

Industrial Engineering Division

Spring 2018 Newsletter

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Another productive academic year has taken place, showcasing the many ways our members have impacted a number of stakeholders, including students, industry partners, and the community. When collaboration happens, it's possible for innovation to unfold and drive impact.

The 125th Annual Conference and Exposition, which will take place from June 24-27 in Salt Lake City, is an exemplary opportunity for members to share their knowledge and learn from their peers. This newsletter is devoted to providing you with information about the conference and its value. The industrial engineering division will offer four technical sessions, which focus on the following topics: preparing programs for the future, preparing students for the future, preparing for the future through projects and research, and preparing courses for the future. A number of scholars will present their papers during each session, providing their findings and insight related to their area of expertise. Be sure to attend the IED Business Town Hall Business Meeting on Monday, June 25, at 3:15 p.m. and the Joint Banquet on Tuesday, June 26, at 6:15 p.m. Please keep reading for details regarding these interactive sessions. This is an opportunity you don't want to miss!

Call for Officers

The Industrial Engineering Division (IED) is seeking nominations for Secretary/Treasurer for 2018-19. This is the first year of a five-year rotation, which is followed by: Assistant Program Chair, Program Chair, Division Chair, and then finally Awards/Past Division Chair. The time commitment is minimal except in the Program Chair year. Please consider nominating someone for this position; self-nominations are welcome. If you have questions, feel free to contact anyone currently on the IED Board — contact information is at the end of the newsletter. Nominations can be made at the Town Hall Business Meeting on Monday, June 25. Please see the timeline of conference sessions and events for details about the time and location of the meeting.

ASEE Fellows

John A White (1997), Distinguished Professor and Chancellor Emeritus, University of Arkansas **Larry J. Shuman (2006),** Professor, University of Pittsburgh

Jane M. Fraser (2012), Professor and Chair, Colorado State University, Pueblo Jessica O. Matson (2013), Professor of Industrial Engineering, Tennessee Tech University Kim LaScola Needy (2014), Dean, Graduate School and International Education, University of Arkansas

Ted Eschenbach (2017), Professor Emeritus, School of Engineering, University of Alaska, Anchorage

2017 National Award Winners

The division offers a number of awards to recognize excellent papers presented at the ASEE Annual Conference and acknowledge outstanding service on behalf of the division.

IED Best Paper Award

The purpose of this award is to encourage and recognize industrial engineering educator for the preparation and presentation of outstanding papers at sessions sponsored by the IE Division during the ASEE Annual Conference.

"Decision-Making, Information Seeking, and Compromise: A Simulation Game Activity in Global Industrial Management." Alejandro Salado, John Ray Morelock and Arash Baghaei Lakeh, Virginia Tech

IED Best Paper Award Runner-Up

"Transforming Outreach Education: Implementing Industrial Engineering Classroom Activities as Outreach Projects." Dia St. John and Eric Specking, University of Arkansas

New IE Educator Outstanding Paper Award

The purpose of the award is to encourage and recognize new industrial engineering educators for the preparation and presentation of outstanding papers at sessions sponsored by the IE Division during the ASEE Annual Conference. The recipient will be awarded \$250 per author up to \$500 per paper. Senior faculty are eligible for the award as co-authors, but not for the monetary award. The award also includes a plaque of recognition.

"Industrial Engineering beyond Numbers: Optimizing under Ethics." Alejandro Salado, Virginia Tech

New Attendee Travel Grants

The purpose of the award is to encourage industrial engineering educators for the preparation and presentation of outstanding papers at sessions sponsored by the IE Division during the ASEE Annual Conference. The recipient(s) will be awarded \$500 to be used toward travel expenses to attend the annual conference. The award also includes a ticket to the IED awards banquet.

Alejandro Salado, Virginia Tech Behin Elahi, Purdue University – Fort Wayne

Timeline of Conference Sessions and Events

U429 IED Technical Session - Preparing Programs for the Future

Industrial Engineering Division

Date and time: Sunday, June 24, 2018, 1:15 to 2:45 p.m. Location: Room 255 F, Convention Center - Salt Palace

Papers Presented

1. A New Industrial and Systems Engineering Program: Benchmarking results to Determine What and Why

Dr. Kate D. Abel (Stevens Institute of Technology (School of Engineering and Science) View the paper here

- A Systems Approach to Accredited Program Accountability in Regional Universities
 Dr. David Elizandro (Tennessee Technological University) and Dr. David H. Huddleston
 (Tennessee Technological University) <u>View the paper here</u>
- 3. Industrial Engineering Outreach to K-12 Community

Mr. Anuj Mittal (Iowa State University), Professor Sriram Sundararajan (Iowa State University), Dr. D. Raj Raman (Iowa State University), and Dr. Caroline C Krejci (The University of Texas at Arlington)

View the paper here

4. Curriculum and Specializations Framework to Address Skills Required by Manufacturing Companies

Dr. Nabeel Yousef (Daytona State College) and Dr. Ron Eaglin (Daytona State College) View the paper here

5. Detecting Current Job Market Skills & Requirements Through Text Mining
Professor Houshang Darabi (University of Illinois, Chicago), Mr. Fazle Shahnawaz
Muhibul Karim (University of Illinois at Chicago), Samuel Thomas Harford, Ms. Elnaz
Douzali (University of Illinois, Chicago), and Dr. Peter C Nelson (University of Illinois at
Chicago) View the paper here

M529 Industrial Engineering Division Town Hall Business Meeting

Date and Time: Monday, June 25, 2018, 3:15 to 4:45 p.m.

Room 250 B, Convention Center - Salt Palace

T129 IED Technical Session - Preparing Students for the Future

Industrial Engineering Division

Date and Time, Tuesday, June 26, 2018, $8:00\ to\ 9:30\ a.m.$

Location: Room 255 F, Convention Center - Salt Palace

Papers Presented

A Framework for Collaborative Peer Review for Group-Written Documents
 Professor Lisa Miller (University of Minnesota, Twin Cities) and Dr. Daniel Emery
 (Affiliation unknown) View the paper here

2. Diverse Teams Build Better Forecasts

Dr. Joseph Wilck (College of William and Mary) and Dr. Paul C. Lynch (Penn State Erie, The Behrend College) View the paper here

3. Introducing Changemaking Engineering into an Operations Research Course: Some Unexpected Results

Dr. Rick Olson (University of San Diego) and Mr. Andres Esteban Acero (Universidad de los Andes) View the paper here

4. Writing as a Method to Build Better Engineers: Examining Faculty Perceptions of Writing's Importance

Elizabeth Kovalchuk (Montana Engineering Education Research Center) and Dr. William J. Schell IV P.E. (Montana State University) <u>View the paper here</u>

T329 Industrial Engineering Division Poster Session

Date and time: Tuesday, June 26, 2018, 11:30 am. to 1:00 p.m. Location: Exhibit Hall A, B, & C, Convention Center - Salt Palace

Papers Presented

1. Truck-Drone two tier delivery network design

Dr. Ergin Erdem (Robert Morris University), Christopher Johnson (Affiliation unknown), Dr. SANGHO SHIM (Robert Morris University), and Jordan Williams (Affiliation unknown) View the paper here

2. A steepest edge rule for a column generation approach to the convex recoloring problem

Dr. Ergin Erdem (Robert Morris University) and Dr. SANGHO SHIM (Robert Morris University)

View the paper here

T429 IED Technical Session - Preparing for the Future through Projects and Research

Industrial Engineering Division

Date and time: Tuesday, June 26, 2018, 1:30 to 3:00 p.m.

Location: 225 F, Convention Center - Salt Palace

Papers Presented

1. A Project-based Learning Approach in Teaching Simulation to Undergraduate and Graduate Students

Dr. Gokhan Egilmez (University of New Haven), Dr. Dusan Sormaz (Ohio University), and Dr. Ridvan Gedik (University of New Haven) View the paper here

2. Implementation of a Project-Based Learning Approach to Undergraduate Education: Case study of Optimization Course in Industrial Engineering

Dr. Behin Elahi (Purdue University Fort Wayne) View the paper here

3. Implementing a Course-Based Undergraduate Research Experience (CURE) into an IE Curriculum

Ms. Leslie Potter (Iowa State University), Dr. Richard Stone (Iowa State University), Ms. Audrey Fyock (Iowa State University), and Devna Fay Popejoy-Sheriff (Iowa State University) <u>View the paper here</u>

4. Product-Based Learning: Bundling Goods and Services For An Integrated Context Rich Industrial Engineering Curriculum

Dr. Janis P. Terpenny (Pennsylvania State University, University Park), Dr. Catherine M. Harmonosky (Pennsylvania State University, University Park), Prof. Amine Lehtihet (Pennsylvania State University, University Park), Dr. Vittal Prabhu (Pennsylvania State University, University Park), Dr. Andris Freivalds (Pennsylvania State University, University Park), Ms. Elena M. Joshi (Pennsylvania State University, University Park), and Prof. Jose A. Ventura (Pennsylvania State University, University Park)

View the paper here

5. Reality Gaps in Industrial Engineering Senior Design or Capstone Projects

Desen Sevi Ozkan (Virginia Tech Department of Engineering Education), Dr. Homero

Gregorio Murzi (Virginia Tech), Dr. Alejandro Salado (Virginia Tech), and Chris Gewirtz

(Virginia Tech) View the paper here

T719 Joint Banquet

Engineering Economy Division and Industrial Engineering Division Date and Time: Tuesday, June 26, 2018, 6:15 to 9:15 p.m. Silver Fork Lodge and Restaurant, Brighton, Utah

This is a great networking opportunity! This year's venue will be the Silver Fork Lodge and Restaurant in Brighton, Utah. The event will have a cash bar, and the meal will include the choice of Prime Rib, Apple-Stuffed Pork Loin, or Vegetable Lasagna. All meals are served with vegetable medley, bread, and choice of potato. A bus will be driving the group to the venue, and the cost of transportation is included in the ticket price. You may choose to drive to the restaurant to join the group. The ticket price is \$65 per person.

W429 Technical Session - Preparing Courses for the Future

Industrial Engineering Division

Date and time: Wednesday, June 27, 2018, 1:30 to 3:00 p.m. Location: Room 255 F, Convention Center - Salt Palace

Papers Presented

- A Gamification Approach for Experiential Education of Inventory Control
 Dr. Gokhan Egilmez (University of New Haven) and Dr. Ridvan Gedik (University of New Haven) View the paper here
- 2. Designing a Converged Plant-wide Ethernet/IP Lab for Hands-on Distance Learning: An Interdisciplinary Graduate Project

Dr. John Pickard (East Carolina University), Dr. Jimmy Bill Linn (Affiliation unknown), Ms. Tolulope B. Awojana (East Carolina University), and Dr. Philip J Lunsford II P.E. (East Carolina University) View the paper here

- 3. Immersive Virtual Training Environment for Teaching Single and Multi-Queuing Theory Industrial Engineering Queuing Theory Concepts
 - Dr. Michael Andre Hamilton (Mississippi State University), Dr. Raed Jaradat (Mississippi State University), Mr. Parker Jones (Mississippi State University ISER), Emily S. Wall (Mississippi State University), Mr. Vidanelage Lakshika Dayarathna (Mississippi State University), Dr. Debisree Ray (Mississippi State University), and Ms. Ginnie Shih En Hsu (Affiliation unknown) View the paper here
- 4. Mastery Learning and Assessment Approach in Operations Research Course
 Dr. Omar Ashour (Penn State University, The Behrend College) View the paper here
- Simpson's Paradox and equity in a classroom: when dropping the worst homework is prejudicial to your students
 - Dr. Javier Rubio-Herrero (St. Mary's University San Antonio) View the paper here

Conference Registration Information

To register for the conference and explore lodging options, visit the ASEE website here. You can find the full program schedule here.

Newsletter Submissions Welcome!

The most valuable newsletters are the ones that contain news of interest to the members submitted by the members. If you have something that you'd like to share with the IED, please forward the details to our newsletter editor. The newsletter editor for Fall 2018 and Spring 2019 is Ebisa D. Wollega (Ebisa.wollega@csupueblo.edu). Anything that might be of interest to the member is welcome, including:

- Call for papers for conferences related to engineering education, which included ASEE regional conferences
- Reminders of deadline submission to agencies funding educational research
- Announcements of members receiving teaching awards or other related accolades
- Announcement of papers related to IE education

Please help add valuable information to help promote collaboration, innovation, and impact in the field of industrial engineering!

Visit the ASEE IED Webpage at:

https://sites.asee.org/ied

IED Board Members Contact Information

Until the end of the 2018 ASEE Conference, the IED officers are:

Division Chair: Gene Dixon

dixone@ecu.edu / (252) 737-1031

Program Chair: Justin Kile

Justin.kile@quinnipiac.edu / (203) 582-3372

Program Chair-Elect: Paul C. Lynch

Lynch0917@hotmail.com / (814) 898 - 6387

Secretary/Treasurer: Ebisa D. Wollega

Ebisa.wollega@csupueblo.edu / (719) 549-2848

Awards/Past Division Chair: Letitia Pohl

<u>lpohl@uark.edu</u> / (252) 737-1031

Directors: Lawrence Whitman (2018)

Larry.whitman@wichita.edu / (316) 978-5907

Jane Fraser (2019)

Jane.fraser@colostate-pueblo.edu / (719) 549-2036

Jessica (Matson) Oswalt (2019)

matson@tntech.edu / (931) 372-3260

Rick Olson (2018)

R olson@sandiego.edu / (619) 260-6853

Webmaster: Lawrence Whitman

Diversity Committee Delegate: Glenda Young

Glendayoung87@gmail.com / (662) 722-0201

After the conference, the Division Chair, Program Chair, Assistant Program Chair, and Secretary/Treasurer will move up one position. Who would you like to nominate for Secretary/Treasurer?

We look forward to seeing you in June:

2018 ASEE Annual Conference & Exposition
June 24-27, 2018, Salt Palace Convention Center / Salt Lake City, Utah