



# First-year Programs Division Newsletter Spring 2016 Edition



Editor: Rich Whalen – Northeastern University

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## Looking Ahead: Message from the Division Chair

**From Susan Freeman:** Jazzed about Engineering Education! That seems to fit the First-year Programs Division (FPD) very well. I am excited about this year’s conference and also jazzed about visiting New Orleans. Let me encourage you to join us – from the conference website, I think this captures a lot:

The ASEE Annual Conference and Exposition is the only conference dedicated to all disciplines of engineering education. It is committed to fostering the exchange of ideas, enhancing teaching methods and curriculum, and providing prime networking opportunities for engineering and technology education stakeholders such as deans, faculty members and industry and government representatives.

The conference features more than 400 technical sessions, with peer-reviewed papers spanning all disciplines of engineering education. With **Monday** and **Tuesday** plenaries with distinguished lectures by Lisa Jackson and Joseph Bradley; award receptions and banquets; the **“Greet the Stars” Orientation** for First-time Attendees; a reception especially for **New ASEE Members**; and the **ASEE Division Mixer**, our conference is jam-packed with opportunities! And that’s not even counting the exciting things going on in our Exhibit Hall, home to the **“Focus on Exhibits” Welcome Reception, Brunch, Luncheon and Summertime Social.**

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- ### Upcoming Events and Dates of Interest
- ASEE 2017 Abstract Submission Open:**  
September 2016
  - ASEE 2017 Sunday Workshop Applications Accepted**  
September 2016
  - 
  - FYEE: 2016 First year Engineering Experience Conference:** “Enhancing the First Year of Engineering Education”  
July 31- August 2, 2016 Columbus, OH  
**See page 3 for Call for Proposals to host**
  - FIE: 2016 Frontiers in Education Conference:** “The Crossroads of Engineering and Business”  
October 12-15, 2016 Erie, PA
  - WEEF: World Engineering Education Forum:** “Engineering Education for Smart Society”  
November 6—10, 2016 Seoul, Korea
  - National Effective Teaching Institute (NETI):**  
January 23-25, 2016 New Orleans, LA

- ### Planning Ahead ... Future ASEE Meetings:
- 2017 – Columbus, OH      2018 – Salt Lake City, UT
  - 2019 –Tampa, FL          2020 – Montreal, Quebec

**Message from the Chair: (continued)**

We look forward to welcoming you to New Orleans!

- See more at:

**<https://www.asee.org/conferences-and-events/conferences/annual-conference/2016#sthash.K9d9TElt.dpuf>**

There are a couple of new things to consider, first, make sure that you attend the technical sessions, and come meet fellow FPD educators at the poster session to see the new ideas and works-in progress. But wait there is also a Charity Casino Night on Sunday Night which looks pretty great and all proceeds benefit the ASEE Give Back Campaign. Sunday, Monday and/or Tuesday Night you can sign up for the Dinner Club and meet up with people to find great places to eat dinner with friends. Make new friends, meet the old and enjoy some New Orleans Crawfish, Etouffee and Gumbo.

Please don't miss the FPD Business Meeting on Tuesday morning, this is the time to get more involved with the division. You will need to buy a ticket to eat breakfast, or you can just come and join in if you would like. There is good discussion on the conference, and how our division is doing. We will be voting on the changes in the bylaws and every vote is important. We will hear from the officers and elect new board members, please be part of the team. We will also talk about our sponsored conference, and future work and opportunities with the Eighth Annual (FYEE), First Year Engineering Experience

*continued above right ...*

**Message from the Chair: (continued)**

Conference, Enhancing the First Year of Engineering Education being held at The Ohio State University, Columbus, OH, July 31-August 2, 2016. If you can't make it to New Orleans, consider coming in August to FYEE, also a great time.

I look forward to meeting up with the committed engineering educators that are passionate about setting students up for success in their first year. And I look forward to great technical sessions and posters to learn more about enhancing and improving engineering education. F'sho.

With warm regards,

Susan Freeman

***2015-16 First-Year Programs Division Chair***



To Members of ASEE First-Year Programs Division

The AdHoc First-Year Engineering Experiences (FYEE) committee of the First-Year Programs Division of ASEE is requesting proposals to host the FYEE conference. We are looking for hosts for the 2017 conference and for the 2018 conference. The deadline for the receipt of proposals is 5:00pm Eastern DST, June 17, 2016. Proposals should use the template format found below and on the next page. It should be submitted as a single PDF to

***[https://virginiatech.qualtrics.com/SE/?SID=SV\\_81dE4wJDxFq635z](https://virginiatech.qualtrics.com/SE/?SID=SV_81dE4wJDxFq635z)***.

The General Chair and the Conference Committee at the chosen site are supported by the FYEE Steering Committee (appointed by the FPD Chair), a Publications Chair, a Sponsorship Chair, an Exhibits Chair, and the FYEE Program Chair (elected by the FPD membership). The responsibilities of the committee and chairs are outlined in the document Administration of the FYEE Conference by the FPD.pdf emailed in an earlier announcement. As indicated in the document, the general chair of a conference will ultimately be required to propose a cost neutral budget. Therefore, the general chair will be expected to find appropriate university or corporate sponsorship for any conferences expenses not covered by registration and exhibitor fees.

Questions regarding hosting the conference can be addressed to Mara Knott, FYEE 2015 General Chair (knott@vt.edu), and PK Imbrie, FYEE 2014 General Chair, (imbrie@tamu.edu).

Please feel free to share this announcement widely.

In addition, if you are interested in attending the FYEE conference this year from July 31st until August 2nd at The Ohio State University in Columbus, Ohio, or seeing more about this conference, visit the site [fyee.org](http://fyee.org).

**FIRST YEAR ENGINEERING EXPERIENCES CONFERENCE HOST PROPOSAL TEMPLATE**

**Conference Year (check as appropriate)**

<input type="checkbox"/> 2017	<input type="checkbox"/> 2018	<input type="checkbox"/> 2017 OR 2018	<input type="checkbox"/> 2017 AND 2018
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**Contact:**

Name:  
Position:  
Email: Phone:

**Host Institution**

Name:  
Location:  
Size:  
Characteristics:

**First Year Engineering Program:**

Number of Students (annually):  
Number of faculty:  
Number and names of Required Courses:  
Structure: (e.g., college based, independent "first-year" department, based in traditional departments, common, required)

**Available Public Transportation (including location of/distance to nearest airport/modes of transportation):**

**Options for Hotel accommodations and pricing:**

Site	Per night cost	Distance to meeting room site
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**Potential Meeting Room Facilities**

Facility	Brief Description of space
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**Proposed Dates:**

**Ideas for Conference Schedule or Unique Conference Features:**

**Thoughts on/Ideas for Potential Speakers, Tours, Workshops:**

**General Chair:**

Name:  
Phone and email:  
Brief Bio (~100 words)

**Letter of Support: Attach a letter in support of hosting the FYEE conference from an appropriate administrative unit with fiscal authority (i.e., program head, department head, dean).**

## 2015 ASEE Awards Presentation Recap: *Below are some of the people who shined in 2015!*

### 2015 Best Paper Awards

- *1st Place:* "Creating Inclusive Environments in First-Year Engineering Classes to Support Student Retention and Learning", Christina Paguyo (Colorado State University), Rebecca A Atadero (Colorado State University), Karen E Rambo-Hernandez (West Virginia University), and Jennifer Francis (West Virginia University)
- *2nd Place:* "Integration of academic advising into a first-year engineering design course and its impact on psychological constructs", William H Guilford (University of Virginia), Anna Blazier (University of Virginia), and Alyssa Becker (University of Virginia)
- *3rd Place:* Providing Authentic Experiences in the First Year: Designing Educational Software in Support of Service Learning Activities, John K. Estell (Ohio Northern University) and David Reeping (Ohio Northern University)

### 2015 Distinguished Service Award

- Dr. Robin Hensel (West Virginia University) for outstanding leadership of the First-Year Programs Division.

### 2014 Best Presentation Awards

- *Best Presentation: (a two way tie)*
  1. "Improving learning productivity and teamwork skills in freshman engineering students through conative understanding" by Dr. Elizabeth A Adams (Arizona State University), Ms. Claire Louise Antaya (Arizona State University), Dr. Thomas P Seager (Arizona State University), and Prof. Amy E. Landis (Arizona State University)
  2. "Making a First-year Impression: Engineering Projects That Affect and Connect" by Dr. Susan F Freeman (Northeastern University), Dr. Beverly Kris Jaeger (Northeastern University), and Dr. Richard Whalen (Northeastern University)
- *Best Student Presentation:* "Pre-College Engineering Participation Among First-Year Engineering Students" by Mr. Noah Salzman (Purdue University, West Lafayette), Dr. George D Ricco (Purdue University, West Lafayette), and Dr. Matthew W. Ohland (Purdue University and Central Queensland University)

## Who's Who on the Board and Committees for 2015-2016:

**P.K. Imbrie**, Texas A&M University  
Vice Chair, Program Chair

**Mara Knott**, Virginia Tech  
Treasurer / Secretary

**Jean Kampe**, Michigan Technological University  
Past Chair

**John Estell**, Ohio Northern University  
Vice Chair Elect, Program Chair-Elect

**Sue Freeman**, Northeastern University  
Division Chair

**Keith Mazachek**, Washburn University  
Executive Board Member-at-Large

**S. Patrick Walton**, Michigan State University  
Executive Board Member-at-Large

**Lorelle Meadows**, Michigan Technological University  
Executive Board Member-at-Large

**Kerry Meyers**, Youngstown State University  
Executive Board Member-at-Large



**Rich Whalen**, Northeastern University  
Newsletter Editor

**Scott Moor**, Indiana University  
University, Fort Wayne, Historian

**Patricia Ralston**, University of Louisville  
Executive Board Member-at-Large

## FPD Conference Program

### **U227-SUNDAY WORKSHOP: Improve Student Academic Performance and Retention – The 'Design Your Process to Become a World-Class Engineering Student' Project**

Workshop · First-Year Programs Division

Sun. June 26, 2016 9:00 AM to 12:00 PM

New Orleans Convention Center, 270

Session Description

#### **Ticketed event: \$25.00 advanced registration and \$35.00 on site registration**

This workshop is facilitated by experienced First-Year Engineering Educators and offers a collaborative format for people interested in improving first-year engineering student success. Participants will be divided into groups. Specific structured discussions include:

- What is student success?
- How to advance first-year students to work to their full potential?
- Exploration of a student's reflection on how to be successful as a first-year engineering student;
- Implementing the "Design Your Process to Become a World Class Engineering Student";
- Incorporate the project in existing courses/seminars;
- Collaborative learning strategies to support the objectives of the project;
- Grading solutions for high enrollment courses;
- Barriers for implementing the project;
- Available support material for the project;
- Joining the research effort – implement, assess, publish.

The collaborative nature of this workshop is aimed to provide participants the opportunity to develop a support network that will extend beyond the workshop and will help with the implementation of the project. The diverse backgrounds of the facilitators will assure a comprehensive treatment of the material presented. - See more at:

[https://www.asee.org/public/conferences/64/registration/view\\_session?session\\_id=6630#sthash.VX2kbsw3.dpuf](https://www.asee.org/public/conferences/64/registration/view_session?session_id=6630#sthash.VX2kbsw3.dpuf)

### **U527-First-year Programs Division Executive Board Business Meeting**

Business · First-Year Programs Division

Sun. June 26, 2016 3:15 PM to 4:00 PM

New Orleans Convention Center, 237

Session Description

A convening of the First-Year Programs Division to conduct board business.

### **M327-First-Year Programs Division Technical Session 1: Using Technology and/or Technology Tools to Enhance Learning**

Technical · First-Year Programs Division

Mon. June 27, 2016 11:30 AM to 1:00 PM

New Orleans Convention Center, 262

Moderated by Dr. Benjamin Emery Mertz and Dr. Kerry Meyers

Papers Presented

1. An Alternative to Videos for Lecture Preparation in a Flipped First-Year Engineering Computing Dr. Gregory Warren Bucks (University of Cincinnati) and Dr. Kathleen A. Ossman (University of Cincinnati)
2. Using Blended Learning to Address Instructional Challenges in a Freshman Engineering Dr. Tareq Daher (University of Nebraska - Lincoln), Dr. Stuart Bernstein (University of Nebraska - Lincoln), and Brett Meyer (University of Nebraska - Lincoln)
3. Kahoot, A New and Cheap Way to Get Classroom-Response Instead of Using Clickers Prof. Rodrigo Cutri P.E. (Maua Institute of Technology), Dr. Luiz Roberto Marim (Maua Institute of Technology), Dr. Juliana Ribeiro Cordeiro (Affiliation unknown), Dr. Hector A. C. Gil (Maua Institute of Technology), and Mrs. Camila Cunha Toledo Guald (Maua Institute of Technology)

4. Freshman Residential Schools for Undergraduate On-Campus and Online Engineering Students | Dr. John Matthew Long (Deakin University), Dr. Sivachandran Chandrasekaran P.E. (Deakin University), and Mr. Simon William Cavenett (Affiliation unknown)

#### **M427-First-Year Programs Division Technical Session 2A: Using Alternative Measurements to Look at Students and Their Success**

Technical · First-Year Programs Division

Mon. June 27, 2016 1:15 PM to 2:45 PM

New Orleans Convention Center, 357

Moderated by Dr. Alex Friess and Dr. Laura A. Ruhala

Papers Presented

1. Improving Efficacy in Group Projects with Teamwork Agreements Dr. Jack Bringardner (New York University), Dr. Christopher Leslie (New York University), Prof. Gunter W. Georgi (New York University), and Alyssa Marie D'Apice (New York University)
2. Step-Outs to Stars: Engineering Retention Framework Dr. Nora Honken (University of Cincinnati), Dr. Patricia A Ralston (University of Louisville), and Dr. Thomas Tretter (University of Louisville)
3. Conceptualizing Student Identity Development through Self-Directed Learning Opportunities in the First Year of an Engineering Program Dr. Nick Tatar (Franklin W. Olin College of Engineering), Ms. Lauren Van Beek (University of St. Thomas), and Laura Ann Lilienkamp (Smith College)
4. The Impact of One-Credit Introductory Engineering Courses on Engineering Self-Efficacy: Seminar v. Project-Based Dr. Nicholas Andres Brake (Lamar University) and Dr. James C. Curry (Affiliation unknown)
5. Connecting for Success; The Impact of Student-to-Other Closeness on Performance in Large-Scale Engineering Classes Dr. Mark Schar (Stanford University), Dr. Angela Harris (Stanford University), Dr. Robert J. Witt (University of Wisconsin - Madison), Dr. Robert Rice (University of California - Merced), and Dr. Sheri Sheppard (Stanford University)

#### **M427B-First-Year Programs Division Technical Session 2B: Strategies for Writing and Communication Courses**

Technical · First-Year Programs Division

Mon. June 27, 2016 1:15 PM to 2:45 PM

New Orleans Convention Center, 356

Moderated by Dr. Leroy L. Long III and Prof. David Donahoo

Papers Presented

1. Team Learning Behaviors: Supporting Team-Based Learning in a First-Year Design and Communications Course Ms. Nicole Lynn Larson (University of Calgary), Ms. Genevieve Hoffart (University of Calgary), Dr. Tom O'Neill (University of Calgary), Prof. Marjan Eggermont (University of Calgary), and Dr. William Daniel Rosehart P.Eng. (University of Calgary)
2. Assessment of a Writing Workshop Model for First-Year Engineering Students Dr. Patricia R Backer (San Jose State University)
3. Early English Language Assessment to Improve First-Year Student Success Dr. Penny Kinnear (University of Toronto), Dr. Micah Stickel (University of Toronto), Dr. Brian M. Frank (Queen's University), and Dr. James A. Kaupp (Queen's University)
4. Through the Lens of the Reviewer: Information Literacy, an LMS, and Peer Review Dr. Wendi M. Kappers (Embry-Riddle Aeronautical University - Daytona Beach)

**Q: Where can I find a listing of all FPD Papers that were presented at past ASEE Conferences?**

**A: Head to ASEE web site and search by Division:** <http://www.asee.org/papers-and-publications/papers>



## M527-First-Year Programs Division Technical Session 3; The Best of All the FPD Papers

Technical · First-Year Programs Division

Mon. June 27, 2016 3:00 PM to 4:30 PM

New Orleans Convention Center, 356

Session Description

These papers were selected by reviewers and the FPD executive board as some of the best papers in the division.

**For those interested in:** Academia-Industry Connections, Broadening Participation in Engineering and Engineering Technology, K-12, and New Members

Moderated by Mrs. Meg Harkins and Dr. S. Patrick Walton

Papers Presented

1. Leadership in Practice: A Model for Building Strong Academic Foundations in a Residential Learning Community Ms. Noel Kathleen Hennessey (The University of Arizona) and Rebecca Primeau (University of Arizona)
2. Six Years of Living with the Lab Dr. Gerald W. Recktenwald (Portland State University)
3. Cranking Up Cornerstone: Lessons Learned from Implementing a Pilot with First-Year Engineering Students Dr. Susan F. Freeman (Northeastern University), Dr. Courtney Pfluger (Northeastern University), Dr. Richard Whalen (Northeastern University), Dr. Kathryn Schulte Grahame (Northeastern University), Dr. Joshua L. Hertz (Northeastern University), Dr. Chirag Variawa (Northeastern University), Mrs. Jennifer Ocif Love (Northeastern University), Dr. Mark L. Sivak (Northeastern University), and Dr. Bala Maheswaran (Northeastern University)
4. Can a Five-Minute, Three-Question Survey Foretell First-Year Engineering Student Performance and Retention? Stephanie M. Gratiano (Roger Williams University) and Dr. William John Palm IV P.E. (Roger Williams University)
5. Connections Among University Faculty Engaged in the First Two Years of Engineering and Their Impact on Faculty Attitudes and Practice Prof. James A. Middleton (Arizona State University), Prof. Stephen J. Krause (Arizona State University), Dr. Eugene Judson (Arizona State University), Prof. Robert J. Culbertson (Affiliation unknown), Lydia Ross (Arizona State University), Prof. Keith D. Hjelmstad (Arizona State University), Dr. Yong-Seok Park (Arizona State University), Dr. James Collofello (Arizona State University), and Ms. Bethany B. Smith (Arizona State University)

## T127-First-year Programs Division Business Meeting

Business · First-Year Programs Division

Tue. June 28, 2016 8:00 AM to 9:30 AM

Hampton Inn & Suites, Hampton - Riverside II

Session Description

**Ticketed event: \$30.00 advanced registration and \$40.00 on site registration**

This is the First-Year Programs Division (FPD) business meeting; all FPD members are encouraged to attend. Breakfast will be provided to those who purchase a session ticket. Division business (e.g. elections) occurs during this session and opportunities to become more involved in the division are provided.

## T327-First-Year Programs Division Poster Session

Poster · First-Year Programs Division

Tue. June 28, 2016 11:30 AM to 1:00 PM

New Orleans Convention Center, Exhibit Hall F

Moderated by Dr. P.K. Imbrie and Prof. Tamara Knott

Papers Presented

1. Video Instruction to Complement All Learning Styles in a First-Year Introduction to Engineering Course Dr. Jack Bringardner (NYU Tandon School of Engineering) and Yona Jean-Pierre (NYU Tandon School of Engineering)



2. 3-D Printing in a First-Year Engineering Design Project Dr. Kerry Meyers (Youngstown State University), Dr. Brett P. Conner (Youngstown State University), and Mr. Andrew Scott Morgan (Affiliation unknown)
3. Improving Freshman Retention With Intrusive Advising Interventions Mr. Jeremy Helm (Arizona State University) and Ms. Tami Coronella (Arizona State University)
4. A Scalable Course Project to Accommodate Academic Variation Dr. Huihui Qi (Grand Valley State University) and Dr. Hugh Jack (Western Carolina University)
5. Growing Together with the Community through Service Learning Dr. Helen Yoonhee Jung P.E. (California Baptist University), Dr. Ziliang Zhou (California Baptist University), and Dr. Liya Ni (California Baptist University)

### **T527-First-Year Programs Division Technical Session 4A: Retention Programs and Strategies**

Technical · First-Year Programs Division

Tue. June 28, 2016 3:00 PM to 4:30 PM

New Orleans Convention Center, 357

Moderated by Mrs. Natalie Christine Trehubets Van Tyne P.E. and Dr. Sandra Soto-Caban

Papers Presented

1. Engineering Boot Camp: A Broadly Based Online Summer Bridge Program for Engineering Freshmen Mrs. Meg Harkins (University of North Carolina - Charlotte)
2. Summer Bridge Program Structured to Cover Most Demanding STEM Topics Ms. Megan McSpedon (Rice University), Dr. Ann Saterbak (Rice University), and Michael Wolf (Rice University)
3. Chasing the Holy Grail: Successful Academic Persistence and Retention of Highly Motivated First-Year Engineering Students Dr. Jamie Bracey (Temple University), Dr. Keyanoush Sadeghipour (Temple University), Carnell Baugh (Independent), and Mr. Shawn Fagan (Temple University)
4. Long-Term Impact of an Elective, First-Year Engineering Design Course Ms. W. Jackeline Torres (Rice University), Dr. Ann Saterbak (Rice University), and Dr. Margaret E. Beier (Rice University)

### **T527B-First-Year Programs Division Technical Session 4B: Assessing Student Motivation and Student Success**

Technical · First-Year Programs Division

Tue. June 28, 2016 3:00 PM to 4:30 PM

New Orleans Convention Center, 260

Moderated by Dr. Diana G. de la Rosa-Pohl and Dr. Kathryn Schulte Grahame

Papers Presented

1. Assessing Gender Differences between Student Motivations for Studying Engineering Dr. Anne Dudek Ronan P.E. (New York University) and Dr. Jack Bringardner (New York University)
2. Motivation and Learning Strategies of High School and University Students Dr. Quamrul H. Mazumder (University of Michigan - Flint) and Miss Vasudha Kilaru (University of Michigan - Flint)
3. Motivation is a Two-Way Street: Pedagogies Employing Discussion in Addition to Lecture Display More Positive Student Motivational Response Mr. Alexander E. Dillon (Franklin W. Olin College of Engineering), Prof. Jonathan D. Stolk (Southern Methodist University), Dr. Yevgeniya V. Zastavker (Franklin W. Olin College of Engineering), and Dr. Michael D. Gross (Wake Forest University)
4. Increasing the Relevance of Shared Course Content through a Student and Academic Affairs Collaboration Dr. Matthew James Jensen (Florida Institute of Technology) and Ms. Jessica Ha (Florida Institute of Technology)

### **T627-First-Year Programs Division Technical Session 5A: Work-In-Progress: 5 Minute Postcard Session I**

Technical · First-Year Programs Division

Tue. June 28, 2016 4:45 PM to 6:15 PM

New Orleans Convention Center, 260

Session Description

This special session gives authors of Work-in-Progress (WIP) papers the opportunity to pitch their work with a two-slide (back and front of a post card) overview of their work in five minutes or less. After the pitch is made, attendees will have opportunity to visit with the authors and their posters.

**For those interested in:** Academia-Industry Connections, Broadening Participation in Engineering and Engineering Technology, K-12, and New Members

Moderated by Dr. P.K. Imbrie and Dr. Susan F Freeman

Papers Presented

1. Evaluating the Impact of a Revised Introductory Engineering Course: Student Retention and Success as an Indicator Dr. Ryan W. Krauss (Southern Illinois University - Edwardsville), Dr. Ryan Fries (Southern Illinois University - Edwardsville), and Dr. Cem Karacal (Southern Illinois University - Edwardsville)
2. Using Peer Mentoring to Enhance Student Experience and Increase Retention in Mechanical Engineering Mr. Nicolas N. Brown (University of Utah), Ms. Joy Velarde (University of Utah), and Dr. Debra J. Mascaro (University of Utah)
3. Student Success through College of Engineering Freshman Year Experience Program Prof. John Ross Tapia (New Mexico State University), Ms. Elizabeth Ann Howard (New Mexico State University), and Dr. Rolfe Sassenfeld (New Mexico State University)
4. The Evolution of the Freshman Engineering Experience to Increase Active Learning, Retention, and Diversity—Work in Progress Dr. Tracy Jane Puccinelli (University of Wisconsin - Madison), Dr. Mary E. Fitzpatrick (University of Wisconsin - Madison), and Dr. Gene Paul Masters (University of Wisconsin - Madison)
5. Multi-Disciplinary Summer Orientation Sessions for First-Year Students in Engineering, Engineering Technology, Physics, and Computer Science Dr. Clara Novoa (Texas State University - San Marcos), Dr. Araceli Martinez Ortiz (Texas State University - San Marcos), and Dr. Kimberly Grau Talley P.E. (Texas State University)

### **T627B-First-Year Programs Division Technical Session 5B: Work-In-Progress: 5 Minute Postcard Session II**

Technical · First-Year Programs Division

Tue. June 28, 2016 4:45 PM to 6:15 PM

New Orleans Convention Center, 357

Session Description

This special session gives authors of Work-in-Progress (WIP) papers the opportunity to pitch their work with a two-slide (back and front of a post card) overview of their work in five minutes or less. After the pitch is made, attendees will have opportunity to visit with the authors and their posters.

**For those interested in:** Academia-Industry Connections, Broadening Participation in Engineering and Engineering Technology, K-12, and New Members

Moderated by Dr. Dan Budny P.E. and Dr. Richard Whalen

Papers Presented

1. TH!NK: A Framework to Assess and Support Critical and Creative Thinking Dr. Anita Vila-Parrish (North Carolina State University), Dr. Tameshia Ballard Baldwin (North Carolina State University), Dr. Lina Battestilli (North Carolina State University), Ms. Hailey Queen (North Carolina State University), Dr. Jessica Young Schmidt (Affiliation unknown), and Dr. Susan Carson (North Carolina State University)
2. Demographic Effects on Student-Reported Satisfaction with Teams and Teammates in a First-Year, Team-Based, Problem-Based Course Dr. Robin Fowler (University of Michigan)
3. Leveling Up by Gamifying Freshman Engineering Clinic Mr. Joseph Anthony Gulotta (Rowan University), Nicholas Steven Parisi (Rowan University), and Dr. Cheryl A. Bodnar (Rowan University)
4. Investigating the Impact of an Educational CAD Modeling Tool on Student Design Thinking Miss Manaz Rusi Taleyarkhan (Purdue University), Dr. Chandan Dasgupta (Purdue University), John

Alexander Mendoza-Garcia MSSEC (Purdue University, West Lafayette), Dr. Alejandra J. Magana (Purdue University, West Lafayette), and Dr. Senay Purzer (Purdue University, West Lafayette)

5. Converting Traditional Engineering Physics Laboratories into Self-Designed Student Explorations . Amy Biegalski P.E. (University of Tennessee, Knoxville), Dr. Kevin Kit (University of Tennessee, Knoxville), and Dr. Rachel McCord (University of Tennessee, Knoxville)

### **W127-First-Year Programs Division Technical Session 6: Design and Design Challenges**

Technical · First-Year Programs Division

Wed. June 29, 2016 8:00 AM to 9:30 AM

New Orleans Convention Center, 357

Moderated by Dr. Robin A.M Hensel and Dr. Michael Elmore P.E.

Papers Presented

1. Nanotechnology Solutions to Engineering Grand Challenges Dr. Edward W. Davis (Auburn University), Dr. Joni M. Lakin (Auburn University), Prof. Virginia A. Davis (Auburn University), and Dr. P.K. Raju (Auburn University)
2. Assessing the Impact of Incorporating the NAE Grand Challenges for Engineering as a Multidisciplinary Hands-On Design Project into the Introduction to Engineering Course Dr. Haolin Zhu (Arizona State University) and Amy Trowbridge (Arizona State University)
3. Developing Flexibly Adaptive Skills through Progressive Design Challenges Dr. Sean P Brophy (Purdue University, West Lafayette)
4. Redesign of the Introduction to Engineering Course and its Impact on Students' Knowledge and Application of the Engineering Design Process Dr. Haolin Zhu (Arizona State University) and Dr. Benjamin Emery Mertz (Arizona State University)
5. Freshman Engineering: Current Status and Potential for the Future Prof. James B. Riggs (Texas Tech University)

### **W227-First-Year Programs Division Technical Session 7: Experiential Learning**

Technical · First-Year Programs Division

Wed. June 29, 2016 9:45 AM to 11:15 AM

New Orleans Convention Center, 357

Moderated by Dr. Lisa Abrams P.E. and Ms. Victoria G Bill

Papers Presented

1. Implementation of a Flotation Platform Project for a First-Year Engineering, Project-Based Course Dr. Victoria E Goodrich (University of Notre Dame) and Dr. Leo H. McWilliams (University of Notre Dame)
2. Implementation and Impact of a First-Year Project-Based Learning Course Dr. Liang Li Wu (University of California - Irvine), Robert M. Cassidy (University of California - Irvine), Prof. J Michael McCarthy (University of California - Irvine), Dr. John C. LaRue (University of California - Irvine), and Dr. Gregory N. Washington (University of California - Irvine)
3. Enhancing Critical Thinking in a First-Year Engineering Course using a Hands-On Study of Vectors Dr. Angela Thompson P.E. (University of Louisville), Dr. Brian Scott Robinson (University of Louisville), and Dr. J. C. McNeil (University of Louisville)
4. Building Computational Thinking Skills Using Robots With First-Year Engineering Students . Sarah B. Lee (Mississippi State University) and Mr. Hunter Lovvorn (Mississippi State University)
5. Investigating Task Choice in First-Year Engineering Team Projects Alexandria Steiner (University of Michigan), Dr. Laura Hirshfield (University of Michigan), Dr. Cynthia Finelli (University of Michigan), and Prof. Debbie Chachra (Franklin W. Olin College of Engineering)

### **W427-First-Year Programs Division Technical Session 8: Ways to Measure "Things" About Your Course(s)**

Technical · First-Year Programs Division

Wed. June 29, 2016 1:15 PM to 2:45 PM

New Orleans Convention Center, 357

Moderated by Dr. Rhonda Kay Gaede and Jack Bringardner

Papers Presented

1. Just Five More Minutes: The Relationship Between Timed and Untimed Performance on an Introductory Programming Exam Dr. Matthew A. Verleger (Embry-Riddle Aeronautical University - Daytona Beach)
2. Analyzing Changes in Motivational Constructs for First-Year Engineering Students during the Revision of a First-Year Curriculum Miss Lilianny Virguez (Virginia Tech), Dr. Kenneth Reid (Virginia Tech), and Prof. Tamara Knott (Virginia Tech)
3. Using Concept Maps as a Tool for Assessment and Continuous Improvement of a First-Year Course Dr. Elise Barrella (James Madison University), Dr. Justin J. Henriques (James Madison University), and Dr. Kyle G. Gipson (James Madison University)
4. Data-Driven Course Improvements: Using Artifact Analysis to Conquer ABET Criterion 4 Mr. Tony Andrew Lowe (Purdue University, West Lafayette), David A. Evenhouse (Purdue University), Mr. Dhinesh Balaji Radhakrishnan (Purdue University), and Dr. Stephen R. Hoffmann (Purdue University, West Lafayette)

### **W527-First-Year Programs Division Technical Session 9: Evaluating and Measuring Recruiting and Major Selection Strategies**

Technical - First-Year Programs Division

Wed. June 29, 2016 3:00 PM to 4:30 PM

New Orleans Convention Center, 357

Moderated by Ms. Norma L Veurink and Dr. Kenneth Reid

Papers Presented

1. Pathways of Student Stayers, Movers, and Leavers in the First Two Years of Undergraduate Engineering Ms. Bethany B. Smith (Arizona State University), Dr. Yong-Seok Park (Arizona State University), Lydia Ross (Arizona State University), Prof. Stephen J. Krause (Arizona State University), Dr. Ying-Chih Chen (Arizona State University), Prof. James A Middleton (Arizona State University), Dr. Eugene Judson (Arizona State University), Prof. Robert J. Culbertson (Affiliation unknown), Dr. Casey Jane Ankeny (Arizona State University), Prof. Keith D. Hjelmstad (Arizona State University), and Dr. Claire Y. Yan (University of British Columbia - Okanagan)
2. Recruiting Undecided Admits to Pursue a STEM Degree Dr. Melissa A. Dagley (University of Central Florida), Dr. Cynthia Y. Young (University of Central Florida), Dr. Michael Georgiopoulos (University of Central Florida), Dr. Andrew Patrick Daire (University of Houston), Prof. Christopher L. Parkinson (University of Central Florida), Dr. Diandra J. Prescod (Pennsylvania State University), and Mr. Christopher T. Belser (University of Central Florida)
3. Enhancing Curriculum in a First-Year Introduction to Engineering Course to Assist Students in Choice of Major Dr. J. C. McNeil (University of Louisville) and Dr. Angela Thompson P.E. (University of Louisville)
4. A Qualitative Study Investigating How First-Year Engineering Students' Value Beliefs Influence their Choice of Selecting an Engineering Major Mr. Juan David Ortega-Alvarez (Universidad EAFIT, Medellin - Purdue University, West Lafayette), Ms. S. Zahra Atiq (Purdue University, West Lafayette), and Mr. Hector Enrique Rodriguez-Simmonds (Purdue University, West Lafayette)

**Q: What does it take to earn a Best Paper or Best Presentation Award?**

**A: Refer to past FPD Newsletters for Guidelines: <http://www.asee.org/member-resources/groups/divisions>**