**

(February, 2022)

Thesis in the field of Physics: Phase Transitions in Dipole-Dipole Interacting Atomic Systems

## Ruoxi Wendy Wang

(February, 2022)

Thesis in the field of Biology: A Mechanistic Evaluation of the Role of Aneuploidy During Oncogenesis

#### Wencong Wang

Thesis in the field of Chemistry submitted to the Department of Chemistry: Efficient Synthetic Strategies for Discrete Macromolecules: Enabling Exploration of Structure-Property Relationships in Biological and Materials Applications

## Yimin Wang

(February, 2022)

Thesis in the field of Physics, Statistics, and Data Science submitted to the Department of Physics: New Techniques in Low-Q2 Elastic Electron-Proton Scattering Measurements and the Proton Radius Extraction

## Araminta Amabel Wilson

Thesis in the field of Mathematics: Genera via Deformation Theory and Supersymmetric Mechanics

## Molly Madeline Wilson

Thesis in the field of Biology: Transcriptional Regulators in Stem Cell Biology

#### Zhenjie Yan

(February, 2022)

Thesis in the field of Physics: Quasiparticle Breakdown and Heat Transport in a Homogeneous Strongly-Interacting Fermi Gas

#### Jeehyun Yang

(February, 2022)

Thesis in the field of Physical Chemistry submitted to the Department of Earth, Atmospheric, and Planetary Sciences: **Experiment and Modeling Combined** Kinetic Study of Bottom-up Polycyclic Aromatic Hydrocarbon Formations

## **Luming Yang**

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Investigation of Triphenylene-Based Radical-Containing Ligand Bridges in Mediating Electronic Spin Coupling and Sensing Chemical Analytes

# Ruoxuan Yang

Thesis in the field of Mathematics: Stable and Unstable Shock Formation of the Burgers-Hilbert Equation

## Lauren Elizabeth Yates

(February, 2022)

Thesis in the field of Physics: Using the MicroBooNE Liquid Argon Detector to Search for Electron Neutrino Interactions and Understand the MiniBooNE Anomaly

## Mengshan Ye

Thesis in the field of Chemistry submitted to the Department of Chemistry: Organometallic Chemistry in Fe-S Clusters

# Kosuke Yoshinaga

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: A Showcase of Functional Fluorous Materials and Their Applications

# Emily M. Zygiel

(September, 2021) Thesis in the field of Chemistry submitted to the Department of Chemistry: Investigation of Microbial Responses to Transition Metal Sequestration by the Innate Immune Protein Calprotectin

# AWARDED JOINTLY WITH THE WOODS HOLE OCEANOGRAPHIC INSTITUTION, DOCTORAL

# **Doctor of Philosophy**

# Lydia Claire Babcock-Adams

Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Molecular Characterization of Organically Bound Copper in the Marine Environment

#### **EeShan Chetan Bhatt**

(September, 2021) Thesis in the field of Mechanical and Oceanographic Engineering submitted to the Department of Mechanical Engineering: An Virtual Ocean Framework for Environmentally Adaptive, Embedded Acoustic Navigation on Autonomous Underwater

#### Henri Francois Drake

Vehicles

(September, 2021) Thesis in the field of Physical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Control of the Abyssal Ocean Overturning Circulation by Mixing-Driven Bottom Boundary Layers

## **Daniel Michael Duane**

(February, 2022)

Thesis in the field of Oceanographic Engineering submitted to the Department of Mechanical Engineering: The Effect of Attenuation from Fish on Long-Range Active and Passive Acoustic Sensing in the Ocean

# Michaela Fendrock

Thesis in the field of Paleoclimate submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Questions and Clarity: Insights from Applying Computational Methods to Paleoclimate Archives

# Mara Amelia Freilich

(September, 2021) Thesis in the field of Physical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Vertical Fluxes in the Upper Ocean

#### Joleen Heiderich

(September, 2021) Thesis in the field of Physical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: The Gulf Stream: Along-Stream Evolution of Volume Transport and Water Properties Observed by Underwater Gliders

# Tianyi Huang

(September, 2021) Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Investigating Chromium Cycling in Global Oxygen Deficient Zones with Chromium Isotopes

#### Ian Thomas Jones

(September, 2021) Thesis in the field of Marine Biology (jointly with WHOI) submitted to the Department of Biology: Assessing Anthropogenic Noise Impacts and Relevant Soundscape Cues for Marine Invertebrates: Leveraging Squid and Coral Reefs as Model Systems

## Jennifer Shizu Karolewski

Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Coupled Biogeochemical Cycling of Metals with Nitrogen and Carbon in Aquatic Environments

#### Marissa Morgan Kellogg

Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Assessing the Potential for Zinc Limitation of Marine Primary Production: Proteomic Characterization of the Low Zinc Stress Response in Marine Diatoms

# Jennifer An Kenyon

(February, 2022) Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Anthropogenic and Natural Radioisotopes as Tracers for Contaminant Sources and Particulate Fluxes

# Kristen Railey Kita

(February, 2022) Thesis in the field of Mechanical and Oceanographic Engineering submitted to the Department of Mechanical Engineering: Advances in Passive Acoustic Detection, Localization, and Tracking Applied to Unmanned **Underwater Vehicles** 

#### Sheron You-Xian Luk

(February, 2022) Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Constraining Natural and Anthropogenic Disturbances in the Delivery of Coastal Ecosystem Services

#### Craig McLean

(September, 2021) Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Understanding how Nutrient Stress Distinguishes Phytoplankton Groups

# Julien Thomas Middleton

Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Barium Isotope Cycling in the Marine Environment: Pathways of Fractionation and Implications for Paleoceanographic Applications

#### **Astrid Pacini**

(February, 2022) Thesis in the field of Physical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Structure, Variability, and Dynamics of the West Greenland Boundary Current System

# Mallory Cecile Ringham

Thesis in the field of Chemical Oceanography submitted to the Department of Earth, Atmospheric, and Planetary Sciences: High Resolution, in-situ Studies of Seawater Carbonate Chemistry and Carbon Cycling in Coastal Systems Using Channelized Optical System II

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(February, 2022) Thesis in the field of Biological Oceanography submitted to the Department of Biology: Trojan Horses in the Marine Realm: Characterizing Protistan Parasite Ecology in Coastal Waters

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(September, 2021) Thesis in the field of Geophysics submitted to the Department of Earth, Atmospheric, and Planetary Sciences: Inferring the Thermomechanical State of the Lithosphere Using Geophysical and Geochemical Observables

#### Justin Joseph Suca

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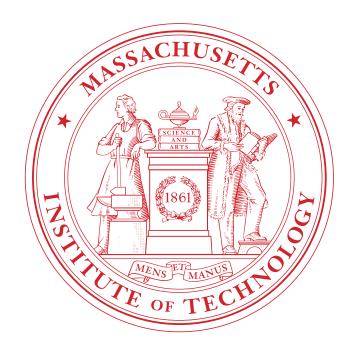
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