MathWorks Math Modeling Challenge

A program of **SIAM**

Final Event: April 24, 2023

PROGRAM

7:30   Arrive at Jane Street; all-team group photo on terrace

WELCOME BREAKFAST

8:00   *Opening Remarks*
Michelle Montgomery, M3 Challenge Program
Director, SIAM

Dr. Chris Musco, New York University, M3 Challenge
Director of Technical Computing Judging

Carl Sundstrom, Senior Project Analyst,
NYC Department of Transportation

TEAM PRESENTATIONS

9:00   **FW BUCHHOLZ HIGH SCHOOL**
Team #16629

9:25   **HIGH TECHNOLOGY HIGH SCHOOL**
Team #16559

9:50   **CONESTOGA HIGH SCHOOL**
Team #16424

10:15   **ADLAI E STEVENSON HIGH SCHOOL**
Team #16407

10:40   *10-minute Break*

10:50   **ELTHAM COLLEGE** (Technical Computing)
Team #16474

11:15   **THOMAS JEFFERSON HIGH SCHOOL FOR
SCIENCE & TECHNOLOGY** (+ Technical Computing)
Team #16401

11:40   **WILLIAM MASON HIGH SCHOOL** (Technical Computing)
Team #16968

12:05   **ST. JOHN'S SCHOOL**
Team #16573

LUNCH

12:30   *Congratulations!*
Dr. Suzanne Weekes, Executive Director, SIAM
In Young Cho, Trader, Jane Street

HOST PRESENTATION

1:30   *Jane Street Panel*
Aisha Stordeur, moderator

AWARD CEREMONY AND RECEPTION

2:30   *"Best of" video: 2023 M3 Challenge experience*

Master of Ceremonies
Dr. Karen Bliss, M3 Challenge Associate Director, SIAM

Remarks
Dr. Katie Kavanagh, Clarkson University,
SIAM VP for Education

*Outstanding Communication of Results and
Technical Computing Scholarship Prizes*
Tanya Kuruvilla and Helen Lomas, MathWorks

M3 Challenge Team Prizes

3:00   *Team Photos*

3:00; 3:30   Jane Street Tours (optional)

3:30–4:30   Meet at Marriott for transport to
airport/trains/vans

A program of

SIAM | Society for Industrial and
Applied Mathematics

**Host:
Jane Street
250 Vesey Street
New York, New York 10281**

WINNERS

Of the 650 papers submitted to this year's MathWorks Math Modeling Challenge, 168 (25%) advanced to the second round of judging, where 37 were selected for awards and recognition (6%).

SEMI-FINALISTS

Papers from the following six schools underwent in-depth discussion and were deemed of exceptional quality by judges. These teams are recognized as semi-finalists and will receive prizes of $1,500 each.

American Heritage School
(Team #16844), Plantation, Florida
Coach: Radleigh Santos
Students: Srijan Deoraj, Luke Freed,
Anagh Sangavarapu, Sharvaa Selvan,
Alan Wu

Blake School - Northrop Campus
(Team #16667), Minneapolis, Minnesota
Coach: Christin Winkler
Students: Karn Kaura, Alex Wu,
Curtis Ying

Eltham College
(Team #16474), London, England
Coach: Benjamin Eastley
Students: Oles Chaban, Atharv Gupta,
Ben Robinson, Alice Sanderson,
Ethan Southward

Livingston High School
(Team #16513), Livingston, New Jersey
Coach: Cheryl Coursen
Students: Harsh Akunuri, Ben Gantman,
Renee Hong, Jeffrey Xu, Timothy Wu

Montgomery Blair High School
(Team #16767), Silver Spring, Maryland
Coach: David Stein
Students: Jerry Jing, Michael Wang,
Alisha Wu, Sophia Zeng, Victor Zhu

Plano West Senior High School
(Team #16960), Plano, Texas
Coach: Sam Fung
Students: Albert Jiang, Suden Prashar,
Andy Qin

HONORABLE MENTIONS

Teams representing the following schools are recognized for honorable mention distinction. Prizes of $1,000 will be awarded to each of these 22 teams for noteworthy submissions.

AMERICAN HERITAGE SCHOOLS PALM BEACH
Delray Beach, Florida

CLEAR LAKE HIGH SCHOOL
Houston, Texas

EXETER MATHEMATICS SCHOOL
Exeter, Devon

FT LEE HIGH SCHOOL
Fort Lee New Jersey

GLASTONBURY HIGH SCHOOL
Glastonbury, Connecticut

JERICHO SENIOR HIGH SCHOOL
Jericho, New York

LOS ALTOS HIGH SCHOOL
Los Altos, California

MAGGIE L WALKER GOVERNOR'S SCHOOL
Richmond, Virginia

MONTGOMERY BLAIR HIGH SCHOOL
Silver Spring, Maryland

NICOLET HIGH SCHOOL
Glendale, Wisconsin

NORTH ALLEGHENY SR HIGH SCHOOL
Wexford, Pennsylvania

NUEVA SCHOOL
Hillsborough, California (**two teams**)

ORLANDO SCIENCE MIDDLE & HS
Orlando, Florida

PINE VIEW SCHOOL
Osprey, Florida

PINGRY SCHOOL
Short Hills, New Jersey

PITTSFORD MENDON HIGH SCHOOL
Pittsford, New York

ST ANDREW'S SCHOOL
Middletown, Delaware

WATFORD GRAMMAR SCHOOL FOR BOYS
Watford, Hertfordshire

WILLIAM FREMD HIGH SCHOOL
Palatine, Illinois (**two teams**)

WILLIAM MASON HIGH SCHOOL
Mason, Ohio

TECHNICAL COMPUTING HONORABLE MENTIONS

Teams representing the following schools are recognized for Technical Computing Honorable Mention distinction.

BLAKE SCHOOL - NORTHROP CAMPUS
Minneapolis, Minnesota

LEGEND HIGH SCHOOL
Parker, Colorado

LIVINGSTON HIGH SCHOOL
Livingston, New Jersey

MEMPHIS UNIVERSITY SCHOOL
Memphis, Tennessee

PINE VIEW SCHOOL
Osprey, Florida

WILLIAM FREMD HIGH SCHOOL
Palatine, Illinois

WINNERS

Of the 650 papers submitted to this year's MathWorks Math Modeling Challenge, 168 (25%) advanced to the second round of judging, where 37 were selected for awards and recognition (6%).

FINALISTS

M3 Challenge Finalist Awards honor teams for the most outstanding mathematical approaches to the problem through modeling, justifying assumptions, describing their process, analyzing effects of change, and summarizing results. The top six teams will present their papers and winners will be announced at the award ceremony.

Adlai E. Stevenson High School
(Team #16407), Lincolnshire, Illinois
Coach: Paul Kim
Students: Jack Chen, Collin Fan, Aadit Juneja, Aayush Kashyap, Nathan Ma

High Technology High School
(Team #16559), Lincroft, New Jersey
Coach: Raymond Eng
Students: Michael Gao, Kevin Guan, Amanda Guan, Amanda Lin, Kevin Liu

Conestoga High School
(Team #16424), Berwyn, Pennsylvania
Coach: Allison Youndt
Students: James Johnson, Evan Lu, Daniel Tu, Vincent Yao, Evelyn Yu

St. John's School
(Team #16573), Houston, Texas
Coach: Dwight Raulston
Students: Ananya Das, Caden Juang, Oliver Lin, Ben Lu, Addison Spiegel

FW Buchholz High School
(Team #16629), Gainesville, Florida
Coach: Ziwei Lu
Students: Himal Bamzai-Wokhlu, Nicholas Dang, Nolan Gao, Melissa Li, Nathan Wei

Thomas Jefferson High School for Science & Technology
(Team #16401), Alexandria, Virginia
Coach: Quinn McFee
Students: Rishabh Chhabra, Om Gole, Rishabh Prabhu, Jerry Sheng, Laura Zhang

TECHNICAL COMPUTING FINALISTS

This year 292 papers were considered for M3 Challenge Technical Computing Awards for outstanding use of programming to analyze, design, and conceive a solution for the problem. The top three teams will present their papers and winners will be announced at the award ceremony.

Eltham College
(Team #16474), London, England
Coach: Benjamin Eastley
Students: Oles Chaban, Atharv Gupta, Ben Robinson, Alice Sanderson, Ethan Southward

Thomas Jefferson High School for Science & Technology
(Team #16401), Alexandria, Virginia
Coach: Quinn McFee
Students: Rishabh Chhabra, Om Gole, Rishabh Prabhu, Jerry Sheng, Laura Zhang

William Mason High School
(Team #16968), Mason, Ohio
Coach: Colleen Everett
Students: Oliver Gao, Matthew Qiu, Jason Wang, Katie Wilson, David Zhang

PRIZES: $100,000 OR £75,000

M3 Challenge Champion ....$20,000 or £15,000+
M3 Challenge Runner Up...$15,000 or £11,400+
M3 Challenge Third Place...$10,000 or £7,500+
M3 Challenge Finalists (3)......................................$5,000 or £3,750+ each
M3 Challenge Semi-Finalists (6)...............................$1,500 or £1,100+ each
M3 Challenge Honorable Mentions (22).................$1,000 or £750+ each
Technical Computing Finalists (3) ....$3,000, $2,000, $1,000 or £2,250+, £1,500+, £750+
Outstanding Communication of Results.................$500 or £375+ each
Finalist Team Coaches (6) ....$500 or £375+ each

MathWorks Math Modeling Challenge

A program of SIAM.

ABOUT M3 CHALLENGE

MathWorks Math Modeling Challenge (M3 Challenge) is the prestigious Internet-based competition known for providing a transformative high school experience to inspire students to pursue STEM majors and careers. The contest, organized by Society for Industrial and Applied Mathematics (SIAM) and sponsored by leading software developer MathWorks, is free and open to students in the U.S. and U.K. M3 Challenge will award top teams this year with $100,000+ or £75,000+ in scholarships to use for their higher education. M3 Challenge has awarded more than $1.75 million in scholarships to date.

Each school may enter up to two teams of three to five junior/senior or sixth form students, who spend up to 14 hours on Challenge weekend devising and submitting a solution to the Challenge Problem, which is not revealed to them until they log in. Following a rigorous multi-stage judging process, six finalist teams and three technical computing awardees present their findings live to a final judge panel to determine the final rank order. Learn more at *m3challenge.siam.org*.

ABOUT MATHWORKS

MathWorks is the leading developer of mathematical computing software. MATLAB, the language of engineers and scientists, is a programming environment for algorithm development, data analysis, visualization, and numeric computation. Simulink is a block diagram environment for simulation and Model-Based Design of multidomain and embedded engineering systems. Engineers and scientists worldwide rely on these products to accelerate the pace of discovery, innovation, and development in automotive, aerospace, communications, electronics, industrial automation, and other industries. MATLAB and Simulink are also fundamental teaching and research tools in the world's universities and learning institutions. Founded in 1984, MathWorks employs more than 6,000 people in 34 offices around the world, with headquarters in Natick, Massachusetts, U.S. For additional information, visit *mathworks.com*.

ABOUT SIAM

Society for Industrial and Applied Mathematics (SIAM), headquartered in Philadelphia, Pennsylvania, is an international society of more than 14,000 individual, academic and corporate members from 100+ countries. SIAM helps build cooperation between mathematics and the worlds of science and technology to solve real-world problems through publications, conferences, and communities like chapters, sections, and activity groups. Learn more at *siam.org*.

ABOUT JANE STREET

Jane Street is a global trading firm with offices in New York, London, Hong Kong, Singapore, and Amsterdam. Our approach is rooted in technology and rigorous quantitative analysis, but our success is driven by our people. Find out more at *janestreet.com*.

AWARDS AND RECOGNITION

- ASAE Associations Advance America (AAA) Award of Excellence
- Committee Encouraging Corporate Philanthropy (CECP) Excellence Award
- The National Association of Secondary School Principals has placed M3 Challenge on the NASSP National Advisory List of Student Contests and Activities since 2010

M3Challenge.siam.org

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