

Dear DEED Members,

Hopefully Spring has sprung where you call home!

The intent of this newsletter is to inform the DEED community about upcoming events and related news in DEED, ASEE, and the engineering design community.

Newsletters are typically sent on the 15th of every month; submissions are welcome.

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1) ASEE 2016 Paper Review Process

The DEED Executive Committee has put new criteria in place for submissions. DEED is now a Present to Publish - AND - a Review to Publish division. The peer review process depends on an active review community and this change helps keep that process healthy.

This means that to have your work reviewed, you MUST agree to review the work of others. Refusing review duties or failure to submit reviews is grounds for rejection of work at both the abstract and paper submission stages. This change was discussed, debated and implemented at the DEED business meeting.

^^^^^^^^^^^^^^ IMPORTANT DATE ^^^^^^^^^^^^^^^

May 2 - Deadline to remove all blind indicators and upload Final Paper including cover page

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2) 2016 Capstone Design Conference: Save the Date!!

Calling all those involved in capstone design! The 2016 Capstone Design Conference is scheduled for June 6-8, 2016 in Columbus, Ohio. The biannual Capstone Design Conferences provide an opportunity for the engineering community to share ideas about starting and improving design-based capstone courses. See some of the ideas presented in the 2014 Capstone Design Conference in the latest IJEE special issue:

<http://www.ijee.ie/contents/c310615B.html>

Sign up for the capstone design conference mailing list to receive conference updates:

<http://capstonedesigncommunity.org/ mailing-list>

DEED Helps to support the Capstone Conference - Check it out!

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3) SWE Survey - Understanding Engineers' Workplace Experiences

Hopefully you took the opportunity to participate!

The Society of Women Engineers (SWE) conducted a survey of 50,000 professional engineers in the United States and Canada about their experiences in the workplace. SWE is working with Joan C. Williams, Distinguished Professor of Law at the University of California, Hastings and founding director of the Center for WorkLife Law (WLL), to conduct the survey called Understanding Engineers' Workplace Experiences.

"This survey is designed to strengthen engineering as a profession by providing crucial research about the work lives of those in the field. The goal is to help organizations improve their ability to tap and develop talented engineers," said Williams.

This survey is funded by Society of Women Engineers in partnership with the Center for WorkLife Law. Professor Williams wrote to thank DEED for their participation, and to clarify that the survey was designed to account for the effect that both race and sex of respondents influenced their workplace experiences.

Survey results will be disseminated in a report to be published in August of 2016.

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4) Purdue University, College of Engineering, EPICS Continuing Lecturer Position

http://www.purdue.edu/ethics/Search_Screen/Faculty_Openings/Engineering/3466-2016.html

The purpose of the position is to provide significant instructional support for the EPICS program by directly teaching and mentoring several multi-disciplinary student design teams. In addition, this position will provide disciplinary oversight of senior design students by mentoring students and collection of assessment data. The person will also be a part of the instructional leadership team, and contribute to the development and delivery of curricular materials to support the community-driven design work.

Rank: Continuing Lecturer
Funding: Recurring
Desired Start Date: July 1, 2016

Essential Qualifications: Applicants must have a B.S. and M.S. in Engineering, Computer Science or related field. Background in Electrical and/or Computer Engineering and Ph.D. preferred. Applicants should have experience in the practice or teaching of engineering, computing or technology. Experience mentoring project-based courses, especially those which satisfy capstone requirements, also preferred. Equivalent experience will be considered. Applicants must have the ability to take the initiative to solve problems, assume responsibility, and establish and maintain quality standards. In addition, applicants should have excellent interpersonal and communication (verbal and written) skills, the ability to work with people of various backgrounds, good time management and organizational skills, the ability to learn and adapt to changing learning environments, and the ability to work with students, undergraduate and graduate, and faculty in mentoring students teams through their design projects.

Applications: Interested applicants should forward their resume and contact information for three references to Dr. Carla Zoltowski: cbz@purdue.edu

Review of applications will begin March 7, 2016 and will continue until filled. A background check will be required for employment in this position. Purdue University is an EOE/AA employer. Purdue University is committed to maintaining a community which recognizes and values the inherent worth and dignity of every person. In pursuit of its goal of academic excellence, the University seeks to develop and nurture diversity. All qualified applicants for employment will receive consideration without regard to race, religion, color, sex, national origin or ancestry, genetic information, marital status, parental status, sexual orientation, gender identity and expression, disability or status as a veteran.

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5) Open Faculty Positions at Arizona State University

The Ira A. Fulton Schools of Engineering at Arizona State University has openings for tenure/tenure track faculty positions to support a broad initiative in advanced manufacturing. Appointments will be at the assistant, associate or full professor rank commensurate with the candidate's experience and accomplishments, beginning August 2016. Areas of interest include, but are not limited to: product design strategies for additive manufacturing systems, modeling of advanced manufacturing systems

and processes, non-destructive testing-manufacturing integration, hybrid additive-subtractive manufacturing process integration, automation strategies and technologies for hybrid manufacturing, and scalable manufacturing at the limits of size, temperatures, and material properties. While the faculty appointment may be in any of the six Fulton Schools of Engineering, The Polytechnic School, located at ASU's Polytechnic campus in Mesa, Arizona, is currently the most involved in the search. The Polytechnic School houses the premier additive manufacturing and research center in the Southwest, providing strong support for the advancing ASU's research and development in Advanced Manufacturing. The facility features over \$2M in state-of-the-art polymer, metal, and composite materials 3D printing equipment as well as advanced materials processing and analysis capabilities.

For more information or questions about the positions, please contact the search committee chair, Jennifer Bekki (jennifer.bekki@asu.edu). Review of applications will begin on November 26, 2015. For more information, see the complete posting online at: <http://engineering.asu.edu/hiring/advanced-manufacturing-systems-11362/>

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6) Purdue Research on Engineering Career Paths

We are working to develop preparatory materials that help engineering undergraduate students learn to write effective resumes and pursue professional engineering opportunities. The first phase of this research is to collect resumes from undergraduate students, young professionals, and mid/late-career professionals in engineering careers. We would appreciate your input as an engineer by completing a very short survey for us, as well as uploading a copy of your professional engineering resume. All of this is done through online survey software.

Purpose of Research: The purpose of this research is to study engineering career paths and resume writing from successful engineers at a variety of career levels (from university student into professional engineering roles).

Specific Procedures to be Used: This research is conducted via an online survey, which is comprised of demographic information and a space for you to upload your current resume into the system.

Confidentiality: The project's research records may be reviewed by departments at Purdue University responsible for regulatory and research oversight. Steps will be taken to insure the confidentiality of all materials. All survey responses will be confidential. If your resume includes your name in the document or filename, these elements will be blinded before data analysis, in order to best protect your identity. All data provided to researchers will be stored in a secure (password protected) database that only the principal and co-investigators on this project will be able to access. Any printed data will be stored in a locked cabinet.

If you are willing to participate in our research, please follow the survey link below to participate. It is estimated that this will take no more than 5 minutes of your time.

https://purdue.qualtrics.com/SE/?SID=SV_cXYlxlwZysGSf2J

In addition, if you would be willing to pass this on to your engineering friends and colleagues, we would be grateful for more participants. Thanks in advance, as we work to better educate and prepare future generations of engineering students.

Contact Information: If you have concerns, you may contact:

Catherine Berdanier (cberdanier@purdue.edu)

Gracemarie Mike (gmike@purdue.edu)

Mary McCall (mccall0@purdue.edu)

Dr. Monica Cox (mfc@purdue.edu)

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7) University of Toronto First Year Engineering Teaching Stream Position Posting

The Faculty of Applied Science and Engineering at the University of Toronto invites applications for an Assistant Professor, Teaching Stream appointment in the First Year Engineering Program. The incumbent will be appointed in a relevant department depending on his/her area of expertise. The preferred start date for the appointment is July 1, 2016.

The Faculty welcomes applications from individuals with demonstrated excellence in engineering pedagogy, curriculum development and engineering design. Applicants must have experience teaching within a first-year engineering program and will have a PhD in Engineering Education, or a related field, by the time of appointment or shortly thereafter. The successful candidate will be expected to teach in the first year engineering design courses, as well as in other first year fundamental courses, such as Mathematics, Physics, and/or Chemistry. In addition, this position will work closely with the Chair First Year and the senior academic leadership on the implementation of key recommendations from the recent Core Curriculum Review Task Force. This will include leading an integrative approach to curriculum development across our first year programs and the ongoing coordination of the complete first year curriculum.

The detailed posting can be found at:

<https://utoronto.taleo.net/careersection/10050/jobdetail.ftl?job=1600140>

The closing date for applications is: March 28, 2016

Contact Micah Stickel with questions at:

cfy@ecf.utoronto.ca

m.stickel@utoronto.ca

[416.978.7805](tel:416.978.7805)

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8) New program in Sustainable Design Engineering at The University of Prince Edward Island - Faculty Positions Available!

The School of Sustainable Design Engineering at the University of Prince Edward Island is seeking applicants for up to ten tenure-track faculty positions encompassing all academic ranks. UPEI's new four year degree program in Sustainable Design Engineering provides students with an unprecedented opportunity to gain their Bachelor of Science via a client-focused, project-based model.

Design projects, which are integrated into every academic semester of the program, are based on real-world problems and external clients. Through these design courses, students are immersed in a realistic engineering environment where they are expected to interact with clients, develop design solutions, and conform to the best practices of the profession.

<http://www.upei.ca/hr/competition/36a15>

If you have any questions, or would like more detailed information, please contact:

Elizabeth Osgood, P. Eng.
Assistant Professor
School of Sustainable Design Engineering
University of Prince Edward Island
[\(902\) 620-5175](tel:9026205175)
eosgood@upei.ca

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9) Faculty Position: IPPD Program Assistant Director - University of Florida

The University of Florida Herbert Wertheim College of Engineering seeks candidates for a 12-month, non-tenure-track assistant engineer faculty position to serve as the assistant director of the Integrated Product and Process Design (IPPD) Program. The IPPD program is an institutionalized, industrially sponsored multidisciplinary capstone design course sequence. Over 2900 seniors in various engineering and business disciplines have participated in nearly 500 projects since program founding in 1995. IPPD prepares students for professional practice by engaging them in real-world design, build and test projects provided by sponsoring industrial clients and supported by company liaison engineers and UF faculty mentor/coaches. The assistant director will be responsible for managing the design, planning, and delivery of leading edge product and process design curriculum, mentoring project teams, assisting with sponsor company interactions, project acquisition, student recruiting, publication of scholarly work related to capstone design education in engineering education journals and conference proceedings, leading and participating in grant-writing activities, and teaching courses in the Herbert Wertheim College of Engineering.

For more information and instructions on how to apply, visit:

<http://explore.jobs.ufl.edu/cw/en-us/job/496391/assistant-engineer>

Please direct questions to the search committee chair:

William R. Eisenstadt, Professor
Dept. of Electrical and Comp. Engr.
University of Florida
1064 Center Drive
Room 529 NEB
Gainesville, FL 32611-6130
[352-392-4946](tel:352-392-4946)
wre@tec.ufl.edu

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10) 4th INTERNATIONAL CONFERENCE ON DESIGN CREATIVITY

Design creativity is an important and interesting topic of study in design. Since it involves the profound and essential nature of design, design creativity is expected to be a key in not only addressing the social problems that we are facing, but also producing an innate appreciation for beauty and happiness in our minds. In order to elucidate the nature of design creativity, the following issues are being studied: cognitive processes underlying design creativity, computational models of design creativity, and practical processes to incorporate the human and social dimensions.

Conference website: www.me.gatech.edu/2016_icdc

Email: ICDC2016@me.gatech.edu

We invite high-quality submission for ICDC including, but are not limited to the following: Collaborative creative design, Cognition in creative design, Creative design processes and methods, Creative design styles and cultures, Design creativity support tools, Cultural aspects of creativity and innovation, Measuring creativity and its impact, Social dimensions of creative design, Teaching creativity and innovation, Bioinspired design, Creative processes in design.

Full paper submission: 22nd April, 2016 -- Deadline extended!!

Conference Chair: Julie Linsey, USA
Vice Chair: Yukari Nagai, Japan
Program Chair: Maria Yang, USA

ICDC 2016 will be co-located with the 24th International Conference on Case-Based Reasoning (ICCBR 2016). ICCBR 2016 will be held at Georgia Tech from Oct. 31 to Nov. 2 with Creativity as the conference theme. Details to follow soon. Contact Dr. Ashok Goel for more details on ICCBR 2016 ashok.goel@cc.gatech.edu

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11) 2nd Annual Mid Years Engineering Experience Conference (MYEE)

Call for proposals (presentations and workshops)

<http://myeec.org>

March 30 – April 1, 2016

College Station, TX

Hosted by:

The Dwight Look College of Engineering at Texas A&M University

The Texas A&M Engineering Experiment Station

The Institute for Engineering Education and Innovation

The second annual Mid Years Engineering Experience (MYEE) Conference is dedicated solely to addressing the middle years in the engineering curriculum, i.e., the sophomore and junior years. These two years are typically referred to as the Sophomore Slump and Junior Jump. To ensure a quality conference MYEE seeks presentations, workshops, and/or special sessions related to the primary objective of promoting scholarly research on topics focusing on these two years. Both 2-year and 4-year institutions are encouraged to submit. Suggested topics include, but are not limited to: innovative pedagogies for teaching engineering science courses; proven techniques of using instructional technology to enhance student learning and/or critical thinking skills; successful models for engaging professional practitioners, such as in-classroom, field trips, and internships; design across the curriculum; novel assessment/research methods for student learning and program evaluation/improvement; retention; issues related to nontraditional student populations; diversity-aware classroom techniques; and advising. The intent is to offer a collaborative exchange of ideas that have worked for second and third year engineering students, while providing networking opportunities for engineering educators who focus on these areas.

The conference organizers are pleased to announce the international journal, "Engineering Education Letters," has agreed to partner with this conference to publish a Special Issue. Based on the conference review of the extended abstracts, selected authors will be invited to write a full paper for a Special Issue of "Engineering Education Letters" focused on these mid years, which will then go through the standard, peer review process.

1. Presentation, workshop, or special session proposals submission (300 - 500 word summary): February 8, 2016
2. Proposals reviewed and authors notified: February 12, 2016
3. Early Registration Deadline: February 15, 2016
4. Final proceedings version of Extended Abstracts (1500-3000 words): March 1, 2016
5. Conference: March 30 - April 1, 2016

Proposals for participation in the 2016 Conference can be submitted in the following two venues:

1. Workshops: Longer period of time for a focused topic or exchange.
2. Presentations: For projects either well defined or projects that are planned to begin soon.
3. Special Sessions: Panels, round tables, discussions, vendor showcases, etc.

Topics of Interest

You can either select an area of Engineering Education, Engineering Technology Education, Computer Science Education or other related area. The topic areas are to allow attendees to develop a network of people with common interests,

- Advances in engineering education research as it applies to the sophomore and junior year experience
- Innovative pedagogies for teaching technical content
- Laboratory development and innovation
- Experiential learning and immersive experiences
- Design education
- Undergraduate research and integration of research and education
- Blended, inverted/flipped, and online learning in the sophomore and junior years
- Design across the curriculum involving the sophomore and junior years
- Current technologies and their impact on the sophomore gateway courses and junior courses
- Novel assessment/research methods for student learning and program evaluation/improvement
- Innovative and proven methods for assessing effective teaching using instruments outside of and/or in addition to the traditional student rating
- Novel approaches and methods for addressing ABET engineering criteria
- Learning outcomes, assessment, and accreditation
- Demonstrated success in integrating sustainability concepts within classes, curricula, and co-curricular activities
- Retention and learner support strategies for the sophomore and junior years
- Transition strategies from the freshman year to the sophomore year to improve sophomore slump
- Integration of transfer students to the mid years
- Approaches to address the time "between the bookends" of the freshmen year and the senior year
- Measures and promotion of academic maturity in the mid years
- Role of advising and its impact on the mid years
- Effective uses of peer mentoring and/or student organizations in the mid years
- Formation and development of engineering identity in the sophomore and junior years
- Student development models and best practices to promote the professional development of preparing students for internships and graduation
- Strategies to improve sophomore and junior year success for diverse students
- Use of learning analytics to improve success and retention for mid years
- Living and learning communities in the mid years
- Service learning in the mid years
- Preparing students for the jump or transition to the professional environment
- Other topics that address issues in engineering education in the sophomore and junior years

If you have any questions, please contact the conference organizers at myeec@tamu.edu

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12) ASEE Strategic Doing and Engineering Education Transformation Network Announcements !

Seeking Volunteers: ASEE Strategic Doing Team

We are seeking volunteers to engage in ASEE's Strategic Doing efforts through the Transformation Team. The purpose of this team is to help ASEE transform how it supports teams of faculty, administration, and students as they transform engineering education at their institutions. This is a great opportunity to engage with and serve ASEE and its members while building a network of colleagues interested in transformation of engineering education. Expected monthly time-commitment: 2-3 hours.

To join or for more information, please contact the team lead Gurlovleen Rathore (Gurlovleen.rathore@gmail.com)

(Five-minute) Survey: Engineering Education Transformation Network

- Are you working to transform engineering education?
- Do you want to connect with like-minded colleagues to expand your efforts, leverage best practices and/or resolve challenges you have encountered?

Complete a brief survey to help ASEE's Transformation Team develop a network to support your ongoing efforts to transform engineering education.

Questions? Contact ASEE's Strategic Doing Transformation Team lead Gurlovleen Rathore (Gurlovleen.rathore@gmail.com)

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13) Academic Forum on Systems Engineering Knowledge in the Education of All Engineers

The International Council on Systems Engineering (INCOSE), the Systems Engineering Research Center (SERC), the American Society of Engineering Education (ASEE) and a number of universities are working together to increase the use of Systems Engineering (SE) Knowledge in the Education of All Engineers.

As part of this work we will hold a free Academic Forum meeting at George Mason University (GMU) on 2-3 May 2016 at the GMU Arlington Campus.

<http://arlington.gmu.edu>

Please put these dates in your calendar if you would like to attend and register your interest by sending your name and affiliation to Mr. Angel Manzo at: seor@gmu.edu

The event will be free to attend but places will be limited and attendees must register. Details on how to register for a place, local hotels, etc. are available at the forum website.

A brief discussion of the forum theme and aims is given below. Three specific themes have emerged from previous academic forum:

1. Why is SE knowledge of value to the education of all engineers?
2. What SE knowledge is important to achieve this value?

3. How do we facilitate the integration of this knowledge into engineering education?

You can find a discussion of these themes, the background and motivation for our joint activities, and a description of recent forum activities at <http://www.wpi.edu/research/seli/incose61.html>.

If you have specific ideas or information to add to this work and would like to be more directly involved, please contact Rick Adcock.

Rick Adcock
INCOSE Associate Director for Education
R.D.Adcock@Cranfield.ac.uk

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14) NSF-sponsored workshop on Standards-based Grading (SBG)

You are cordially invited to attend the NSF-sponsored workshop on Standards-based Grading (SBG) being held at the 2016 ASEE Conference in New Orleans, LA.

The goal of the workshop is to introduce engineering educators to an alternative approach of assessing students' achievement using a learning outcomes or standards-based grading system, which was recently featured in the February 2016 Prism. The workshop will be held Sunday, June 26th from 9 a.m. to noon. The workshop will be led by four experienced practitioners - Adam Carberry, Arizona State University; Matthew Siniawski, Loyola Marymount University; Sara Atwood, Elizabethtown College; and Heidi Diefes-Dux, Purdue University. Best practices will be shared along with ways to integrate SBG into your courses. Participants are encouraged to bring colleagues and syllabi to allow for implementation planning, including articulation of course outcomes and assessment rubrics.

Additionally, the workshop is intended to be a catalyst to jumpstart an SBG community of instructors. Workshop participants will be encouraged to become part of our NSF-supported study of SBG to commence during the 2016-2017 academic year. The study aims to recruit 20 faculty to pilot the implementation of SBG in their classrooms; workshop participants will be given first priority to join the study. Participants selected to become part of the funded study will be provided a small stipend (\$700) for their participation beyond the ASEE workshop.

Register through ASEE's Annual Conference Registration website.

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15) Put the Design in DEED!

"The scientist merely explores that which exists, while the engineer creates what has never existed before."

- Theodore Von Kármán

Design is central to engineering. Shouldn't DEED be central to ASEE? DEED members, please reach out to your colleagues and encourage them to join the DEED division!

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16) Submitting to the InDEED Newsletter

To submit an item to the InDEED newsletter, please prepare a short description (no more than 2 paragraphs) including any relevant URLs (in explicit form, not as hyperlinks), deadlines and contact information.

Email this information to Peter Schmidt, DEED Division Chair - ps125@evansville.edu.

The newsletter will be distributed on the 15th of each month. Newsletter submissions should be forwarded no later than the 10th of the month.

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Yours inDEED,

Peter L. Schmidt, PE, PhD
Division Chair, ASEE DEED