



Program Chair's Report—2020 EDGD Annual Conference

2020 EDGD Annual Conference (held in conjunction with ASEE's Virtual Conference)

Jun 22-26, 2020

The following is a program summary for the 2020 EDGD annual conference.

Results:

37	Submitted
2	Rejected
0	In abstract
4	In draft
17	In final
16	Ready to publish
7	Diversity related

The Program:

M218-Engineering Design Graphics Division Technical Session 4

Technical Engineering Design Graphics Division

Mon. June 22, 2020 10:20 AM to 10:40 AM

Online, A Virtual Conference

Session Description

Offers a potpourri of ideas that will be of interest to design graphics instructors and others with an interest in design graphics instruction.

Moderated by Hannah Budinoff

Papers Presented

Challenges of Developing a New Engineering Drawings Course for Civil Engineers [\[view paper\]](#)

Mr. Bradley James Schmid (University of Saskatchewan)

CAD for College: Switching to Onshape for Engineering Design Tools [\[view paper\]](#)

Ms. Kate N. Leibold (Rochester Institute of Technology)

Conceptual Cylinder Head CAD Project for Assessment [\[view paper\]](#)

Mr. Eric Leonhardt (Western Washington University)

Engineering Application with a Visual Aid and an Experimental Setup [\[view paper\]](#)

Dr. Nandita Biswas (Washington State University) and Mr. David Torick (Washington State University)

M417-The Engineer of 2020: Realizing the Vision?

Panel Engineering and Public Policy Division, Engineering Design Graphics Division, Environmental Engineering Division, Engineering Research Council, ASEE Committee on Diversity, Equity & Inclusion, Ocean and Marine Division, Engineering Technology Division, Manufacturing Division, Entrepreneurship & Engineering Innovation Division, and Technological and Engineering Literacy/Philosophy of Engineering Division

Mon. June 22, 2020 1:00 PM to 1:30 PM

Online, A Virtual Conference

Session Description

Please join us for a moderated discussion on the current state of engineering education and the profession as compared to the vision of two National Academy of Engineering (NAE) landmark reports.

The NAE's 2004 report, "The Engineer of 2020: Visions of Engineering in the New Century," presented forward-looking goals for the engineering profession in 2020, including the challenges, opportunities, and global context within which engineers would work. Importantly, the report stated that engineering "must (1) agree on an exciting vision for its future; (2) transform engineering education... [\(continued\)](#)

For those interested in: Academia-Industry Connections and Advocacy and Policy

Moderated by Dr. Elizabeth Cady

T318-Engineering Design Graphics Division Technical Session 1

Technical Engineering Design Graphics Division

Tue. June 23, 2020 11:20 AM to 11:40 AM

Online, A Virtual Conference

Session Description

Advocates on behalf of broadening participation in engineering and engineering technology.

For those interested in: Broadening Participation in Engineering and Engineering Technology

Moderated by Dr. Lulu Sun

Papers Presented

A Simple Method Allowing Students to Improve Their 3-D Visualization Skills [\[view paper\]](#)

Dr. Dan G. Dimitriu (San Antonio College) and Miss Dana Corrina Dimitriu (Affiliation unknown)

Engineering Graphics in a Community College Setting: Challenges and Opportunities [\[view paper\]](#)

Dr. Hannah Dawes Budinoff (Pima Community College)

Longitudinal Analysis of Spatial Ability over an Undergraduate Engineering Degree Program [\[view paper\]](#)

Dr. Maxine Fontaine (Stevens Institute of Technology) and Dr. Alexander John De Rosa (Stevens Institute of Technology)

T518-EDGD Executive Committee Meeting

Business Engineering Design Graphics Division

Tue. June 23, 2020 3:30 PM to 4:30 PM

Online, A Virtual Conference

Session Description

This is a meeting of the executive committee of the Engineering Design Graphics Division, moderated by the chair, Heidi M. Steinhauer.

W318-Engineering Design Graphics Division Technical Session 2

Technical Engineering Design Graphics Division

Wed. June 24, 2020 11:40 AM to 12:00 PM

Online, A Virtual Conference

Session Description

Focuses on visualization and the technological needs of engineering faculty and other engineering educators.

Moderated by Dr. Ranjeet Agarwala

Papers Presented

Cloud-based Computer-aided Engineering Education: Finding the Silver Lining [\[view paper\]](#)

Dr. Derek M. Yip-Hoi (Western Washington University)

Contextualized Design Projects in Graphics and Visualization Course: Student Perceptions and Sustainability Systems-thinking

Knowledge [\[view paper\]](#)

Dr. Raghav Pucha (Georgia Institute of Technology), Dr. Sunni Haag Newton (Georgia Institute of Technology), Dr. Meltem Alemdar (Georgia Institute of Technology), Dr. Rebecca Watts Hull (Georgia Institute of Technology), and Adhiraj Bhagat (Georgia Institute of Technology)

Evaluation of a Puzzle-based Virtual Platform for Improving Spatial Visualization Skills in Engineering Freshmen [\[view paper\]](#)

Dr. Vimal Kumar Viswanathan (San Jose State University), Sadaqatal Hussaini Mirza (San Jose State University), Dr. Chitra R. Nayak (Tuskegee University), and Dr. Maria Calhoun (Tuskegee University)

W518-Engineering Design Graphics Division Business Meeting

Business Engineering Design Graphics Division

Wed. June 24, 2020 3:30 PM to 4:30 PM

Online, A Virtual Conference

Session Description

Business meeting of the Engineering Design Graphics Division, moderated by the chair, Heidi M. Steinhauer.

For those interested in: Broadening Participation in Engineering and Engineering Technology and New Members

R318-Engineering Design Graphics Division Technical Session 3

Technical Engineering Design Graphics Division

Thu. June 25, 2020 11:20 AM to 11:40 AM

Online, A Virtual Conference

Session Description

Strategies and use of instructional aids to improve design graphics instruction.

For those interested in: New Members

Moderated by Dr. Ranjeet Agarwala

Papers Presented

Development of a Spatial Visualization Assessment Tool for Younger Students Using a Lego™ Assembly Task [\[view paper\]](#)

Prof. Nathan Delson (UC San Diego), Dr. Lelli Van Den Einde (UC San Diego and eGrove Education, Inc.), Mrs. Jessica Tuazon (Affiliation unknown), and Mr. Daniel Yang (UC San Diego)

Enhancing Learning of Engineering Graphics Through Gamification [\[view paper\]](#)

Dr. Lulu Sun (Embry-Riddle Aeronautical University)

NOT Reinventing the Wheel: Product Data Management (PDM) Software Utilized as a Feedback System for Students in an Introductory

Engineering Graphics Course [\[view paper\]](#)

Mr. David Torick (Washington State University) and Dr. Nandita Biswas (Washington State University)

F218-Engineering Design Graphics Division Technical Session 5

Technical Engineering Design Graphics Division

Fri. June 26, 2020 10:20 AM to 10:40 AM

Online, A Virtual Conference

Session Description

Extends bridges between design graphics and engineering technology.

For those interested in: Broadening Participation in Engineering and Engineering Technology

Moderated by Miss Yaël-Alexandra Jackie Monereau

Papers Presented

Forming a Strong Association Between Dimensional Data in Sketches and Engineering Drawings [\[view paper\]](#)

Dr. Oziel Rios (University of Texas at Dallas)

Students' Understanding of Datum Reference Frame Concepts in a GD&T Course: Student Outcomes Across Multiple Semesters [\[view paper\]](#)

Dr. Theodore J. Branoff (Illinois State University) and Dr. Kevin L. Devine (Illinois State University)

Using the Results of Certification Exam Data: A More Deliberate Approach to Improving Student Learning [\[view paper\]](#)

Dr. Robert A. Chin (East Carolina University) and Dr. Ranjeet Agarwala (East Carolina University)

F418-Maker Spaces: Developing and Broadening our Knowledge, Skills, and Implications in their Value

Panel Engineering Design Graphics Division

Fri. June 26, 2020 1:00 PM to 1:30 PM

Online, A Virtual Conference

Session Description

Maker space's top three benefits include:

- (1) developing creativity skills;
- (2) developing critical thinking and problem-solving skills; and
- (3) applying knowledge to practical problems (Nagel, 2018).

Those involved in maker-space activities have also been found to collaborate more with others and to have gained confidence in their abilities. This participatory panel session focuses on recognizing, sharing, and developing our knowledge, skills, and implications associated with the value of

maker spaces. While not inclusive, this session also examines maker-space ideas, definitions, purpose, materials, activities, locations, furniture, and all that make maker spaces and their impact.
For those interested in: Broadening Participation in Engineering and Engineering Technology, New Members, and Pre-College
Moderated by Dr. Sheryl A. Sorby and Dr. Matthew Wettergreen

For the 2021 annual conference:

July 2020: 2021 Division Officer List due

August 2020: 2021 Call for Papers are due

Respectfully Submitted,

///signed///

Robert A. Chin and Ranjeet Agarwala
2020 Program Co-Chairs