

## Goals and Proceedings Information

### Indiana STEM Education Conference Goals

The goal of the annual Indiana STEM Education Conference is to support K-12 STEM teaching and learning in Indiana by sharing effective practices in STEM teaching and learning. The conference is an opportunity for STEM teachers, researchers, and organizations to present instructional strategies, lessons/curriculum, policies, research, and resources. Each annual meeting is informed by a timely theme and is organized around four strands: STEM Instructional Strategies, STEM Curriculum and Resources, STEM Career Exposure, and STEM Education Research.

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## Preface and Acknowledgments

Welcome to the seventh-annual Indiana STEM Education Conference, hosted by the Center for Advancing the Teaching and Learning of STEM (CATALYST, <https://www.education.purdue.edu/catalyst/>) at Purdue University. The theme for the 2022 conference is *STEM Education: Making Giant Leaps*. This year's Indiana STEM Education Conference provides opportunities to learn about effective STEM education strategies, curriculum, and resources to engage students in solving significant problems through STEM education.

Still navigating the global pandemic, the planning and organizing team developed in-person and virtual conference options featuring 77 presentations, 24 sponsors, and 13 research posters or briefs for approximately 420 participants. Similar to last year, the virtual presentations and resources will stay posted for a few months in the Acelevents Event Platform. This will allow participants to watch the presentations and to view the resources multiple times after the conference ends.

The keynote speaker for the conference is Dr. Briony Horgan. Dr. Horgan is a scientist on NASA's Mars rover Perseverance and an Associate Professor of Planetary Science at Purdue University. Her research program uses data from NASA satellites and rovers to understand the surface processes that shaped Mars and the Moon. In her presentation she discussed her experience becoming an interdisciplinary STEM researcher, her experience with research with the Mars rover mission, and her thoughts about encouraging future STEM researchers through the K-12 schools.

Sponsors are important for the success of the conference. For a second year, we are fortunate to have Internet Essentials from Comcast (<https://internetessentials.com/>) as a premier sponsor. Additional sponsors include: 1st Maker Space, Keep Indiana Learning STEM Synergy, Purdue Summer College for High School Students, Standard for Success, LLC, STEM Education Works, AP-TIP IN/University of Notre Dame, College of Science K-12 Outreach Purdue University, Gearbox Labs, Get More Math, Moss Education, Purdue University – Department of Forestry and Natural Resources, Tallo, Carolina Biological Supply Company, FIRST Indiana Robotics, GEMS @Purdue, GER<sup>2</sup>I - Gifted Education Research & Resource Institute, HASTI – Hoosier Association of Science Teachers, Inc., Indiana Technology Student Association, ITEEA – International Technology and Engineering Educators Association, Nyla Nova STEMiversity, STEM Teach Indiana, and TinkRworks.

This is the second year of published proceedings for the Indiana STEM Education Conference. The 13 research posters or briefs are published through Purdue e-Pubs (<https://docs.lib.purdue.edu/instemed>).

Thank you to all of the attendees for making time to grow as a professional through this conference. In addition, we thank Acelevents for helping us create the virtual conference; Information Technology at Purdue (IT@P), Ed Dunn, and his group for providing technology support; and Purdue Conferences, Pamela Walker-Stokes, and her colleagues for organizing the conference details.

See you in 2023!