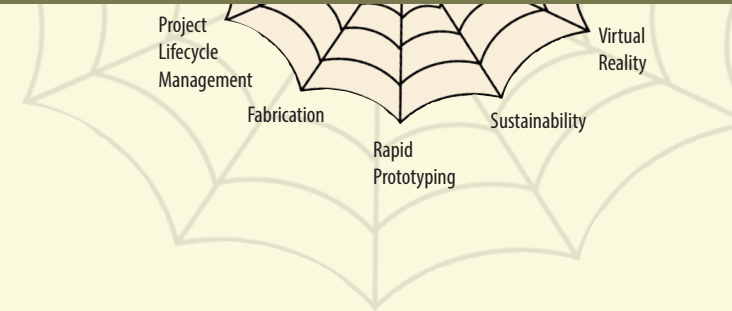


Special thanks
to all our **Sponsors**



Expanding the Web of Graphics



Sunday | October 12

- 8:00 - 10:00 am **Registration** | Marriott, Redbird B
- PRE-CONFERENCE WORKSHOPS**
- 10:00 - noon **Workshop 1** | Package Design & Production | Nelson Smith Bldg., Rm. 10
- 9:30 - noon **Workshop 2** | Design Considerations for 3D Printing | Turner Hall, Rm. 132
- 12:00 - 1:00 pm **Lunch** (on own) | Avanti's Restaurant
- 1:30 - 4:00 pm **Workshop 3** | The future of CAD: Fusion 360 | Turner Hall, Rm. 167
- 1:30 - 4:00 pm **Workshop 4** | NX Motion | Turner Hall, Rm. 210
- 4:15 - 5:30 pm **Executive Committee Meeting** | Marriott Broadway Meeting Room
- 4:00 - 6:00 pm **Media Showcase and Vendors Setup** | Marriott, Redbird B
- 4:00 - 7:00 pm **Registration** | Marriott, Redbird B
- 6:30 - 8:30 pm **Welcome Reception** | Marriott, Redbird B
- 6:30 - 8:30 pm **MEDIA SHOWCASE & VENDORS** | Marriott, Redbird B
- The Use of a Real Time Online Class Response System to Enhance Classroom Learning*
Lulu Sun
- A Flipped Classroom Learning Module: Introduction to the Design and Modeling of Spur Gears*
Jennifer McInnis and Nicholas Bertozzi

ASEE | Engineering Design Graphics Division
 69th Midyear Conference



**Monday
October 13**

Expanding the Web of Graphics

69th Midyear Conference

**Tuesday
October 14**

7:30 - 8:30 am **Registration, Continental Breakfast & Vendors** | Marriott, Redbird B

8:30 - 8:45 am **Opening Remarks** | Marriott, Redbird A

Dr. Jeff Wood, Dean of the College of Applied Science and Technology

8:45 - 10:00 am **Modeling Processes** | Pat Connolly, Moderator

Additive Manufacturing and 3D Printing Datasets Visualization,

Simplifications, Enhancements, Optimizations, and beyond...

Rafael Obregon

Open Source Maker Movement: Opportunities for the Engineering Design Classroom

Robert Martin and Chris Merrill

Improving Accessibility to Additive Manufacturing

Ranjeet Agarwala and Robert A. Chin

10:00 - 10:30 am **Break and Vendors** | Marriott, Redbird B

10:30 - noon **Group Discussion** | Diarmaid Lane, Moderator

Shaping the Future of Our Membership

Diarmaid Lane

Noon - 2:00 pm **Lunch, Vendors & Business Meeting** | Marriott, Redbird B

2:00 - 3:15 pm **Spatial Visualization** | Dennis Lieu, Moderator

Micro to Macro... Investigating the Complex Cognitive Processes in Forming and Externalizing Visual Imagery

Diarmaid Lane and Donal Carty

Development of Spatial Visualization Skills through Engineering Curricula

Norma Veurink and Sheryl Sorby

Why Should We Assess the Haptic Tendencies of Pre-service STEM Teachers?

Nancy Study

3:15 - 3:45 pm **Break and Vendors** | Marriott, Redbird B

3:45 - 4:30 pm **Spatial Visualization Strategies** | Judy Birchman, Moderator

Understanding How Learner Outcomes are affected through the Implementation of Augmented Reality in an Introductory Engineering Graphics Course

Timothy Thornton, Aaron Clark and Matthew Lammi

Examining the Constraint-based Modeling Strategies of Undergraduate Students

Theodore Branoff

Evening **Dinner** (on your own)

8:00 - 8:30 am **Continental Breakfast & Vendors** | Marriott, Redbird B

8:30 - 9:45 am **Graphics and STEM Concepts** | Nick Bertozzi, Moderator

Defining Concepts for an Engineering Graphics Concept Inventory: A Delphi Study

Mary Sadowski and Sheryl Sorby

Developing a Concept Inventory for Engineering Design Graphics

Sheryl Sorby, Mary Sadowski, Heidi Steinhauer and Nancy Study

Promoting Reflective Thinking about STEM through CADD Activities

Raymond Dixon

9:45 - 10:15 am **Break & Vendors** | Marriott, Redbird B

10:15 - 11:15 am **Classroom Techniques** | Lulu Sun, Moderator

Authentic New Product Development Instruction Made Possible with Low-Fidelity and Lower-Cost Rapid Prototyping

Louis Reifschneider and Peter Kaufman

On the Development of an Automated Course Assessment Tool (ACAT)

Timothy Kostar, Kurt Hamilton, Linda Marquis and Nicholas Bertozzi

11:30 - 12:45 pm **Bus trip to Caterpillar** (box lunch on the bus; depart from Conference Center North doors)

12:45 - 3:30 pm **Caterpillar Tour**

3:30 - 4:30 pm **Bus Trip** (Return to Normal)

6:00 - 7:00 pm **Reception** | Marriott, Redbird B

7:00 - 9:00 pm **Awards Banquet** | Marriott, Redbird B

TECHNICAL SESSION 1

Marriott | Redbird A

TECHNICAL SESSION 2

Marriott | Redbird A

TECHNICAL SESSION 3

Marriott | Redbird A

TECHNICAL SESSION 4

Marriott | Redbird A

TECHNICAL SESSION 5

Marriott | Redbird A

TECHNICAL SESSION 6

Marriott | Redbird A