

# **ANNOUNCEMENT OF WINNERS**

of the seventy-ninth competition held on December 1, 2018

#### **WINNING TEAMS**

Rank	School	Team Members (in alphabetical order)
1	HARVARD UNIVERSITY	Dongryul Kim, Shyam Narayanan, David Stoner
2	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Junyao Peng, Ashwin Sah, Yunkun Zhou
3	UNIVERSITY OF CALIFORNIA, LOS ANGELES	Ciprian Mircea Bonciocat, Xiaoyu Huang, Konstantin Miagkov
4	COLUMBIA UNIVERSITY	Quang Dao, Myeonhu Kim, Matthew Lerner-Brecher
5	STANFORD UNIVERSITY	David Kewei Lin, Hanzhi Zheng, Yifan Zhu

The institution with the first-place team receives an award of \$25,000, and each member of the team receives \$1,000. The awards for second place are \$20,000 and \$800; for third place, \$15,000 and \$600; for fourth place, \$10,000 and \$400; and for fifth place, \$5,000 and \$200.

In each of the following categories, the listing is in alphabetical order.

#### THE PUTNAM FELLOWS - THE FIVE HIGHEST RANKING INDIVIDUALS

Each receives an award of \$2,500.

DONGRYUL KIM	Harvard University
SHYAM NARAYANAN	Harvard University
DAVID STONER	Harvard University
YUAN YAO	Massachusetts Institute of Technology
SHENGTONG ZHANG	Massachusetts Institute of Technology

#### THE NEXT TEN HIGHEST RANKING INDIVIDUALS

Each receives an award of \$1,000.

MURILO CORATO ZANARELLA	Princeton University
JIYANG GAO	Massachusetts Institute of Technology
ANDREW GU	Massachusetts Institute of Technology
JAMES LIN	Massachusetts Institute of Technology
MICHAEL MA	Massachusetts Institute of Technology
ASHWIN SAH	Massachusetts Institute of Technology
KEVIN SUN	Massachusetts Institute of Technology
DANIELLE WANG	Massachusetts Institute of Technology
HUNG-HSUN YU	Massachusetts Institute of Technology
YUNKUN ZHOU	Massachusetts Institute of Technology

#### **ELIZABETH LOWELL PUTNAM PRIZE**

The winner receives an award of \$1,000.

DANIELLE WANG Massachusetts Institute of Technology

#### THE NEXT TWELVE HIGHEST RANKING INDIVIDUALS

Each receives an award of \$250.

ANKAN BHATTACHARYA Ohio State University University of California, Los Angeles XIAOYU HUANG RAY LI University of California, Berkeley Massachusetts Institute of Technology **ALLEN LIU** Massachusetts Institute of Technology JUNYAO PENG **BRIAN REINHART** Massachusetts Institute of Technology MICHAEL REN Massachusetts Institute of Technology DILHAN SALGADO Carnegie Mellon University MIHIR SINGHAL Massachusetts Institute of Technology ZHUO QUN SONG Princeton University Massachusetts Institute of Technology ZHUOFAN XIE KAIQI ZHU University of California, Los Angeles

MYEONHU KIM, Columbia University

#### **HONORABLE MENTION - INDIVIDUALS**

OSMAN AKAR, University of California, Los Angeles RAUL ALCANTARA, Massachusetts Institute of Technology ADAM BUSIS, Harvey Mudd College DALAI CHADRAA, University of Washington, Seattle HONGYI CHEN, University of Colorado, Boulder ZACHARY CHROMAN, Massachusetts Institute of Technology MATTHEW CRAVEN, Florida Institute of Technology QUANG DAO, Columbia University JEFFREY DAWSON, University of British Columbia KAAN DOKMECI, Massachusetts Institute of Technology JUNHAO FAN, University of California, Berkeley SWAPNIL GARG, Massachusetts Institute of Technology KYLE GETTIG, University of Florida ALBERT GEVORGYAN, University of Waterloo ANDREW HE, Massachusetts Institute of Technology EDWARD HOU, Carnegie Mellon University CALVIN HSU, Massachusetts Institute of Technology BRICE HUANG, Massachusetts Institute of Technology YAN HUANG, Princeton University JEFFREY HUANG, University of Texas at Austin CALEB JI, Washington University CODY JOHNSON, Carnegie Mellon University AKSHAJ KADAVERU, Massachusetts Institute of Technology RICHARD KANG, University of Waterloo ALEXANDER KATZ, Massachusetts Institute of Technology

ZACK LEE, Carnegie Mellon University GIDEON LEEPER, California Institute of Technology YUAN LIAO, Boston University ANDREW LIN, Massachusetts Institute of Technology DHRUV MEDARAMETLA, Stanford University LINGJIE MEI, Massachusetts Institute of Technology ERIK METZ, University of Maryland, College Park KONSTANTIN MIAGKOV, University of California, Los Angeles JEET MOHAPATRA, Massachusetts Institute of Technology ESHAAN NICHANI, Massachusetts Institute of Technology OTTO OSTERMAN, University of Texas at Dallas ADVAIT PARULEKAR, Texas A&M University FEI PENG, Carnegie Mellon University EDWIN PENG, Carnegie Mellon University KHANH PHAM, University of Chicago SARANESH PREMBABU, Massachusetts Institute of Technology QI QI, Massachusetts Institute of Technology SEYOON RAGAVAN, Princeton University NIKHIL REDDY, Massachusetts Institute of Technology SAMUEL REINEHR, Colorado School of Mines QIUYU REN, Massachusetts Institute of Technology KEVIN REN, Massachusetts Institute of Technology PEDRO SACRAMENTO OLIVEIRAZ, University of Pennsylvania SIVAKORN SANGUANMOO, University of Wisconsin, Madison

GIAN CORDANA SANJAYA, University of Waterloo
MAYA SANKAR, Massachusetts Institute of Technology
MEHTAAB SAWHNEY, Massachusetts Institute of Technology
CHRISTOPHER SHAO, Massachusetts Institute of Technology
JOSHUA SPECKMAN, University of Southern California
KAI SUN, University of Waterloo
SIAH YONG TAN, Stanford University
MICHAEL TANG, Massachusetts Institute of Technology
DRAKE THOMAS, University of Minnesota, Twin Cities
ANTON TRYGUB, Massachusetts Institute of Technology
IOAN VLADIMIR VINTU, Colorado College
RUNZE WANG. Swarthmore College

WILLIAM WANG, University of Pennsylvania
JIANQIAO XIA, Massachusetts Institute of Technology
YINZHAN XU, Massachusetts Institute of Technology
CHRIS XU, Massachusetts Institute of Technology
RICHARD XU, Harvard University
ALLEN YANG, Massachusetts Institute of Technology
JIT WU YAP, University of Michigan, Ann Arbor
RICHARD YI, Massachusetts Institute of Technology
ZHENYUAN ZHANG, University of Waterloo
HANZHI ZHENG, Stanford University
YIFAN ZHU, Stanford University
SIYE ZHU, Harvard University

#### **HONORABLE MENTION - TEAMS**

Listed by university in alphabetical order.

HARVEY MUDD COLLEGE
UNIVERSITY OF BRITISH COLUMBIA
UNIVERSITY OF CALIFORNIA, BERKELEY
UNIVERSITY OF MARYLAND, COLLEGE PARK
UNIVERSITY OF WATERLOO

Shyan Akmal, Adam Busis, Xuming Liang Jeffrey Dawson, Sina Saleh, Heng Xia Junhao Fan, Ray Li, Jonathan Xia Aaron George, Erik Metz, Pratik Rathore Albert Gevorgyan, Anzo Teh, Fengyang Wang

#### THE WILLIAM LOWELL PUTNAM MATHEMATICAL COMPETITION WAS PREPARED BY:

DANIEL ULLMAN, George Washington University – Director of the Competition MARK KRUSEMEYER, Carleton College – Associate Director of the Competition HARM DERKSEN, University of Michigan – Chair of the Problems Committee IOANA DUMITRIU, University of Washington – Member of the Problems Committee ROBIN PEMANTLE, University of Pennsylvania – Member of the Problems Committee

# Score—Rank Correspondence

Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
114	1.5	82	19	68	50	53	114	39	239	25	447.5	11	1055.5
109	3.5	81	20	67	51.5	52	120	38	251.5	24	467.5	10	1157
100	5	80	21	66	55	51	127	37	263.5	23	495.5	9	1235
99	6	79	23	65	59	50	133.5	36	272.5	22	532.5	8	1275
97	7	78	26	64	62	49	145.5	35	281	21	572	7	1309.5
94	8	77	29	62	65.5	48	158.5	34	290.5	20	619	6	1353.5
93	9	76	31	61	70.5	47	167	33	307	19	656.5	5	1437.5
91	10	75	32	60	77	46	172.5	32	331.5	18	681	4	1576.5
89	11.5	74	33	59	82	45	176.5	31	352.5	17	708	3	1805
88	13.5	73	34.5	58	87	44	180.5	30	377	16	733	2	2182.5
87	15	72	36.5	57	93	43	185.5	29	400.5	15	760.5	1	2720
86	16	71	39	56	98.5	42	193	28	414	14	804.5	0	3824
84	17	70	42	55	104	41	206.5	27	424.5	13	866.5		
83	18	69	46.5	54	110	40	224	26	433	12	956		

### Frequency Distribution of Problem Scores of the Top 477 Contestants

Score	A1	A2	<b>A3</b>	<b>A4</b>	A5	A6	B1	B2	В3	B4	B5	B6
10	318	103	104	25	10	31	269	261	228	49	20	43
9	36	12	69	8	5	7	14	34	24	59	2	0
8	56	43	35	6	3	2	52	10	30	34	0	0
7	6	0	7	1	0	0	15	0	3	9	0	0
6	0	18	0	0	0	0	0	0	0	4	0	0
5	4	0	1	0	0	0	0	0	2	0	0	0
4	0	0	0	0	0	0	0	0	0	1	0	0
3	13	0	0	0	0	0	37	0	0	0	0	0
2	25	34	57	2	12	2	70	30	100	20	4	2
1	7	55	16	9	120	11	2	8	48	11	2	6
0	11	143	129	191	136	176	12	81	16	138	166	158
NA	1	69	59	235	191	248	6	52	26	152	283	268

# Students Ranked 1-193

Listed by university in alphabetical order.

#### Boston University, Boston, MA

Yuan Liao Yuxuan Zhang

### Brigham Young University, Provo, UT

**Gradin Anderson** 

### California Institute of Technology, Pasadena, CA

August Chen Jing Ding Zachary Chase

Gideon Leeper Lazar Ilic Haoxuan Chen Yanke Song

### Carnegie Mellon University, Pittsburgh, PA

Cody JohnsonFei PengYiwei LyuDilhan SalgadoJunghwan MinYucheng DaiEdward HouMaxwell AiresYuheng GuoEdwin PengMikhail IvkovZack Lee

Eugene Lee Omar Alrabiah
Evan Fang Philip Lamkin

## Colorado College, Colorado Springs, CO

Ioan Vladimir Vintu

### Colorado School of Mines, Golden, CO

Samuel Reinehr

## Columbia University, New York City, NY

Matthew Lerner Brecher Myeonhu Kim Quang Dao

# Cornell University, Ithaca, NY

Qingxuan Jiang

# Florida Institute of Technology, Melbourne, FL

Feng Gui Junghyun Hwang

#### Florida State University, Tallahassee, FL

Graham O'Donnell

### Harvard University, Cambridge, MA

Avi Swartz Franklyn Wang Richard Xu

David Stoner Jacob Klegar Shyam Narayanan

Dongryul Kim Mark Kong Siye Zhu

Fabio Pruneri Matthew Hase Liu

### Harvey Mudd College, Claremont, CA

Adam Busis Shyan Akmal Xuming Liang

Mengyi Shan

## Massachusetts Institute of Technology, Cambridge, MA

Akshaj Kadaveru Farrell Eldrian Wu Mihir Singhal Aleksandre Saatashvili Gabriel Mintzer Nikhil Reddy Alexander Gu Hung-Hsun Yu Patrick Wang Alexander Katz James Lin Peter Rowley

Allen Liu Jason Lu Qi Qi

Allen Yang Jeet Mohapatra Qiuyu Ren Andrew Gu Jeremy Mcculloch Rachel Zhang

Andrew He Jianqiao Xia Rahul Yesantharao Andrew Lin Jiyang Gao Raul Alcantara Anton Trygub John Wu Richard Yi Aruzhan Amanbayeva Joshua Lee Ruidi Cao

Ashwin Sah Junyao Peng Saranesh Prembabu Brian Reinhart Kaan Dokmeci Shengtong Zhang Brice Huang Kevin Ren Srijon Mukherjee Calvin Hsu Kevin Sun Swapnil Garg Calvin Lee Kritkorn Karntikoon Yinzhan Xu Chris Xu Lingjie Mei Yuan Yao Christopher Shao Maya Sankar Yunkun Zhou Daniel Liu Mehtaab Sawhney Yuging Xie

Danielle Wang Michael Ma Zachary Chroman

Edwin Song Michael Ren Zhuofan Xie

Eshaan Nichani Michael Tang

### Miami University, Oxford, OH

Robert Krueger

### Michigan State University, East Lansing, MI

Mohit Bansil

#### Ohio State University, Columbus, OH

Ankan Bhattacharya

#### Princeton University, Princeton, NJ

Aleco Leng Kapil Chandran Murilo Corato Zanarella

Atanas Dinev Marko Medvedev Seyoon Ragavan

Byron Chin Matthew Tyler Yan Huang

Eric Neyman Michael Gintz Zhuo Qun Song

Joao Vargas Miles Lee

#### Rensselaer Polytechnic Institute, Troy, NY

Paween Pitimanaaree

#### St. Olaf College, Northfield, MN

Jakob Hofstad

## Stanford University, Stanford, CA

David Kewei Lin Hanzhi Zheng Siah Yong Tan
Dhruv Medarametla Jae Hee Lee Yifan Zhu

### Swarthmore College, Swarthmore, PA

Runze Wang

## Syracuse University, Syracuse, NY

Xuerui Yang

### Texas A&M University, College Station, TX

Advait Parulekar Matthew Kroesche

### University of British Columbia Vancouver, Vancouver, BC, Canada

Heng Xia Jeffrey Dawson

## University of California, Berkeley, Berkeley, CA

Jiannan Jiang Junhao Fan Ray Li

### University of California, Los Angeles, Los Angeles, CA

Ciprian Mircea Bonciocat Konstantin Miagkov Xiaoyu Huang

Justin Li Minghao Pan Kaiqi Zhu Osman Akar

#### University of California, San Diego, San Diego, CA

Tianyao Xu

#### University of Chicago, Chicago, IL

Khanh Pham Vijay Srinivasan

#### University of Colorado, Boulder, Boulder, CO

Hongyi Chen

#### University of Florida, Gainesville, FL

**Kyle Gettig** 

#### University of Illinois at Urbana-Champaign, Champaign, IL

Zivi Chen

#### University of Maryland, College Park, College Park, MD

Aaron George Joshua Fernandes Pratik Rathore

Erik Metz

# University of Michigan, Ann Arbor, Ann Arbor, MI

Jit Wu Yap

## University of Minnesota, Twin Cities, Minneapolis, MN

Drake Thomas Utkarsh Koshti

### University of Pennsylvania, Philadelphia, PA

Pedro Sacramento Oliveiraz William Wang

### University of Rochester, Rochester, NY

Phuc Lam Zachary Polansky

## University of Southern California, Los Angeles, CA

Joshua Speckman

# University of Texas at Austin, Austin, TX

Jeffrey Huang Yifan Jiang

### University of Texas at Dallas, Richardson, TX

Otto Osterman

University of Toronto, Toronto, ON, Canada

Andrey Khesin Dmitry Paramonov Samuel Li

University of Washington, Seattle, WA

Bodrol Olonbaatar Dalai Chadraa Thomas Browning

University of Waterloo, Waterloo, ON, Canada

Albert Gevorgyan Jason Yuen Richard Kang
Anzo Teh Kai Sun Zhenyuan Zhang

Gian Cordana Sanjaya Michael Pang

University of Wisconsin, Madison, Madison, WI

Chenghui Li Liwei Jiang Sivakorn Sanguanmoo

Washington University in St. Louis, University City, St. Louis, MO

Caleb Ji Joseph Walegir

Yale University, New Haven, CT

Daniel Gershenson Joshua Hinman Yuxuan Ke

## Students Ranked 206-495.5

Listed by university in alphabetical order.

### Arizona State University, Tempe, AZ

Liam Lawson

### Bard College at Simon's Rock, Great Barrington, MA

Yonghao Yu

### **Bob Jones University, Greenville, SC**

**Erick Ross** 

### **Brigham Young University, Provo, UT**

Erik Parkinson Jonathan Hales Thomas Draper

### Brown University, Providence, RI

George Spahn Nikolai Illarionov Timothy Sudijono

### California Institute of Technology, Pasadena, CA

Andrew Bai Erich Liang Michael Seaman
Daniel Zhou Mayank Pandey Vinayak Kumar

## Carleton College, Northfield, MN

Trevor Flash Thompson

# Carnegie Mellon University, Pittsburgh, PA

Albert Lu Isaac Browne Weihan Li Albert Xu Jianming Wang Wenze Shi Brandon Jiang Joshua Abrams William Liu Chittesh Thavamani Jung Joo Suh Xiaorong Zhang David Altizio Keerthana Gurushankar Xiruo Zhang **Garrett Brothers** Liam Thomas Yang Yang Geyang Qin Matthew Shi Yuepeng Yang Gunmay Handa Ramgopal Venkateswaran Zachary Sussman Hang Liao Ruoyuan Liu Zhiyang He Hongyi Zhou Tudor Popescu Zimu Xiang

### Case Western Reserve University, Cleveland, OH

Benjamin Cheung

### City College of New York, New York City, NY

Nicolas Naing

### Clemson University, Clemson, SC

Robert Melville

#### Columbia University, New York City, NY

Anton Wu Lori Leu Ruigi Zhong

Junhui Zhang

### Cornell University, Ithaca, NY

Aaron Lou Jiazhen Tan Sofya Bykova Alexander Xue Leo Huang Zhicheng Wang

Aryeh Krischer Linchen Ahang

### Dartmouth College, Hanover, NH

Raymond Chen

## Duke University, Durham, NC

Alexandru Damian Junghyun Hwang Steven Li

Jerry Liu Shicheng Rao

# Emory University, Atlanta, GA

Tao Zhou

## Florida Atlantic University, Boca Raton, FL

Logan Dymond

## Florida International University, Miami, FL

Fatima Afzali

## Foothill College, Los Altos Hills, CA

Raiymbek Akshulakov

### George Mason University, Fairfax, VA

Julian Benali

## Georgia Institute of Technology, Atlanta, GA

Nathan Soedjak Timothy Gieseking Xiaogi Peng

Shyamal Patel

### Grinnell College, Grinnell, IA

Jonathan Sadun

#### Harvard University, Cambridge, MA

Arav Karighattam Raluca Vlad Vincent Pan Elbert Du Stefan Spataru William Zhang

Eric Bornstein Vaughan Mcdonald

### Harvey Mudd College, Claremont, CA

Christopher Mcelroy Jacob Cordeiro Richard Shapley

Jacky Lee Jordan Haack Steven Litvack-Winkler

### Haverford College, Haverford, PA

Aaron Kriegman Joao Pedro Mello De Carvalho

## Iowa State University, Ames, IA

Ben Frankel

### Johns Hopkins University, Baltimore, MD

Brian Wen Kyle Gatesman Tanuj Alapati

Daniel Chu Nathan Vallapureddy

## Lake Forest College, Lake Forest, IL

Niam Abeysiriwardena

### Lehigh University, Bethlehem, PA

Chesphongphach Buranasilp Suchakree Chueluecha

### Massachusetts Institute of Technology, Cambridge, MA

Aayush GuptaJeffery YuPeter MizesAgustin GarciaJiaxin ZhangSathwik KarnikAlan PengJoshua YoonScott BeckerAnders OlsenJulian WellmanShreyas BalajiAnna EllisonJung Soo ChuSujay Kazi

Ashwath Thirumalai Katherine Cheng Sushrutha Reddy
Calvin Yost Wolff Kevin Yang Ting Chun Lin
Daniel Barnett Lillian Zhang Varkey Alumootil

Daniel Wang Matthew Ellison Yiran Cai

Dhruv Rohatgi Max Murin Yogeshwar Velingker

Fan Ye Maxwell Fishelson Zachary Farr
Faraz Masroor Meghal Gupta Zachary Obsniuk

Haimoshri Das Michael Kural Handong Wang Michelle Shen

# Michigan State University, East Lansing, MI

Luken Wiljanen Neel Modi

# New York University, New York City, NY

Aadil Bhore Daniil Glukhovskiy Tatiana Ezubova

Anh Le Xuan Mai Hongkangp Yang

### Northeastern University, Boston, MA

Alon Duvall Benjamin Quiring

## Northwestern University, Evanston, IL

Aidan Perreault Fiona Brady

## Oberlin College, Oberlin, OH

Liam Axon

# Ohio State University, Columbus, OH

Rushil Raghavan

## Pennsylvania State University, State College, PA

Kedar Karhadkar

### Princeton University, Princeton, NJ

Alice Lin Jackson Blitz Stefan Tudose
Andrei Graur Jacob Wachspress Tristan Pollner
David Fitzpatrick Kai Zheng Victoria Talvola

Gary Hu Nathan Bergman Xiaorun Wu George Bentley Patrick Hompe Yang Song

Igor Medvedev Samuel Mathers

### Purdue University, West Lafayette, IN

Nathan Hu

# Purdue University Fort Wayne, Fort Wayne, IN

Giang Le

### Queen's University, Kingston, ON, Canada

Riley Becker

#### Rice University, Houston, TX

Mark Helman Mark Saving Shaquille Wyan Que

### Rose-Hulman Institute of Technology, Terre Haute, IN

Bochuan Lyu Jiasheng Hu

# Rutgers University, Piscataway, NJ

Steve Hsu

# Stanford University, Stanford, CA

Andrew Chen Ian Ruohoniemi Sam Redmond

Andrew Lin Nina Zubrilina Tai Vu Ben Heller Pengda Liu Wanqi Zhu

Chady Ben Hamida Phil Chen Yelena Mandelshtam

Emily Wen Prasanna Ramakrishnan Young Han Kim

# Stony Brook University, Stony Brook, NY

Maciej Wlodek

# Swarthmore College, Swarthmore, PA

Zhicheng Fan

#### University at Buffalo, Buffalo, NY

Matthew Eichhorn

### University of British Columbia, Vancouver, BC, Canada

Brandon Zhang Sina Saleh Victor Wang

### University of California, Berkeley, Berkeley, CA

Allen Shen Jonathan Xia Yanlai Yang

Alvin Kao Nathan Kenshur Yuanning Zhang

Eunice Sukarto Nikhil Sahoo James Leng Reid Johnson

### University of California, Los Angeles, Los Angeles, CA

Alexandru Pascadi Jacob Zhang Yan Tao

Bryan Hu Ken Willyard

### University of California, San Diego, La Jolla, CA

Shuangquan Feng Tianyi Yu Tomas Choi

## University of California, Santa Barbara, Santa Barbara, CA

Alex Xu Yewen Sun

## University of Chicago, Chicago, IL

Alex Eastman Trevor Moore Zicheng Zhen

Hari Pingali Xifan Yu Zihao Li

Naomi Sweeting Yutong Qing

### University of Illinois at Urbana-Champaign, Champaign, IL

Alan Hu Kieran Kaempen Weiru Chen

Jason Xia Samuel Guo

### University of Maryland, College Park, College Park, MD

Justin Hontz

University of Michigan, Ann Arbor, Ann Arbor, MI

Aman Karunakaran Noah Luntzlara Yuxuan Bao

Conor Thompson Omer Siddiqui

University of Minnesota, Morris, Morris, MN

Tyrus Martin

University of Minnesota, Twin Cities, Minneapolis, MN

Beren Gunsolus Nhung Pham

University of Nebraska, Lincoln, Lincoln, NE

Alex Heitzman

University of North Carolina at Chapel Hill, Chapel Hill, NC

Robert Zeller

University of North Texas, Denton, TX

Rhythm Garg

University of Notre Dame, Notre Dame, IN

Yuxin Lin

University of Pennsylvania, Philadelphia, PA

Benjamin Foster John Zhang Zachary Sekaran

James Chapman

University of Pittsburg, Pittsburg, PA

Connor Schwartz

University of Rochester, Rochester, NY

Trung Nguyen

University of Southern California, Los Angeles, CA

Jingxin Zhang

University of Texas at Austin, Austin, TX

Aditya Parulekar Alexander Li Dachey Lin

### University of Texas at Dallas, Richardson, TX

**Grant Zierer** 

#### University of Toronto, Toronto, ON, Canada

Calder Morton Ferguson Nathaniel Libman Yukai Zhang

Jennifer Guo Rafael Aznar Jerry Bao Yexinhao Zhou

#### University of Vermont, Burlington, VT

Phuc Tran

### University of Washington, Seattle, WA

Everett Cheng Rory Soiffer

#### University of Waterloo, Waterloo, ON, Canada

Anton Iliashenko Jihanjie Luo Timothy Wahyudi Clive Chan Nicholas Sun Wanchun Shen Felix Bauckholt Reyno Tilikaynen Xinyu Wang

Fengyang Wang Robert Cummings Yizhe Liu

Frieda Rong Ruben Partono Hunter Hong Sina Abbasi

# University of Wisconsin, Madison, Madison, WI

Mingxuan Wu Tairan Ma Ruiting Tong Xiaxin Li

## Virginia Polytechnic Institute and State University, Blacksburg, VA

William Craig

### Washington and Lee University, Lexington, VA

Hung Chu

# Washington University, University City, St. Louis, MO

Dawei Shen Matthew Ehren Sam Heil

Jongwhan Park

## Wesleyan University, Middletown, CT

Di Chen Haochen Gao

### Williams College, Williamstown, MA

Chenyang Sun Richard Wu

## Worcester State University, Worcester, MA

Nicholas Vea

## Yale University, New Haven, CT

Agasha Ratam Hui Yang Michael Homg Andrew Wei Jack Hirsch Noah Kravitz Anthony Ji Lifeng Wang Steven Ma Christopher Xue Max Ranis Tyler Shen

Elaine Hou Michael Doppelt