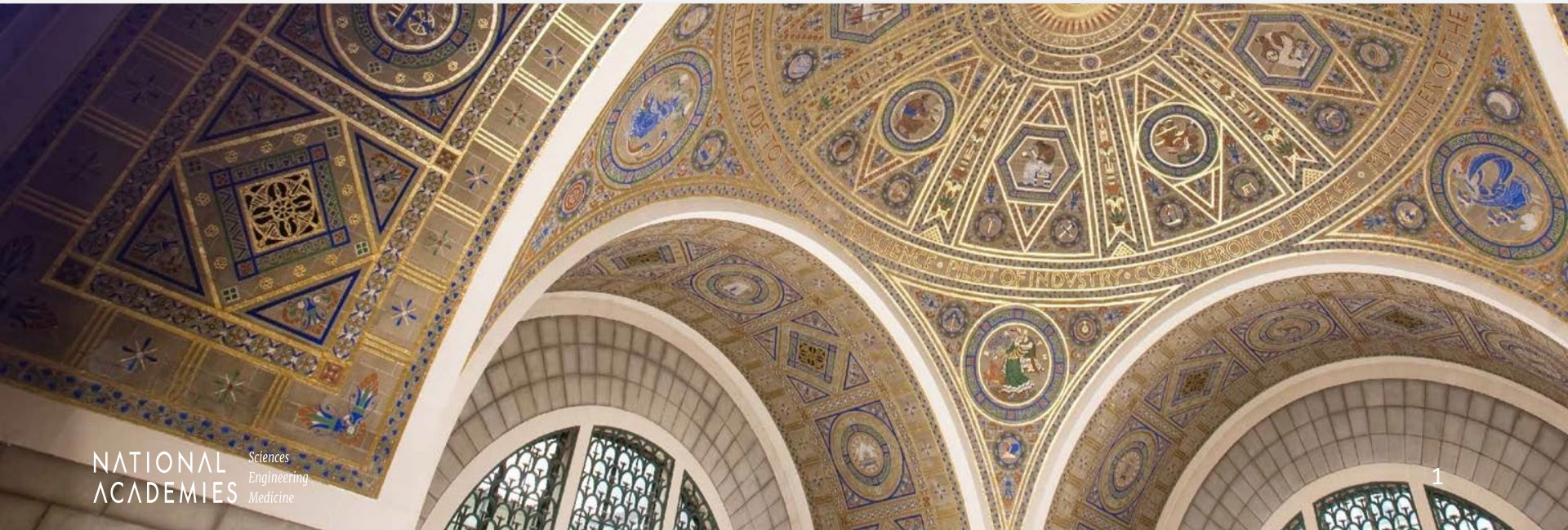


# International Practices in K-12 Mathematics Education: the Role of Computational Thinking, Data Science & AI

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May 27, 2026



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# 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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# Planning Committee



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David Weintrop  
**USA**

Padhu Seshaiyer  
**USA (Chair)**

Richard  
Velasco  
**USA**

Toh Tin Lam  
**Singapore**

# Sponsors



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# Why?

- Less than 3 percent of U.S. children are receiving [data science education](#)
- Deficit of US school teachers
- 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 – David Weintrop
- Introduction of the Speaker – Takashi Kawakami
- Webinar Lecture – Takashi Kawakami
- Q&A – David Weintrop & Takashi Kawakami
- Announcements - Ana Ferreras

# Project Website - Follow Us

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## WORKSHOP

# A Workshop and Webinar Series on International Practices in K-12 Mathematics Education: The Role of Computational Thinking, Data Science, and AI







# Today's Moderator David Weintrop

**David Weintrop** is an Associate Professor and the Dean's Impact Professor in the Department of Teaching & Learning, Policy & Leadership in the College of Education with a joint appointment in the College of Information at the **University of Maryland**. His research focuses on the design, implementation, and evaluation of effective, engaging, and equitable computational learning experiences.



## **Toward the Integration of DS, CT and AI in Mathematics Classes: A Perspective from Japan**

**Takashi Kawakami** is an Associate Professor of Mathematics Education at **Utsunomiya University**, Japan. His current primary focus is exploring the intersection of mathematical modeling, statistics, data science, and AI education in K-12. He has received several awards, including the Highly Commended Award for an Early Career Researcher at ICOTS-10 and the Excellent Paper Award from the Japan Society for Science Education. He has been actively involved in international conferences, including the Survey Team on data science education at ICME-15 and a plenary lecture on AI and mathematical modeling education at ICTMA-22.



# *Announcements*

AND UPCOMING EVENTS



# Next Webinar – June 9, 6 pm (ET)



**Dynamic Interplay of Policy,  
Curriculum, and Practice in  
Korean Mathematics Education**



**Speaker: Kyungwon Lee, Seoul  
National University, South Korea**



**Moderator: Richard Velasco,  
University of Florida**

# Save the Dates - Upcoming Webinars



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## International Practices in K-12 Mathematics Education

The Role of Computational Thinking,  
Data Science, & AI

**MAY 14** • 6:00 – 7:00 PM ET

**MAY 27** • 7:00 – 8:00 PM ET

**JUNE 9** • 6:00 – 7:00 PM ET

**JUNE 25** • 8:00 – 9:00 PM ET