



William Lowell  
**PUTNAM**  
Mathematical Competition

## ANNOUNCEMENT OF WINNERS

of the eighty-second competition held on December 4, 2021

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

Andrew Gu	Massachusetts Institute of Technology
Michael Ren	Massachusetts Institute of Technology
Edward Wan	Massachusetts Institute of Technology
Shengtong Zhang	Massachusetts Institute of Technology
Daniel Zhu	Massachusetts Institute of Technology

### THE NEXT TEN HIGHEST-RANKING INDIVIDUALS

Each receives an award of \$1,000

Ankit Bisain	Massachusetts Institute of Technology
Quanlin Chen	Stanford University
Tianze Jiang	Massachusetts Institute of Technology
Dain Kim	Massachusetts Institute of Technology
Sean J. Li	Massachusetts Institute of Technology
Brian S. Liu	Massachusetts Institute of Technology
Kevin J. Liu	Massachusetts Institute of Technology
Mihir A Singhal	Massachusetts Institute of Technology
Noah Walsh	Massachusetts Institute of Technology
Rui Yao	Massachusetts Institute of Technology

## THE NEXT TWELVE HIGHEST-RANKING INDIVIDUALS

Each receives an award of \$250

Swapnil Garg	Massachusetts Institute of Technology
Thomas Guo	Massachusetts Institute of Technology
Minjae Kwon	Princeton University
Frank Lu	Princeton University
Zhao Yu Ma	Massachusetts Institute of Technology
Holden Mui	Massachusetts Institute of Technology
Kevin Ren	Massachusetts Institute of Technology
Victor Rong	Massachusetts Institute of Technology
Carl Schildkraut	Massachusetts Institute of Technology
Tristan Shin	Massachusetts Institute of Technology
Franklyn Wang	Harvard University
Guanpeng A. Xu	Massachusetts Institute of Technology

## HONORABLE MENTION — INDIVIDUALS

Gradin Anderson, Brigham Young University	Unubold Munkhbat, Massachusetts Institute of Technology
Adam Ardeishar, Massachusetts Institute of Technology	Ritam Nag, Massachusetts Institute of Technology
Adam Bertelli, Carnegie Mellon University	Quan M. Nguyen, Massachusetts Institute of Technology
Ciprian Mircea Bonciocat, University of California, Los Angeles	Vladyslav Oleksenko, Carnegie Mellon University
Krit Boonsiriseth, Massachusetts Institute of Technology	Misheel Otgonbayar, Massachusetts Institute of Technology
Joseph Camacho, Brigham Young University	Alan Peng, Massachusetts Institute of Technology
Sanjana Das, Massachusetts Institute of Technology	Gregory Pylypovych, Massachusetts Institute of Technology
Sixiang Gao, Carnegie Mellon University	Timothy Qian, Massachusetts Institute of Technology
Weizhen Gao, Carnegie Mellon University	Niyanth Rao, Carnegie Mellon University
Kyle J. Gatesman, Johns Hopkins University	Brian E. Reinhart, Massachusetts Institute of Technology
Gopal K. Goel, Massachusetts Institute of Technology	Dilhan H. Salgado, Carnegie Mellon University
Howard L. Halim, Carnegie Mellon University	Gian Cordana Sanjaya, University of Waterloo
Joseph W. Heerens, Massachusetts Institute of Technology	Eric Shen, Harvard University
Daniel X. Hong, Massachusetts Institute of Technology	Zeyu Shen, Duke University
Edward Hou, Carnegie Mellon University	Tomasz Slusarczyk, Massachusetts Institute of Technology
Ivan Hu, University of Wisconsin	Nathan Smith, Washington University
Vincent Huang, Massachusetts Institute of Technology	Kenta Suzuki, Massachusetts Institute of Technology
Aaron Alvarado K. Julistiono, Massachusetts Institute of Technology	Sheldon K. Tan, Harvard University
Ashton Keith, Binghamton University	Colin S. Tang, Massachusetts Institute of Technology
Aidan M. Kelley, Washington University	Vittal Thirumalai, Massachusetts Institute of Technology
John S. Ko, Massachusetts Institute of Technology	Rahul K. Thomas, Stanford University
Nitin A. Kumar, Massachusetts Institute of Technology	Sasha Voitovych, University of Toronto
Thomas J. Lam, Carnegie Mellon University	Jianzhi Wang, University of California, Berkeley
Phuoc Dinh Le, Southern Methodist University	William Wang, Massachusetts Institute of Technology
Tran Duy Anh Le, University of Rochester	Xunjing Wei, Massachusetts Institute of Technology
Saba Lepsveridze, Massachusetts Institute of Technology	Richard H. Wu, University of California, Berkeley
Daniel Li, Massachusetts Institute of Technology	Alex Xu, University of Michigan
Kevin Li, Stanford University	Daniel Xu, Massachusetts Institute of Technology

Michael Li, University of Toronto  
Samuel J. Li, University of Toronto  
Zhening Li, Massachusetts Institute of Technology  
Wentinn N. Liao, University of California, Berkeley  
Andrew Y. Lin, Massachusetts Institute of Technology  
James H. Lin, Massachusetts Institute of Technology  
Jason Liu, Massachusetts Institute of Technology  
Steven Liu, Massachusetts Institute of Technology  
Yijia Liu, Duke University  
Jeffrey Lu, Massachusetts Institute of Technology  
Edis Memis, Harvard University

Binwei Yan, Massachusetts Institute of Technology  
Andrew Yao, Massachusetts Institute of Technology  
Zi Song Yeoh, Massachusetts Institute of Technology  
Justin Y. Yu, Massachusetts Institute of Technology  
Runze Yu, University of California, Los Angeles  
Fedir Yudin, Massachusetts Institute of Technology  
Ethan A. Zahid, Massachusetts Institute of Technology  
Brad W. Zhang, Carnegie Mellon University  
Daniel J. Zhang, University of California, Santa Barbara  
Jacob B. Zhang, University of California, Los Angeles  
Honglin Zhu, Massachusetts Institute of Technology

## ELIZABETH LOWELL PUTNAM PRIZE

Each receives an award of \$1,000

Dain Kim

Massachusetts Institute of Technology

## WINNING TEAMS

Rank	School	Team Members (in alphabetical order)
1	Massachusetts Institute of Technology	Edward Wan, Shengtong Zhang, and Daniel G. Zhu
2	Princeton University	Minjae Kwon, Frank Lu, and Aleksa Milojevic
3	Harvard University	Eric Shen, Sheldon K. Tan, and Franklyn Wang
4	Stanford University	Quanlin Chen, Kevin Li, and Rahul K. Thomas
5	University of California, Los Angeles	Ciprian Mircea Bonciocat, Runze Yu, and Jacob B. Zhang

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

## HONORABLE MENTION — TEAMS

Listed by university in alphabetical order

<b>School</b>	<b>Team Members (in alphabetical order)</b>
Carnegie Mellon University	Adam Bertelli, Edward Hou, Dilhan H. Dalgado
Duke University	Yijia Liu, Nathan Nguyen, and Zeyu Shen
University of California, Berkeley	Wentinn N. Liao, Jianzhi Wang, and Richard H. Wu
University of Toronto	Michael Li, Samuel J Li, and Sasha Voitovych
University of Waterloo	Alexander Monteith-Pistor, Gian Cordana Sanjaya, and Rui Ming Xiong

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

Andrew Bernoff, Harvey Mudd College — Chair of The Problems Committee

Karl Mahlburg, Susquehanna International Group — Member of The Problems Committee

Richard Stong, Center For Computing Research — Member of The Problems Committee

Gabriel Carroll, University of Toronto — Contributor To The Problems Committee

Andrew Granville, University of Montreal — Contributor To The Problems Committee

Daniel Ullman, George Washington University — Director of The Competition

Mark Krusemeyer, Carleton College — Associate Director of The Competition