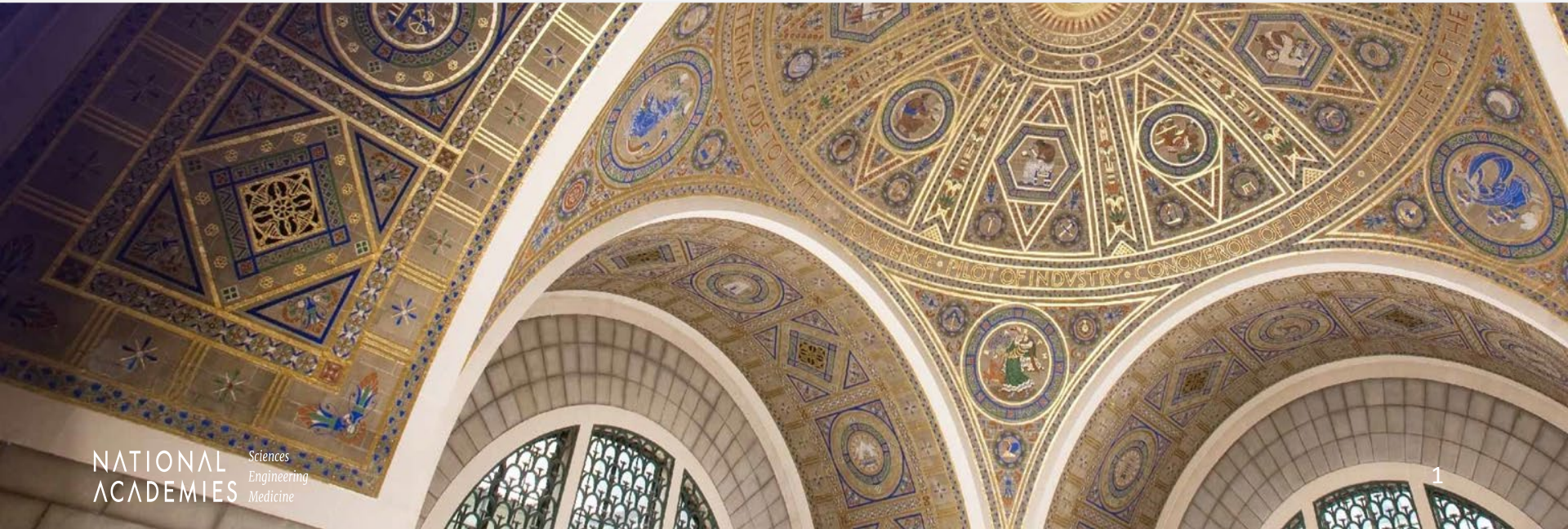
International Practices in K-12 Mathematics Education: the Role of Computational Thinking, Data Science & AI

NATIONAL ACADEMIES Sciences Engineering Medicine

June 25, 2026



WELCOME

The National Academies of Sciences, Engineering, and Medicine (NASEM) provide independent, trustworthy advice that advances solutions to society's most complex challenges.

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Why?

- Less than 3 percent of U.S. children are receiving data science education
- Deficit of math teachers in the U.S.
- No global analysis available
- Hard to improve when we do not know where we stand
- Because it is important - socioeconomically

Project Components

- A Survey - webinar in the Fall and handout
- February 23-24, 2026 - Workshop Recordings
- A Webinar Series (4 webinars this Spring) and more in the Fall
- A Workshop Proceedings Report - July 2026
- A Distribution List - Scroll down and Sign Up

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In-Person Workshop Attendees

Scope of Work

- **Three Frameworks**
  - Data Science
  - Computational Thinking
  - Artificial Intelligence
- **Four Themes**
  - Curriculum Development and Policy Implementation
  - Assessment Techniques and Student Learning
  - Technology Tools and Frameworks
  - Instructional Approaches and Professional Practice
- **Two Grade Levels**
  - 70% on High School Math Ed (Grades 9-12)
  - 30% on K-8 Math Ed (Grades 1-8)

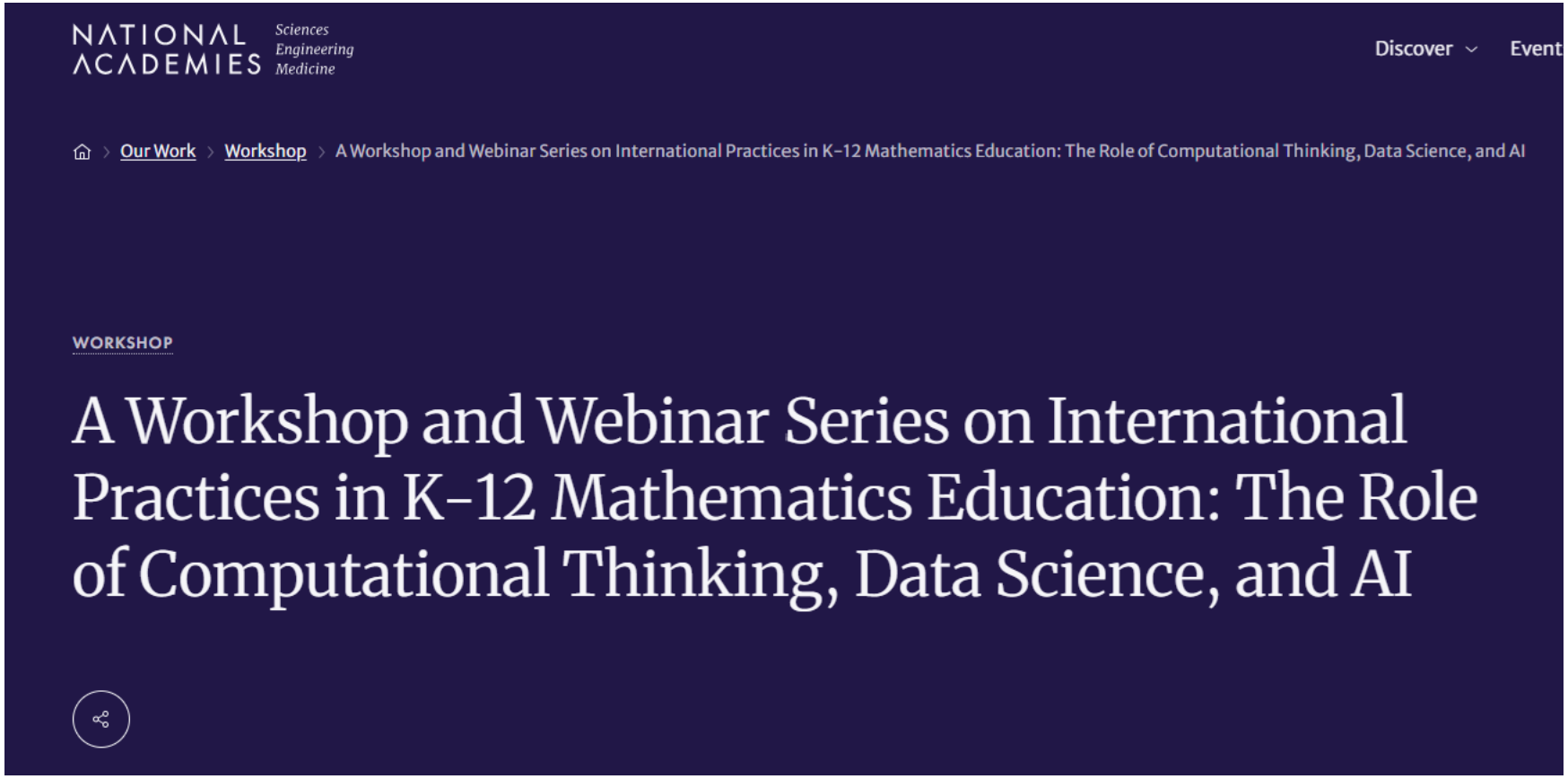
Expected Outcomes

- Advancing the body of knowledge
- A global understanding of best practices
- A **National Plan** and/or a **Consortium of Stakeholders**
- New collaborations and partnerships
- Development of new policies or revise old policies

Webinar Agenda

- Background - Ana Ferreras & Padhu Seshaiyer
- Introduction of the Moderator – Hollylynne S. Lee
- Introduction of the Speaker – Tin Lam TOH
- Webinar Lecture – Tin Lam TOH
- Q&A – Hollylynne S. Lee & Tin Lam TOH
- Announcements - Ana Ferreras

Project Website - Follow Us



Today's Moderator - Hollylynne S. Lee

Dr. Hollylynne S. Lee - A Distinguished University Professor of Mathematics and Statistics Education in the STEM Education department at NC State University. She is also a Senior Faculty Fellow at the Friday Institute for Educational Innovation. Her research expertise focuses on teaching and learning of probability, statistics, and data science in grades 4-14. She is an expert on the design and use of technology tools to facilitate students' learning of mathematics and statistics, as well as preparing pre-service and in-service teachers to teach statistics, data science, and use technology in mathematics.

Generative AI in Mathematics Education

Dr. Tin Lam TOH is an Associate Professor and currently the Head of the Mathematics & Mathematics Education Academic Department in the National Institute of Education, Nanyang Technological University, Singapore. He is a mathematician by training and has moved on to mathematics education research since he joined the National Institute of Education. He held research grants on mathematical problem solving and use of comics in mathematics education, among several other research projects. He publishes in both mathematics and mathematics education in his career.

- Webinar Survey

- Workshop Proceedings

- Webinar Recordings

- Workshop Recordings

- More webinars in the Fall

* ENJOY THE SUMMER BREAK *