



# First-year Programs Division Newsletter

## Fall 2014 Edition



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### Looking Back: Message from the 2014 Program Chair

From Jean Kampe: Four famous words come to mind when the city of Indianapolis is discussed: “Gentlemen, start your engines!” But since 1977, when Janet Guthrie qualified, this traditional starting command has not always been appropriate, or used, at the Indy 500. Traditions are hard to put aside and in 1977, with the arrival of a non-male driver, the Indianapolis Speedway management faced a decision on whether to stay with the traditional starting command or not. I’ll get back this later.

We gathered in Indianapolis for the 2014 ASEE Annual Conference and Exposition. And word spread through the conference of this being deemed a year of action by the ASEE Diversity Committee. Each division has been asked to make a visible effort in 2014-15 to address diversity issues in engineering and engineering education. The First-Year Programs Division is on board with the Diversity Committee’s request, and our 2015 call for papers includes a new topical bullet: Aspects of programs, course materials, and engineering education that address diversity. At ASEE 2015 in Seattle, please consider sharing your program’s efforts to make first-year engineering happen in a welcoming and inclusive atmosphere.

At ASEE 2014, participation and attendance for many divisions were down somewhat, but not so for First-Year Programs. Indianapolis is located within driving distance for many first-year program institutions, and there was a strong showing of first-year interest in all

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### Upcoming Events and Dates of Interest

**ASEE 2015 Abstract Submission Open:**

September 2, 2014 – October 19, 2014

**ASEE 2015 Sunday Workshop Applications Accepted**

September 2, 2014 – November 2, 2014

**FIG: 2014 Frontiers in Education Conference:**

*“Opening Doors to Innovation and Internationalization in Engineering Education”*

October 22-25, 2014 Madrid, Spain

**WEFF: World Engineering Education Forum:**

*“Engineering Education for a Global Community”*

December 3–6, 2014 Dubai, UAE

**National Effective Teaching Institute (NETI):**

*“Engineering Education in an Era of Globalization”*

January 3-5, 2015 Austin, TX

*See page 3 for the complete Call for Papers.*

### Planning Ahead ... Future ASEE Meetings:

2015 – Seattle, WA	2016 – New Orleans, LA
2017 – Columbus, OH	2018 – Salt Lake City, UT

**Message from the Chair: ASEE 2014 (continued)**

respects. FPD received 112 abstracts, an increase of over 20% from the 90 and 91 of the past two years. These yielded 53 final papers that were presented in 11 well-attended technical sessions and in our poster session. The sessions were arranged with a progression in mind of how first-year programs affect students from their pre-college interest in engineering, through the first year at university, and to the culminating effects that a first-year experience can have on subsequent education and retention. Additionally, FPD sponsored a panel session on spatial visualization and was one of 11 co-sponsoring divisions for an ASEE Distinguished Lecture:

- Panel Session – “Developing Spatial Visualization Skills of First-Year Engineering Students: Focus on Retention”
- Distinguished Lecture – “Are You Ready for the next Generation? How a New Approach to K-12 Education will Develop College-Ready Students with Engineering Habits of Mind” by Dr. Christine M. Cunningham, Museum of Science, Boston.

Both of these Wednesday sessions were well attended.

Wednesday also brought late afternoon rains that tempered the warm weather as the conference technical sessions winded down. In the evening, a new ASEE event made its debut, the President’s Farewell Reception. President Ken Galloway hosted this opportunity for conference goers to chat with him as the closing event of the conference and his presidency. Perhaps this event will become an ASEE tradition. Ah, yes, I return to traditions.

First-year programs have been part of the engineering education approach at some institutions long enough to have developed traditions of their own. In this year of diversity

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**Message from the Chair: ASEE 2014 (continued)**

action, perhaps we should examine those traditions, and others at our institutions, to see their full effect. Traditions can impart the benefit of continuity and a sense of pride in, and belonging to, a community for its members. But, at the same time, some traditions may be broadcasting expectations of exclusivity, or of who is presumed to be an acceptable member of the community. For diversity interests, these effects of a tradition negatively serve as a “Do Not Enter” or “Enter at Your Own Risk” sign, as in “Gentlemen, start your engines!”

In case you are interested, and according to Wikipedia, in 1977 the Speedway was averse to changing tradition but eventually acquiesced to “In company with the first lady ever to qualify at Indianapolis, gentlemen, start your engines.” Today a version of “Lady [or ladies if warranted] and gentlemen, start your engines!” is used at Indy, while many other racing venues use “Drivers, start your engines!”

In closing, I send my heartfelt gratitude to all of you who made the 2014 FPD program become a reality and a resounding success. My thanks are extended to all those who submitted abstracts and papers, reviewed, served as session moderators, and attended the FPD business meeting. I encourage you to continue your FPD involvement in the coming year. Please contact Dr. Susan Freeman (S.Freeman@neu.edu), the FPD Program Chair for ASEE 2015, or myself (kampej@mtu.edu) for opportunities to serve your FPD and ASEE communities.

With warm regards,

Jean Kampe

**2014-15 First-Year Programs Division Chair**

**FIRST-YEAR PROGRAMS DIVISION – 2015 CALL FOR PAPERS**

The First-year Programs Division (FPD) seeks papers relating to educational activities associated with first-year engineering students, including freshman and transfer students. Topics under consideration include those below, *and papers on other pertinent topics* are welcome.

**Topic Suggestions:**

- Innovative approaches to first-year engineering education
- Integrated contextual and practice-oriented curricula for the first year
- Project-based and hands-on courses and/or related teaching activities
- Retention strategies and programs
- Aspects of programs, course materials, and engineering education that address diversity
- Pre-college programs and experiences, as well as linkages with K-12 education
- Linkages with two-year, transfer prep, and junior college institutions
- Integrating engineering design into the first year
- Insights into teaming, group work, and team/member assessment
- Creative problem-solving courses and/or related teaching activities
- Instructional use of computers and computer software
- Programs to assist engineering students in making the high school-to-college transition, such as advising, student services, orientation, and other engineering student development programs



Due to the competitiveness of publication in the First-year Programs Division, the quality of a submitted abstract is of the utmost importance. As reviewers are required to evaluate numerous submissions in a short time frame, below are some guidelines and features authors may wish to incorporate in order to receive full consideration (Minimum Abstract Requirements) and to help reviewers gain a better understanding of the nature of the work submitted. As each author's potential for contribution to ASEE through the FPD is unique, it is not necessary to meet all of the Additional Abstract Guidelines and Suggestions.

**Minimum Abstract Requirements:**

- Extended abstracts of up to one full page of text are customary (750-800 words).
- Abstracts must follow the Abstract Format Guidelines provided in Appendix A of the ASEE Author's Kit (available at <http://www.asee.org/conferences-and-events/conferences/annual-conference/2015/program-schedule/call-for-papers#CFP>).
- The abstract submission and review processes are blind. Do not include the names of authors or of institutions anywhere in the abstract or its headings, or in any figures/images or references provided. In order to convey an accurate picture of the work, however, it is reasonable to include a contextual description of the university or college at which the study was conducted. It is suggested to use descriptors such as " ... a large, urban, private institution in the Midwest that is considered to be selective and has a mostly regional student population ..." or " ... a medium-sized, comprehensive, and residential institution in the mid-Atlantic region ..." Be sure to omit any details such as course names and numbers (ENG101), academic building names/descriptors (Smith Engineering Building), or distinct references to the academic program of interest (Huskie Scholars, STEP, Jones College of Engineering at University X).

**Additional Abstract Guidelines and Suggestions, as Applicable and Relevant:**

- Include some brief background information, and/or the pedagogical theory or approach being used;
- Indicate the form that your outcome(s) will take;
- Methods of assessment should be made clear;
- A second page may be used to include a graph or image to clarify the nature of your work, or to include limited references to indicate a basis for the work undertaken.

Blind peer review occurs for both abstracts and papers. Any abstract or draft paper that does not comply with the requirements for a blind review will not be considered. These requirements are stipulated in the ASEE Author's Kit, and demand that there be no reference to author names, author affiliations, or other traceable ID tags (e.g., names of courses, buildings, or programs) anywhere within submitted documents, including within images, figure/table captions, and the list of references. Authors of accepted papers will have the opportunity to convert placeholder text (e.g., University X) with proper identifiers in the final version of their paper. Abstract acceptance does not guarantee acceptance of the paper. ASEE has a Publish-to-Present requirement and final papers must be written and accepted in order for the work to be presented either in a technical session or a poster session at the 2015 ASEE Annual Conference in Seattle, Washington. Submission of abstracts and papers must be made through the ASEE Monolith system and in accordance with ASEE published deadlines, and must adhere to the formatting instructions provided in the ASEE Author's Kit. These deadlines, the Author's Kit, and other pertinent details are available at the following URL:

**For more information, please contact the FPD 2015 Program Chair:**

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**Meet the Board: Below are some of the people who keep FPD functioning with passion and energy!**



**Left to Right: Kerry Meyers, Keith Mazachek, John Estell, Sue Freeman, P.K Imbrie, Scott Moor, Lorelle Meadows, Rich Whalen, Jean Kampe, Robin Hensel, Mara Knott**

**Who's Who on the Board and Committees for 2015: Where are they from and what do they do?**

**Sue Freeman**, Northeastern University  
Vice Chair, Program Chair

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

**Robin Hensel**, West Virginia University  
Past Chair

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

**John Estell**, Ohio Northern University  
Executive Board Member-at-Large Editor

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

**Keith Mazachek**, Washburn 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

## Paper and Presentation Awards in FPD



**Best Presentation Award for 2013 Conference:** Do Attitudes and Behaviors Towards Homework and Studying Change Between High School and Engineering Classes. Nora Honken (Pictured) and Dr. Patricia Ralston (Pictured).



**Best Student Presentation for 2013 Conference:** Problem-Based Learning: A Student Perspective on the Role of the Facilitator. Valerie Lundy-Wagner, Noah Salman (Pictured) and Dr. Mathew Ohland (Pictured)



**Best Paper FPD 2014:** Assessing Knowledge and Application of the Design Process. Dr. Ann Saterbak (Pictured) and Dr. Tracy Volz



**2<sup>nd</sup> place Best Paper FPD 2014 (a two-way tie):** Student Perceptions of Inverted Classroom Benefits in a First-Year Engineering Course. Dr. Krista M. Kecskemety (Pictured) and Brooke Morin

**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>



**2<sup>nd</sup> place Best Paper FPD 2014 (a two-way tie):**  
**Integration of ePortfolios in a First Year Engineering Course for Measuring Student Engagement.** Dr. Victoria E Goodrich (Pictured), Mr. Everaldo Marques de Aguiar Jr., Dr. G. Alex Ambrose, Dr. Leo H McWilliams, Dr. Jay B. Brockman and Prof. Nitesh Chawla



**Very Special Recognition for Service**

**Rich Whalen**, Past Chair of First-year Programs Division is presented with the prestigious Service Award by Robin Hensel for years of service to the Division.



**Very Special Recognition for Service**

**Scott Moor**, Past Secretary/Treasurer of First-year Programs Division is presented with the prestigious Service Award by Robin Hensel for years of service to the Division.



**Q:** Where can I find a listing of all FPD Papers that were presented at the 2014 ASEE Conference?

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