



PRIMES



MIT PROGRAM FOR RESEARCH IN MATHEMATICS, ENGINEERING, AND SCIENCE
FOR HIGH SCHOOL STUDENTS (WEB.MIT.EDU/PRIMES)



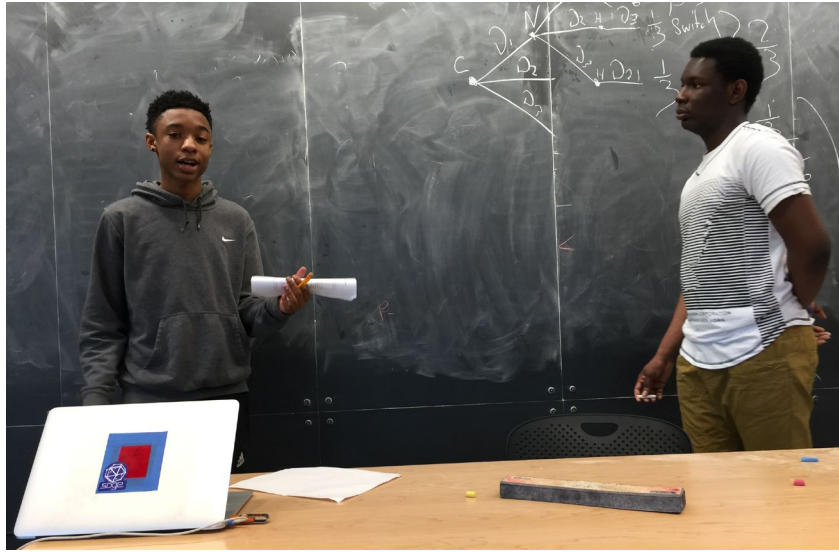
PRIMES students at the Eighth Annual PRIMES conference at MIT, May 2018

MIT PRIMES is a free, year-long after-school research program for high school students, offering projects in mathematics, computer science, and computational biology. This is the only program in the United States that gives students an opportunity to pursue serious research in a university setting at a natural pace, over the period of one year, under the guidance of academic mentors.

- From 2011-2021, **441 research projects** completed by PRIMES students;
- All projects presented at **eleven annual PRIMES conferences**;
- **313 research papers** posted online and **72 published** in *Algebraic Comb.*, *Ann. Comb.*, *Comptes Rendus Math.*, *Commun. Algebra*, *Represent. Theory*, *J. Algebra*, *J. Algebraic Comb.*, *J. Comb.*, *J. Commut. Algebra*, *J. Graph Algorithms Appl.*, *J. Integer Seq.*, *Electron. J. Comb.*, *Eur. J. Comb.*, *Indag. Math.*, *Integers*, *Int. J. Game Theory*, *Discrete Appl. Math.*, *Discrete Math.*, *New York J. Math.*, *Trans. Am. Math. Soc.*, *Bull. London Math. Soc.*, *College Math. J.*, *IEEE Trans. Inf. Theory*, *IMA J. Appl. Math.*, *Topol. Appl.*, *Involve*, *Math Horizons*, *Polit. Analysis*, *Bioinformatics*, *Cell Rep.*, *J. Struct. Biol.*, *Nature Sci Rep*, *Proc Royal Soc A*, *Lett Biomath*, *Math Biosci*, *Phys Rev E*, *Phys Rev Research*, *PLoS Comp Biol*;
- **25 students** received **Outstanding Presentation awards** at MAA Undergraduate Student Poster sessions of Joint Mathematics Meetings;
- **One 1st, three 2nd, three 3rd, and two 4th Grand Awards** at Regeneron/Intel ISEF;
- **1st Prize** (\$100K scholarship), **four 2nd Prizes** (\$50K), **two 4th Prizes** (\$30K), **two 5th Prizes** (\$20K), **2 national finalists** (\$25K), **28 regional finalists**, and **57 semifinalists** at Siemens Competition;
- **Two 1st Places** (\$150K/\$250K), **three 2nd** (\$75K/\$175K), **two 3rd** (\$35K/\$50K), **three 4th** (\$40K/\$100K), **one 5th** (\$90K), **one 6th** (\$80K), **two 7th** (\$70K), **one 9th Place** (\$50K), **two 10th** (\$20K/\$40K), **27 national finalists**, and **97 national semifinalists/scholars** at Intel/Regeneron STS;
- **4 Davidson Fellow Laureates** (\$50K), **11 Davidson fellows** (\$25K/10K), and **8 hon. mentions**;
- **19 USA and Global finalists/medalists** and **19 USA semifinalists** at Yau Science Award.

PRIMES IN 2022

Currently 53 local PRIMES students are working on individual and group research projects and studying in reading groups in mathematics, computer science, and physical and computational biology. PRIMES-USA, a distance-mentoring research section for out-of-state students, has 36 students. We have established partnerships with researchers from Broad Institute, Carnegie Mellon University, Clemson University, CUNY – City College, Harvard, Indiana University, Princeton, SJSU, SHSU, Tufts, University of Illinois at Chicago, UMass Amherst, UMass Lowell, University of Pennsylvania, and MathWorks, which provide projects for several PRIMES students. PRIMES Circle, a math enrichment section for students with disadvantaged backgrounds from local high schools, has 26 students. The total number of students has reached 115, including 41 girls.



PRIMES Circle students making an expository presentation at MIT, May 2017

SPONSORS

PRIMES acknowledges generous support from MIT Mathematics Department, MIT EECS Department, National Science Foundation, Quanta Computer, MathWorks, EHA Foundation, Webster Foundation, Hamilton Foundation, Rosenbaum Foundation, and individual donors. PRIMES is currently seeking funding for the next annual cycle from sources both within and outside MIT. Please contact PRIMES Program Director Dr. Slava Gerovitch at <primes@math.mit.edu>.

PROGRAM COORDINATORS



Prof. Pavel Etingof, Mathematics



Prof. Srinivas Devas, Computer Science



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