

NEW ENGINEERING EDUCATORS NEWSLETTER

Editor: Vimal Viswanathan, Tuskegee University

A message from the Division Chair

Shannon Ciston, UC Berkeley







Dear New Engineering Educators Division Members,

We are looking forward to another great year of programming at the ASEE annual conference in New Orleans, LA, and we hope to see you there!

The New Engineering Educators Division is an inclusion division, home to a wide range of engineering educators. We have

a special focus on developing the skills necessary to thrive in

engineering faculty careers, and our membership includes new and experienced engineering educators; non-tenure track, tenure-track, and tenured engineering faculty; and students and post-docs exploring careers in academia. A passion for engineering education, an interest in sharing best practices and ideas, and a desire to build professional community bind us together.

Because those of us in NEE remember what it's like to be new, we strive to be welcoming and friendly to all who participate in our sessions and events. We hope you will take advantage of the learning and networking opportunities of the annual conference. Please make yourself at home as a member of our division!

"The NEE division has a special focus on developing the skills necessary to thrive in engineering faculty careers."

SPRING 2016 INSIDE Program Chair Kris Jaeger-Helton highlights what you don't want to miss at the annual conference in New Orleans. 2 Meet your officers! Get to know the division offices and the educators in those positions. See how you can get involved. Annual Conference Highlights Technical sessions, panels, business Orleans the NEE at the ASEE Annual Meeting in New Orleans, June 26-29, 2016. 4 & 9

Join us for Free Breakfast at our **Business Meeting**

When? 8:00 am on Wednesday, June 29th

Where? New Orleans Convention Center, Room 241

Highlights of the program in New Orleans

Welcome members and newcomers to the New Engineering Educators Division! We have a rich and rewarding program for this year's annual ASEE conference.

In NEE, we serve educators across all majors and interests and across all levels of experience. By leveraging the expertise and experience of practiced and successful faculty and administration as well as junior colleagues, we are able to inspire faculty and aspiring educators in all phases of their careers. While we have a diverse set of specialties, our primary focus areas are to (1) Help all of us in the classroom improve our teaching, particularly with new innovations and unique opportunities to enhance our courses beyond the content (2) Assist and support newer or transitioning faculty in forming, catalyzing, and/or redirecting their careers (3) Allow administrators and those in educational leadership to share their ideas, programs and perspectives with committed educators, program directors and ambitious change agents in engineering education, and also (4) Find, create, and/or establish ground for collaboration and mentorship among colleagues in the areas of research, scholarship, and professional development.



Written by NEE Program Chair, Kris Jaeger-Helton, Northeastern University

"The main advantages of being affiliated with NEE are that we supplement and support any engineering major and all other divisions, and involve all levels of educators."

There are many ways to connect with us at NEE. If you're new to ASEE, then you'll want to attend the U557 "Greet the Stars" on Sunday at 3:15pm to make new friends and learn about navigating the 2016 Conference to get the most out of it. NEE will present there and provide you with an easy-to-follow schedule for all of our sessions. This is followed by the popular and casual ASEE "Division Mixer" U657 where you will find our New Engineering Educators' Table. Swing by, say hello, and find out how NEE can benefit you and how to become more connected with us.

There are a couple of extra opportunities to meet up, get to know new people, and be welcomed to ASEE and NEE. On Tuesday evening at 7:00pm, we have our annual **Networking and Social Gathering T742** nearby at the very cool Legacy Kitchen at 700 Tchoupitoulas Street and on Wednesday, you are invited to join us at 8:00am for FREE breakfast at the **NEE Business Meeting W142**. While that sounds kind of formal, we really join together and decide on the direction, opportunities, and future state of our Division. This is where each of us on the NEE Leadership Team started and became inspired to align with this unique division.

Our NEE program is rich this year in technical and panel sessions as well as workshops. On Sunday, we start with <u>4</u> workshop options, two in the morning, 9:00am-12:00pm and two in the afternoon, 1:00-4:00pm. Take note of the morning workshop on "Getting your Faculty Career off to a Good Start" U242 or consider the one on "Making Grades Meaningful" U242B to support that challenging aspect of being an educator. On Sunday afternoon, you have another option for career advancement with "Enhancing Professional Success for Early Career Academics" U442B, or take it back to the classroom in "Tips and Tricks for Implementing Reflection in Engineering Education" U442.

Message from the program chair continues...

We have several themed technical sessions this year. Monday is about teaching and course enhancement, with the title highlights being "Tips of the Trade" M442 for teaching and learning improvements at 1:15pm, and "That's a great Idea!" M542 on Monday at 3:00pm for ways to revitalize and upgrade your courses as well as engage students in research. On Tuesday, we'll turn our focus to supporting you as faculty in your careers and fostering productive collaboration, in "Faculty Unite!" T542 at 3:00pm and "But I'm a Loner!" T642 at 4:45pm. Each contains presentations on ways to become collaborative and successful with a focus on professional development. On Wednesday at 9:45am we'll shift focus to concentrate on "The Classroom Culture" W242 with efforts to dial in to students' perspectives with outcomes related to forming a strong foundation in terms of student interactions and class tone.

"We have teamed up with some other divisions along the way to bolster your opportunities for a fulfilling and motivating conference."

But that's not all! Let's zoom in on some of our deluxe panel sessions! We have teamed up with some other divisions along the way to bolster your opportunities for a fulfilling and motivating conference. On Monday at 11:30am, we have a panel titled "Supporting Transitioning Engineering Education Researchers" M347. This will focus on a diverse set of faculty career paths, which is timely as there are so many options for engineering educators nowadays. On Tuesday at 8:00am, do not miss the insightful session "Why Was My Paper Rejected? A Conversation with Two Journal Editors" T142, offered in collaboration with the ERM Division. A look behind the scenes on publications will certainly be eye-opening and informative. On Wednesday, mark your Session Locator for 2 more panel sessions. In the morning at 9:15 we are co-sponsoring a brilliant session called "Listening and Negotiating" W251 with several other divisions and groups: Engineering Leadership Development, Continuing Professional Development, Women in Engineering, the Student Division, and the ASEE Diversity Committee. Finally on Wednesday afternoon, if you are in a position to either mentor or be mentored regarding career pathways in engineering education, then you would benefit from attending the panel on "Community in Engineering Education: Past, Present, and Future" W442 for more collaboration advice.

As you know, the deep value in panel sessions lies in the collective experience and advice of a wide variety of panelist – you are sure to find common ground with one or more panel members in each of these sessions.

Be sure to read the more detailed titles and descriptions of the workshops, technical sessions and panels in your Session Locator and in the Proceedings Guide.

On behalf of the NEE Division and its leadership, we look forward to seeing you very soon in New Orleans!

Get to know your NEE Officers



Walter Schilling MSOE Past Division Chair



Shannon Ciston UC Berkeley Division Chair



Beverly Jaeger Northeastern University Program Chair



Jay Wierer MSOE Program Vice-Chair



Jenny Keshwani UN Lincoln Treasurer



Joel Lanning CSU Fullerton Secretary

The immediate **Past Division Chair** (1) assumes the responsibilities of vacated offices that exist, (2) chairs the awards committee, and (3) provides council to the Division Chair.

The **Division Chair** (1) has administrative responsibility for all function of the Division in accordance with Bylaws, (2) provides council to the program chair, and (3) communicates with the PIC IV Chair.

The **Program Chair** (1) plans and organizes all sessions sponsored by the Division at the Annual Conference, and (2) runs the Annual Business Meeting of the Division.

The **Program Vice-Chair** (1) assists the Program Chair in planning and

organizing sessions at the Annual Conference, (2) assumes the responsibilities of the Program Chair upon vacancy.

The **Treasurer** (1) handles all financial dealings of the Division, and (2) provides a report on all Division accounts during the Annual Business Meeting.

The **Secretary** (1) takes minutes of the Annual Business Meeting and provides these electronically to the Executive Board, and (2) coordinates any advertisement required.

The **Newsletter Editor** provides an annual newsletter to the division.

The **Membership Chair** identifies strategies to improve membership in the division.



Vimal Viswanathan Tuskegee University Newsletter Editor & Social Presence



Derek Breid St. Vincent College Membership Chair

HOW YOU CAN GET INVOLVED?

Join us at the NEE Division Business Meeting at the ASEE Annual Conference in New Orleans, Wednesday morning at 8 am. @ New Orleans Convention Center, 241.

Breakfast is provided!!

If you are interested in participation in a leadership role or as a moderator for a session next year, please join us!

Annual Conference Highlights

U242 – Sunday Workshop: Get your Faculty Career to a Good Start

Workshop - New Engineering Educators Division Sun. June 26, 2016, 9:00 AM to 12:00 PM New Orleans Convention Center, Room 273 Ticketed event: \$25.00 advanced registration and \$35.00 on site registration

Research indicates that it takes 95% of new faculty 4-5 years to reach full research productivity and teaching effectiveness, while the remaining 5% - the "quick starters" – reach the same level in 1-2 years. In this workshop, we will outline practical, easy-to-implement strategies that will help new faculty in their quest to become quick starters.

Speakers: Drs. Rebecca Brent & Richard M. Felder

U242B – Sunday Workshop: Making Grades Meaningful: Best Practices for Implementing a Learning Outcomes-based Grading System

Workshop - New Engineering Educators Division and Educational Research & Methods Division

Sun. June 26, 2016, 9:00 AM to 12:00 PM New Orleans Convention Center, Room 272 Free Ticketed Event

Assessment of student achievement using a grading system is a major task required of engineering educators. Most higher education institutions use d a traditional, summative score-based grading system that relies of assigning an end-of-semester letter grade representative of each student's achievement in the course. This workshop will introduce participants to the Standard Based Grading (SBG) system and how such a system can be easily implemented at institutions that use a traditional letter grade reporting system. Emergent best practices will be shared by the facilitators to explain implementation strategies, present faculty perceived benefits for students, and elaborate on internal and external barriers/obstacles that must be overcome to achieve successful implementation.

Speakers: Drs. Adam R. Carberry, Sara A. Atwood, Heidi A. Diefes-Dux & Matthew Siniawski

U442 – Sunday Workshop: Tips & Tricks for Implementing Reflection in Engineering Education

Workshop - New Engineering Educators Division Sun. June 26, 2016, 1:00 PM to 4:00 PM New Orleans Convention Center, Room 280 Free Ticketed Event

In this workshop, engineering educators will be introduced to the Consortium to Promote Reflection in Engineering Education (CPREE) and

2016 ASEE CONFERENCE AT-A-GLANCE

TECHNICAL SESSIONS

M442 - Tips of the Trade: Best Practices, Expanded Advice, and Strategies for Implementable Course Improvement

Monday, June 27 1:15 – 2:45 pm Convention Center 338

M542 - That's a Great Idea! Learning-focused Methods to Revitalize Your Courses

Monday, June 27 3:00 – 4:30 pm Convention Center 277

T542 - Faculty Unite! Effective Ways for Educators to Collaborate Successfully

Tuesday, June 28 3:00 – 4:30 pm Convention Center 277

T642 - But I'm a Loner! Expanding capability and creativity by examining effective alliances

Tuesday, June 28 4:45 – 6:15 pm Convention Center 277

W242 - Size, Civility, and the Classroom Culture: Setting Class Tone with a Student-centered Perspective

Wednesday, June 29 9:45 – 11:15 am Convention Center 269

PANEL SESSIONS

M347 - Supporting Transitioning Engineering Education Researchers Monday, June 27 11:30 – 1:00 pm Convention Center 243

T142 - Why Was My Paper Rejected? A Conversation with Two Journal Editors

Tuesday, June 28 8:00 – 9:30 am Convention Center 261

W251 - Listening and Negotiation Wednesday, June 29 9:45 – 11:15 am Convention Center 262

W442 - Community in Engineering Education: Past, Present, and Future Wednesday, June 29 1:15 – 2:45 am

the national field guide of over 140 reflection activities. These activities come from a range of engineering disciplines, institution types, learning contexts, and enable a variety of important engineering outcomes. Each individual activity has its own tips and tricks, as recommended by the experienced educators who shared these activities with the engineering education community. In this workshop, we will (1) introduce the CPREE national field guide, and it's breadth of reflection activities, (2) the general tips and tricks for implementing reflection in engineering education, and (3) design principles for developing and delivering reflection activities, leveraging the expertise of experienced engineering educators.

Speakers: Drs. Cynthia J. Atman, Jennifer A. Turns, Lauren D. Thomas & Ken Yasuhara

U442B – Sunday Workshop: Enhancing Professional Success for Early Career Academics: A Skills-Based Workshop

Workshop - New Engineering Educators Division & Students Division

Sun. June 26, 2016, 1:00 PM to 4:00 PM New Orleans Convention Center, Room 277 Free Ticketed Event

This workshop focuses on three skills critical for success as new engineering educators and scholars. These skills – understanding personal and academic identity, building teams, and community awareness – are widely acknowledged as important (in situations as diverse as job advertisements to discussions of "academic fit"), and yet are not usually addressed in an explicit way in the typical training programs of graduate or professional schools. The workshop experience will involve actionable approaches, practiced during the workshop. The majority of the time will be devoted to actual work. Participants will receive a package of handouts for use during and after the workshop and will be introduced to key resources for further development of these and related skills.

Speakers: Drs. Kay C. Dee, Eva Andrijcic, Julia M. Williams & Ella Lee Ingram

M347 - Supporting Transitioning Engineering Education Researchers -Panel Session Reflecting on Shifts into a Diverse Set of Faculty Career Paths

Panel - Student Division, Educational Research and Methods Division, and New Engineering Educators Division

Mon. June 27, 2016 11:30 AM to 1:00 PM New Orleans State Convention Center, Room 243

Moderated by Tom Zajdel and Stephen Douglas Secules

This panel session is designed for engineering education researchers who are currently transitioning into or are planning to pursue a career in academia in the future. During the session, panelists will (1) provide insight regarding what "transitioning" may look like for engineering education researchers who pursue various academic positions, and (2) discuss some of the challenges and opportunities associated with different career options. The panelists will provide highlights from their first year as faculty members and facilitate a dialogue on the topic of preparing scholars for conducting engineering education research in diverse positions in academia.

Speakers: Drs. Courtney June Faber, Walter Curtis Lee Jr., Erin McCave, Courtney Smith, Alexandra Coso Strong & Cheryl Bodner

M442 - Tips of the Trade: Best Practices, Expanded Advice, and Strategies for Implementable Course Improvement

Technical - New Engineering Educators Division Mon. June 27, 2016 1:15 PM to 2:45 PM New Orleans Convention Center, 338 Moderated by Sara A. Atwood & William J. Schell IV

Tips & Tricks for Successful Implementation of Reflection Activities in Engineering Education - Dr. Lauren D Thomas (University of Washington), Mania Orand (Human Centered Design and Engineering), Kathryn Elizabeth Shroyer (University of Washington), Dr. Jennifer A Turns (University of Washington), and Dr. Cynthia J. Atman (University of Washington)

Best Practices for Using Algorithmic Calculated Questions via a Course Learning Management System - Dr. Gillian M. Nicholls (Southeast Missouri State University), Dr. William J. Schell IV P.E. (Montana State University), and Dr. Neal Lewis (University of Bridgeport)

Best Practices for Using Standards-based Grading in Engineering Courses - Dr. Adam R Carberry (Arizona State University), Dr. Matthew Siniawski (Loyola Marymount University), Dr. Sara A. Atwood (Elizabethtown College), and Prof. Heidi A. Diefes-Dux (Purdue University, West Lafayette)

A Standards-based Assessment Strategy for Written Exams - Dr. J. Blake Hylton (Ohio Northern University) and Prof. Heidi A. Diefes-Dux (Purdue University, West Lafayette)

M542 - That's a Great Idea! Learningfocused Methods to Revitalize Your Courses

Technical - New Engineering Educators Division Mon. June 27, 2016 3:00 PM to 4:30 PM New Orleans Convention Center, 277 Moderated by Jeremi S London & Kerry R Widder

Student Learning Materials for Ability Enhancement in an Engineering Course - Dr. Kristine K. Craven (Tennessee Technological University)

Improvements in Student Learning Experiences by Course Revitalization - Dr. Vishwas Narayan Bedekar (Middle Tennessee State University), Dr. Ahad S. Nasab (Middle Tennessee State University), and Dr. Walter W. Boles (Middle Tennessee State University)

Using Failure to Teach Design - Prof. Rob Sleezer (Minnesota State University, Mankato, Twin Cities), Prof. Jacob John Swanson (Minnesota State University, Mankato), and Prof. Rebecca A Bates (Minnesota State University, Mankato)

Combined Contribution of 12 REU Students to the Development of the LEWAS Lab - Debarati Basu (Virginia Tech), Mr. Walter McDonald (Virginia Tech),

Mr. Daniel S Brogan (Virginia Tech), Darren K Maczka (Virginia Tech Department of Engineering Education), and Dr. Vinod K Lohani (Virginia Tech)

T142 - Why Was My Paper Rejected? A Conversation with Two Journal Editors

Panel - New Engineering Educators Division and Educational Research and Methods Division Tue. June 28, 2016 8:00 AM to 9:30 AM New Orleans Convention Center, 261

Moderated by James Blake Hylton

Speakers: Drs. Michael C. Loui & Larry J. Shuman

This session should benefit new faculty members and graduate students who want to publish papers in engineering education journals, particularly authors who plan to convert their conference papers into journal articles. Attendees will leave the session with a stronger understanding of the standards for journal publication and the process of peer review. As authors, they will avoid several common mistakes. As reviewers, they will be able to write better evaluations of submitted manuscripts. The editors will each speak for about ten minutes. During the remainder of the session, they will answer questions from the audience.

PARTICIPATE IN OUR SUNDAY WORKSHOPS

U242 – Get your Faculty Career to a Good Start

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U442B – Enhancing Professional Success for Early Career Academics: A Skills-Based Workshop

Sun. June 26, 2016, 1:00 PM to 4:00 PM New Orleans Convention Center, Room 277 Free Ticketed Event

SPECIALLY DESIGNED FOR NEW ENGINEERING EDUCATORS!!

T542 - Faculty Unite! Effective Ways for Educators to Collaborate Successfully

Technical Session - New Engineering Educators Division

Tue. June 28, 2016 3:00 PM to 4:30 PM New Orleans Convention Center, 277 Moderated by Amber Lynn Genau & Ruth Wertz

Formative Peer Assessment of Teaching - Dr. Stephanie Ann Claussen (Colorado School of Mines)

Case Study: Establishing a Sustainable Faculty
Development Unit within a College of Engineering Dr. Christine S Grant (North Carolina State University),
Ms. Barbara E Smith (North Carolina State University),
Dr. Louis A Martin-Vega (North Carolina State
University), and Mrs. Olgha B Davis (North Carolina
State University)

Strategies and Techniques for New Tenure-track Faculty to Become Successful in Academia - Dr. Gouranga Banik (Oklahoma State University)

Building Teaching Collaborations across
Disciplines - Dr. Jennifer Keshwani (University of Nebraska, Lincoln) and Dr. Krista Lynn Adams (University of Nebraska, Lincoln)

T642 - But I'm a Loner! Expanding capability and creativity by examining effective alliances

Technical Session - New Engineering Educators Division

Tue. June 28, 2016 4:45 PM to 6:15 PM
New Orleans Convention Center, 277
Moderated by Vimal Viswanathan & Amani Magid

Status of a Summer Faculty Immersion Program After Four Years in Development - Dr. Juan C Morales (Universidad del Turabo) and Dr. Michael J. Prince (Bucknell University)

Teaching with Graduate Teaching Assistants: Tips for Promoting High Performance Instructional Teams - Dr. Shannon Ciston (University of California, Berkeley), Dr. Colin Cerretani (University of California, Berkeley), and Dr. Marjorie S Went (UC Berkeley)

Adjunct's Contribution in Bringing the Practice to the Classroom: A Case Study - Dr. Waddah Akili (lowa State University)

Perspectives on Professional Development of Engineering Educators in the Arab Gulf Region:
Current Trends, Challenges, and Future Outlook - Dr.
Waddah Akili (lowa State University)

T742 - NEE Awards & Networking

Social - New Engineering Educators Division Tue. June 28, 2016 7:00 PM to 9:00 PM Legacy Kitchen, 700 Tchoupitoulas Street, New Orleans, LA 504-613-2350 Free Ticketed Event

W142 - NEE Business meeting

Business - New Engineering Educators Division Wed. June 29, 2016 8:00 AM to 9:30 AM New Orleans Convention Center, 241 Free ticketed event

Breakfast is provided to all attendees. Please join us as we decide on the future and direction of our New Engineering Educators.

W242 - Size, Civility, and the Classroom Culture: Setting Class Tone with a Student-centered Perspective

Technical Session - New Engineering Educators Division

Wed. June 29, 2016 9:45 AM to 11:15 AM New Orleans Convention Center, 269 Moderated by Thomas E McDermott & Steven Holland

Expanded Advice from Coordinators of Largeenrollment First-year Engineering Courses - Prof. Jenny L Lo (Virginia Tech), Kacie J. Hodges PE (Virginia Tech Dept of Engineering Education), Dr. Wm. Michael Butler (Virginia Tech), and Prof. Tamara Knott (Virginia Tech)

Student Perceptions of Faculty Support: Do Class Size or Institution Type Matter? - Dr. Cheryl Allendoerfer (University of Washington), Dr. Denise Wilson (University of Washington), Dr. Melani Plett (Seattle Pacific University), Prof. Rebecca A Bates (Minnesota State University, Mankato), Dr. Tamara Floyd Smith P.E. (Tuskegee University), and Dr. Nanette M Veilleux (Simmons College)

Integrating Civility into the Classroom: Practicing and Teaching Civility to Prepare Students for Career Success - Prof. Ralph Ocon (Purdue University Calumet)

Effective Building and Development of Student Teamwork Using Personality Types in Engineering Courses - Dr. Dimitra Michalaka (The Citadel) and Mr. Michael Golub (Indiana University Purdue University, Indianapolis)

W251 Listening and Negotiation

Panel - Women in Engineering Division, Continuing Professional Development Division, Engineering Leadership Development Division, Student Division, New Engineering Educators Division, and ASEE Diversity Committee

Wed. June 29, 2016 9:45 AM to 11:15 AM New Orleans Convention Center, 262 Moderated by Janet Callahan

Speakers: Jenna P. Carpenter, Mary E. Besterfield-Sacre, Kim LaScola Needy & Cheryl B. Schrader

This panel focuses on negotiation, with an emphasis on providing practical ideas and strategies relevant to academic professionals at both entry- and mid-career levels who seek career opportunities. There will be an emphasis on negotiating one's start-up package with an eye toward understanding the elements involved, both from the future employee's perspective and from the department chair or dean's perspective. The panel will discuss what can be negotiated, how one might

proceed to discuss these, and how listening is critical to negotiation. Participants will be provided with practical advice and examples of effective negotiation.

W442 - Community in Engineering Education: Past, Present, and Future

Panel - New Engineering Educators Division and Student Division

Wed. June 29, 2016 1:15 PM to 2:45 PM New Orleans Convention Center, 262 Moderated by Brian Patrick O'Connell

Speakers: Drs. Ken Yasuhara, Cheryl Allendoerfer, Gina Adam, Adam R Carberry, Stacie Gregory & Micah Lande

We anticipate that this session will be of interest to both new and longstanding members of various engineering education-related communities, including graduate students and faculty. In particular, we expect that individuals who are in a position to either mentor or be mentored regarding career pathways in engineering education would benefit. Summary of the ideas to be explored and discussed: This special session will draw on the CELT Engineering Education Pioneers and Trajectories of Impact project (NSF 1263512) in order to scaffold and support community building in engineering education, with a particular focus on new community members (including graduate students and junior faculty).



Want to Get Involved with NEE? Attend our Free Ticketed Events!!

T742 - NEE Awards & Networking Dinner

Social - New Engineering Educators Division

Tue. June 28, 2016 7:00 PM to 9:00 PM Legacy Kitchen, 700 Tchoupitoulas Street, New Orleans, LA 504-613-2350

W142 - NEE Business meeting

Business - New Engineering Educators
Division

Wed. June 29, 2016 8:00 AM to 9:30 AM New Orleans Convention Center, 241

Breakfast is provided!!