



## Civil Engineering Division of the American Society for Engineering Education June 2016

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### Message from the Chair of the Division

*Dr. Kevin D. Hall, P.E., University of Arkansas*

[kdhall@uark.edu](mailto:kdhall@uark.edu)



My, my...where does the time go? It does not seem that long ago that we were enjoying the sights and sounds of Seattle – but now, New Orleans 2016 is upon us! Brock Barry's program for the CE Division is shaping up to be memorable – you don't want to miss it. We have a great collection of topics this year. Thank you to all the authors for sharing

your terrific ideas, scholarship, and experiences with everyone by submitting your papers and posters. Let me also encourage you to take an active role in ASEE; it is so energizing to interact with folks who are passionate about engineering education. Let's all work together to make the CE Division the 'go to' place for rock-solid scholarship on the art and science of teaching and learning. When you consider all the various "things" you are asked to do in your job, what is more important – and rewarding – than knowing that you have influenced and changed a student's life? ASEE is the place for celebrating that legacy – I hope that you will come celebrate with us in the Big Easy!

### Message from the Program Chair

*Dr. Brock E. Barry, P.E., United States Military Academy*

[Brook.Barry@usma.edu](mailto:Brook.Barry@usma.edu)



What a great program we all experienced in Seattle...hats off to Kevin Hall for all of his efforts. But, f' true it ain't but a week away that we be heading to the Big Easy for po-boys, jambalaya, etouffee, and fizzy drinks! We are so excited for the packed week at ASEE Annual Conference and Exposition from June 25<sup>th</sup>-29<sup>th</sup> 2016 in New Orleans.

This year's call for papers has resulted in an amazing program for the CE Division. A summary of the CE Division events is enclosed in this newsletter. We have great papers related to mentoring, transformational change, classroom engagement, infrastructure, and inclusivity. I would also like to highlight a proposed session related to the innovative integration of sustainability in the civil engineering curricula. In addition to our engaging paper sessions, we have plans for a memorable RAP session and awards banquet. I'll see you in N'awlins and together we will laissez les bons temps rouler!

## **2016 Civil Engineering (CE) Division ASEE Program**

### **Civil Engineering Division Executive Committee Meeting**

Sun. June 26, 2016 9:45 AM to 11:15 AM

Room 240, New Orleans Convention Center

### **Civil Engineering Division Business Meeting**

Sun. June 26, 2016 11:30 AM to 1:00 PM

Room 242, New Orleans Convention Center

### **Civil Engineering Division Planning Meeting**

Sun. June 26, 2016 1:15 PM to 2:45 PM

Room 242, New Orleans Convention Center

### **Influencing the Next (Third!) Edition of the Civil Engineering Body of Knowledge for the 21st Century**

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

Room 261, New Orleans Convention Center

*Session Description: The first and second editions of Civil Engineering Body of Knowledge (now known as “BOK1” and “BOK2”) were published in 2004 and 2008, respectively. Following the publication of BOK1 and BOK2, the need for a long-term plan for updating the Body of Knowledge (and its associated accreditation criteria) was identified by the Raise the Bar leaders and affirmed by civil engineering department heads/chairs. The plan for synchronized change was outlined in a 2011 ASEE paper titled “The Civil Engineering Body of Knowledge and Accreditation Criteria: A Plan for Long-Term Management of Change.” The plan for the long-term management of change called for the organization of a new Body of Knowledge Task Committee (BOKTC) by October 2016. The first objective of the new task committee is to determine if BOK2 should be revised. The new task committee could recommend no revisions, minor revisions, or extensive revisions to BOK2. If substantive changes are recommended to BOK2, the master plan calls for the completion of the third edition of the Civil Engineering Body of Knowledge for the 21st Century (BOK3) before October 2018.*

### **Educational & Professional Issues of Strategic Importance to the Civil Engineering Profession - and ASCE**

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

Room 262, New Orleans Convention Center

*Session Description: Significant changes ARE occurring in the professional practice of civil engineering and the education of future civil engineers. ASCE has been working proactively to address those educational and professional issues of greatest strategic importance to the future of*

*the civil engineering profession. To this end, there are several groups of future-focused civil engineering educators and practitioners working to define and analyze the strategic issues – and prepare action plans to appropriately and proactively respond to changes. Most civil engineering professionals are not aware of the educational and professional issues being addressed by ASCE – and the scholarly investigations of these issues that are being pursued by ASCE volunteer groups.*

### **Developing Infrastructure Professionals**

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

Room 262, New Orleans Convention Center

*Session Description: Infrastructure-themed courses go beyond the technical design of water, transportation, and other civil engineering systems to investigating how these systems serve society. In development and delivery, these courses are very different from calculation- or project-based courses. This session discusses the formation and activities of an infrastructure education community of practice; explores emergent infrastructure themed course offerings; and envisions innovative techniques to incorporate political, social, economic, and creative dimensions into infrastructure themed courses.*

### **Civil Engineering Division RAP Session**

Mon. June 27, 2016 6:30 PM to 9:30 PM

Mulate's Cajun Restaurant

201 Julia Street, New Orleans, LA 70130 (across the street from the convention center)

### **Fostering Transformational Change in Civil Engineering**

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

Room 262, New Orleans Convention Center

*Session Description: The session will encourage papers related to case studies, processes, or research on transforming civil engineering education, including development of new programs.*

### **Civil Engineering Division Poster Session**

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

Exhibit Hall F, New Orleans Convention Center

**Student Demographics and Outcomes in Civil Engineering**

Tue. June 28, 2016 1:15 PM to 2:45 PM

Room 266, New Orleans Convention Center

*Session Description: Using a dataset from universities in the U.S. that includes more than 17,000 civil engineering (CE) students, this work describes the demographics and outcomes for students starting in, switching into, and transferring into CE to inform the decision making of faculty, department heads, and deans. Pathways in CE vary by race but not gender. Although women generally out-persist men in CE, the difference is small. While Asian and Hispanic men choose CE at lower rates than others, the Asian and Hispanic men who do major in CE have higher graduation rates than expected. Black students of both genders are underrepresented in choosing CE and in completing the degree. Among Asian, Hispanic, and white students, those who start in CE and leave are replaced by those who transfer or switch in, but black students entering CE later do not make up for the large losses of black students who start in CE. This work is published in the October 2015 issue of the Journal of Professional Issues in Engineering Education and Practice. These results generate important questions that faculty and administrators of CE programs must answer if the discipline is to become more diverse. This interactive panel session provides an opportunity for such key stakeholders to engage in a discussion about these findings.*

**Notable Topics in Civil Engineering Education**

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

Room 262, New Orleans Convention Center

*Session Description: This session will highlight well-written papers on a variety of topics related to civil engineering education that may not otherwise fall within defined technical sessions.*

**PBL and Flipped Classrooms in Civil Engineering Education**

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

Room 276, New Orleans Convention Center

*Session Description: This session will demonstrate techniques related to project/problem-based learning, with or without a just-in-time element, as well as the flipped classroom concept. The audience will take away an understanding of how to structure, apply, and assess these techniques in their immediate contexts.*

**Capstone and Collaborations in Civil Engineering**

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

Room 276, New Orleans Convention Center

*Session Description: Non-traditional capstone experiences that address ill-defined problems faced by society today. Projects should include real societal constraints such as: politics, cultural norms, ethics, economics, and sustainability.*

*This session will include studies that involve collaboration with professionals and/or industrial advisory boards to enact and assess curricular improvements.*

**Thank you** for taking the time to read this newsletter and for sending me your feedback. If you have suggestions, please call me at (812)877-8318 or send an e-mail to: [lovellmd@rose-hulman.edu](mailto:lovellmd@rose-hulman.edu), Matthew D. Lovell - Editor.

**Civil Engineering Division Annual Awards Banquet**

Tue. June 28, 2016 6:30 PM to 9:30 PM

Solomon Victory Theater Atrium & The Stage Door Canteen

945 Magazine Street, New Orleans..... 0.4 mile, 7 min walk from the convention center.

**Use of Technology in Civil Engineering Courses**

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

Room 276, New Orleans Convention Center

Session Description: *This session will explore the effective use of technology for content delivery in civil engineering courses.*

**Viewpoints, Perspectives, and Creativity in Civil Engineering Education**

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

Room 276, New Orleans Convention Center

Session Description: *This will be amazing!*

**Proven Strategies in Classroom Engagement Part I: Artifacts for Creative Pedagogy**

Wed. June 29, 2016 11:30 AM to 1:00 PM

Room 276, New Orleans Convention Center

Session Description: *This session is seeking artifacts that have been shown to effectively engage students and result in improved performance. Authors of selected papers will be asked to provide a demonstration of the artifact and activity during the conference presentation. Single page summary handouts will also be encouraged for use during the presentation.*

**Proven Strategies in Classroom Engagement Part II: Activities for Creative Pedagogy**

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

Room 276, New Orleans Convention Center

Session Description: *This session is seeking artifacts that have been shown to effectively engage students and result in improved performance. Authors of selected papers will be asked to provide a demonstration of the artifact and activity during the conference presentation. Single page summary handouts will also be encouraged for use during the presentation.*

**Innovative Instructional Strategies for Integrating Sustainability**

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

Room 276, New Orleans Convention Center

## 2015 ASEE (Seattle, WA) Civil Engineering Division Awards

*Awards Committee: Shashi Nambisan (Chair), Asghar Bhatti, and Mathew Roberts*

The Stephen J. Ressler Best Paper Award is given for the best paper on a topic in civil engineering education. Eligible papers include, but are not limited to, those published in the ASEE Annual Conference Proceedings. Recipients are awarded engraved plaques.

This award is for the best paper submitted for and presented at the 2014 ASEE Annual Conference, Indianapolis, Indiana in June 2014. This is typically selected from the papers presented in sessions sponsored by the Civil Engineering Division at the ASEE Annual Meeting. The selection is made by the Awards Committee based on the paper and the presentation.

The 2015 award winners are:

**Jeffrey A. Laman** and **Mary Lynn Brannon**, Penn State University for their paper titled “*Integration of Prerequisite Resource Materials in a Structural Design of Foundations Course Using Pencasts*”

The George K. Wadlin Distinguished Service Award is given for outstanding service in support of civil engineering education. The recipient is awarded an engraved plaque.

This award often goes to the most senior past division chair who has maintained strong contact with the division and provided strong support over the years. Sometimes, ASCE will have a candidate they would like to have considered because of their strong service to civil engineering education. These are the two common sources of award recipients.

The 2015 award winner is:

**Ronald W. Welch, Ph.D., P.E.**  
Dean of Engineering and Louis S. LeTellier Chair  
The Citadel, Charleston, SC

The Gerald R. Seeley Award is awarded to a civil engineering faculty member with five or fewer years of teaching experience. The basis for selection is the quality of a paper submitted for presentation in a CE Divisions session at the 2015 ASEE Annual Conference.

The 2015 award winners are:

**Nicole Leo Braxtan, Ph.D.** and **Goli Nossoni, Ph.D.**, Manhattan College, Riverdale, NY for their paper entitled “*Correlation of Personality Type with Student Interest in Sustainability in Civil Engineering*”

The Glen L. Martin Practitioner Service Award is awarded to an engineering practitioner for distinguished service to or support of civil engineering education. While the recipient can be a former faculty member, the distinguished service for this award must occur over a period of time when the recipient served as an engineering practitioner in a position not normally held by an engineering educator. The Award consists of an engraved plaque and complimentary tickets to all CE Division social events at the ASEE annual conference at which the award is presented.

The 2015 award winner is:

**Richard O. Anderson, P.E., Dist. M. ASCE**  
Principal Engineer, Somat Engineering, Inc.  
Taylor, MI

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### George K. Wadlin Distinguished Service Award

*“For outstanding service in support of civil engineering education.”*

2014	Kristen Sanford Bernhardt	2000	William E. Kelly
2013	Jim Hanson	1999	Donn E. Hancher
2012	Wilfred Nixon	1998	William J. Wilhelm
2011	J.P. Mohsen	1997	Gerald R. Seeley
2010	Jeffrey S. Russell	1996	Daniel J. McGinley
2009	Stewart G. Walesh	1995	E. Walter LeFevre
2008	James J. O’Brien	1994	Frederick W. Beaufait
2007	Stephen J. Ressler	1993	James F. McDonough
2006	James M. Nau	1992	Colby V. Ardis
2005	Alan L. Prasuhn	1991	Marvin E. Criswell
2004	Howard C. Dunn, Jr.	1990	Ronald W. Eck
2003	Thomas A. Lenox	1989	Glen L. Martin
2002	Vincent P. Drnevich	1988	Peter G. Hoadley
2001	Richard O. Anderson	1987	George K. Wadlin

### Gerald R. Seeley Award

*Awarded to a civil engineering faculty member with five or fewer years of teaching experience. The basis for selection is the quality of a paper submitted for presentation at the ASEE Annual Conference. First awarded in 2003.*

2014	Matthew D. Lovell	2006	Andrea Surovek
2013	Berndt Spittka	2005	Scott R. Hamilton
2012	Michelle Oswald	2004	Andrew T. Rose
2011	Ellie Fini	2003	Tonya Emerson & Reid Vander Schaaf
2010	Steve Hart		
2009	Brock E. Barry		
2008	Tanya Kunberger & Diane Bondehagen		
2007	Decker Hains		

**Civil Engineering Division Officers (2015 - 2016)**

Name, Email, Phone	Position	Institution
<b>Dr. M. Asghar Bhatti P.E.</b> Professor <a href="mailto:asghar-bhatti@uiowa.edu">asghar-bhatti@uiowa.edu</a> (319) 335-5656	Awards Chair	University of Iowa
<b>Dr. Kevin D. Hall</b> Professor & Chair <a href="mailto:kdhall@uark.edu">kdhall@uark.edu</a> (479) 575-8695	Chair	University of Arkansas
<b>Dr. Matthew D. Lovell P.E.</b> Assistant Professor <a href="mailto:lovellmd@rose-hulman.edu">lovellmd@rose-hulman.edu</a> (812) 877-8318	Editor	Rose-Hulman Institute of Technology
<b>Dr. Charles E. Riley P.E.</b> Associate Professor <a href="mailto:charles.riley@oit.edu">charles.riley@oit.edu</a> (541) 885-1922	Freshman Director	Oregon Institute of Technology
<b>Dr. Andrea L. Welker P.E.</b> Professor <a href="mailto:andrea.welker@villanova.edu">andrea.welker@villanova.edu</a> (610) 519-4959	Mid-Term Director	Villanova University
<b>Dr. Yusuf A. Mehta P.E.</b> Associate Professor <a href="mailto:mehta@rowan.edu">mehta@rowan.edu</a> (856) 256-5327	Past Chair	Rowan University
<b>Dr. Brock E. Barry P.E.</b> Mechanics Group Director <a href="mailto:brock.e.barry@us.army.mil">brock.e.barry@us.army.mil</a> (845) 662-3383	Vice Chair “Program Chair”	U.S. Military Academy
<b>Dr. Steven J. Burian P.E.</b> <a href="mailto:burian@eng.utah.edu">burian@eng.utah.edu</a> (801) 585-5721	Secretary/Treasurer	University of Utah
<b>Dr. Sean St. Clair P.E.</b> Associate Professor & Chair <a href="mailto:sean.stclair@oit.edu">sean.stclair@oit.edu</a> (541) 885-1602	Senior Director	Oregon Institute of Technology



## Session Reports from Seattle 2015

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### 2016 CE Division Best Paper Nominations

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"A Metric for Assessment of ABET Student Outcome "b" – Experimental Design and Analyzing the Results "

*Dr. Allen L Jones (South Dakota State University))*

" Observations from Three Years of Implementing an Inverted (Flipped) Classroom Approach in Structural Design Courses "

*Dr. Shawn P. Gross (Villanova University) with Dr. Eric Musselman (Villanova University)*

"Solving the Impasse Among the Engineering Disciplines: Finding Common Ground for the Educational Requirements for Tomorrow's Professional Engineers "

*Mark William Killgore (American Society of Civil Engineers) with Michael J Conzett (NCEES)*

"New Civil Engineering Program Criteria: The Rest of the Story "

*Dr. Allen C Estes (California Polytechnic State University) with Dr. Thomas A. Lennox (American Society of Civil Engineers) Richard O. Anderson (Somat Engineering, Inc.)*

"Humanities and Social Sciences Outcomes for the Third Edition: Civil Engineering Body of Knowledge"

*Dr. Jeffrey C. Evans (Bucknell University) with Dr. Michelle Oswald Beiler (Bucknell University)*

**M506•Civil Engineering Division Technical Session 1**

*Moderators: Tanya*

**Papers Presented**

*“Observations from Three Years of Implementing an Inverted (Flipped) Classroom Approach in Structural Design Courses”* by Dr. Shawn P. Gross (Villanova University) and Dr. Eric Musselman P.E. (Villanova University)

*“Can Flipped Classrooms Be Utilized to Effectively Produce Successful, Engaged Engineering Students? A Comparison of an Online vs. Inverted Classroom through a Junior-Level Transportation Engineering Course”* by Mrs. Roxann Mackenzie Hayes P.E. (University of Colorado, Denver)

*“Strategies for Creating Engagement in Civil Engineering Students in Lecture Scenarios”* by Mr. Alan Chong (University of Toronto)

*“Using Isomorphic Questions, the Statics Concept Inventory, and Surveys to Investigate the Benefits of and Student Satisfaction in a Hybrid Learning Environment”* by Mr. Eric Kjolsing P.E. (University of California, San Diego) and Dr. Yael Van Den Einde (University of California, San Diego)



*Playing the “Music Game” with Mr. Alan Chong*

**T106• Civil Engineering Division Technical Session 2**

*Moderators: Tom Lenox and Jim O'Brian*

**Papers Presented**

*“New Civil Engineering Program Criteria: The Rest of the Story”* by Dr. Allen C. Estes (California Polytechnic State University), Dr. Thomas A. Lenox (American Society of Civil Engineers), and Mr. Richard O. Anderson P.E. (Somat Engineering, Inc.)

*“Understanding the New Civil Engineering Program Criteria: Preparing to Prepare the Future Civil Engineer”* by Dr. Kenneth J. Fridley (University of Alabama) and Dr. Thomas A. Lenox (American Society of Civil Engineers)

*“Raising the Bar for Engineering: Why ABET is Necessary but not Sufficient”* by Prof. Stephen J. Ressler (U.S. Military Academy) and Dr. Thomas A. Lenox (American Society of Civil Engineers)

*“Solving the Impasse Among the Engineering Disciplines: Finding Common Ground for the Educational Requirements for Tomorrow’s Professional Engineers”* by Mr. Michael J. Conzett (NCEES) and Mr. Mark William Killgore D.WRE P.E. (American Society of Civil Engineers)



*Tom Lenox emphasizing why ABET is Necessary... but not sufficient.*

**T206• Civil Engineering Division Technical Session 3**

*Moderators: Tom Lenox and Jim O'Brian*

**Papers Presented**

*“Updating the Civil Engineering Body of Knowledge: A Proposed Methodology”* by Dr. Stephen J. Ressler (U.S. Military Academy) and Dr. Thomas A. Lenox (American Society of Civil Engineers)

*“Humanities and Social Sciences Outcomes for the Third Edition: Civil Engineering Body of Knowledge”* by Dr. Jeffrey C. Evans P.E. P.E. (Bucknell University) and Dr. Michelle Oswald Beiler P.E. (Bucknell University)

*“Creativity and Innovation as Part of the Civil Engineering BOK”* by Dr. Stuart G. Walesh P.E. (S. G. Walesh Consulting)

*“From Disciplinary to Multidisciplinary Programs: Educational Outcomes, BOK’s, and Accreditation”* by Dr. Derek Guthrie Williamson (University of Alabama), Dr. Kenneth J. Fridley (University of Alabama), and Dr. W. Edward Back (University of Alabama)



*Stuart Walesh inspiring ways to facilitate creativity and innovation in the CE BOK.*

**Thank you** for taking the time to read this newsletter and for sending me your feedback. If you have suggestions, please call me at (812)877-8318 or send an e-mail to: [lovellmd@rose-hulman.edu](mailto:lovellmd@rose-hulman.edu), Matthew D. Lovell - Editor.

**T406• Civil Engineering Division Poster Session***Moderators:***Papers Presented**

*“Introducing Soil Property Evaluation in Geotechnical Engineering – Some Food for Thought”* by Dr. Gregg L. Fiegel (California Polytechnic State University) and Mr. Nephi Derbidge (Cal Poly, San Luis Obispo, CA)

*“Experiential Learning Opportunities Exploring the Impact of Engineering Solutions – A Collaborative GenEd-Engineering Effort”* by Dr. Natacha Depaola (Illinois Institute of Technology), Prof. Paul R. Anderson (Illinois Institute of Technology), Dr. Roberto Cammino (Illinois Institute of Technology), Bonnie Haferkamp (Illinois Institute of Technology), Prof. Limia Shunia (Illinois Institute of Technology), Prof. Eric M Brey (Illinois Institute of Technology), Dr. Jamshid Mohammadi (Illinois Institute of Technology), and Prof. Fouad Teymour (Illinois Institute of Technology)

*“History and Heritage as a Vehicle for Contemporary Issues”* by Dr. Douglas G Schmucker (University of Utah) and Dr. Steven J. Burian (University of Utah)

*“Refinement and Dissemination of a Digital Platform for Sharing Transportation Education Materials”* by Allie S Peters (Oregon State University), Dr. Shane A. Brown P.E. (Oregon State University), Dr. Kevin Chang P.E. (University of Idaho, Moscow), Katherine N Thorton (Affiliation unknown), Kristen Shinohara (Affiliation unknown), and Dr. Kacey D Beddoes (Oregon State University)

*“Assessing the Ethical Development of Students in an Undergraduate Civil Engineering Course Using a Standardized Instrument”* by Dr. Donald D. Carpenter (Lawrence Technological University), Dr. Janel Sutkus (Carnegie Mellon University), Dr. Cynthia J. Finelli (University of Michigan), Dr. Trevor Scott Harding (California Polytechnic State University), Rod Harris (Affiliation unknown), and Matthew L. Cole (Lawrence Technological University)

*“Intra-Disciplinary Integration in Civil Engineering Education: An Approach to Integrate the Various Civil Engineering Disciplines with the Use of a Design Studio Lab”* by Prof. Michael J. Davidson (Wentworth Institute of Technology), Prof. James Lambrechts P.E. (Wentworth Institute of Technology), Dr. Leonard Anderson (Wentworth Institute of Technology), and Dr. Nakisa Alborz (Wentworth Institute of Technology)

*“Introduction to Sub-Branched Civil Engineering Fields through a Creative Freshmen Civil Engineering Design Course”* by Mr. John E. Shamma (Affiliation unknown) and Dr. Rupa Purasinghe (California State University, Los Angeles)

*“Cross-Departmental Teaming Exercise as a Teaching Tool for Efficient Student Learning and Advancement of Science and Engineering”* by Prof. James L. Hanson (California Polytechnic State University), Dr. Amro El Badawy (Affiliation unknown), Dr. Katherine Chen (California Polytechnic State University), and Dr. Nazli Yessiller (Affiliation unknown)



**T606• Civil Engineering Division Technical Session 4**

*Moderators: Al Estes*

Papers Presented

*“A Metric for Assessment of ABET Student Outcome "b" – Experimental Design and Analyzing the Results”* by Dr. Allen L. Jones PE (South Dakota State University)

*“One School’s Approach to the Additional Area of Science Requirement for Civil Engineering”* by Dr. Robert Hamilton P.E. (Boise State University)

*“STEM Collaboration Assessment Leading to Curriculum Changes and Greater Long-Term STEM Engagement”* by Dr. Ronald W. Welch (The Citadel)

*“Transformation of a Large Civil Engineering Department Curriculum using the ASCE BOK2”* by Dr. Kelly Brumbelow (Texas A&M University), Dr. Debra A. Fowler (Texas A&M University), Dr. James R. Morgan (Texas A&M University), and Whitney L. Anthony (Zachry Department of Civil Engineering, Texas A&M University)



*Ron Welch engaging the audience in curriculum changes and STEM engagement*



**W106•Civil Engineering Division Technical Session 5**

*Moderators: Stephen Burion*

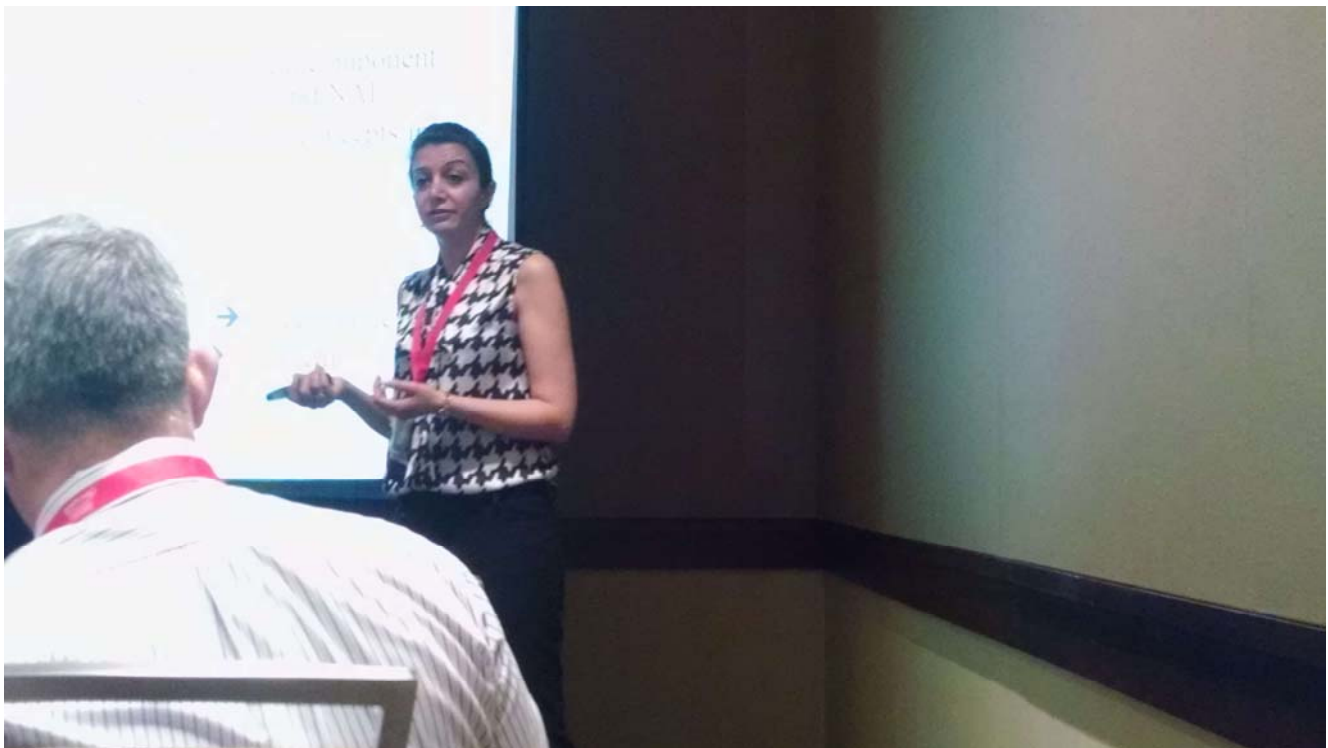
**Papers Presented**

*“Redesign of a Sustainability Experiential Learning Module for Transferability and Portability”* by Claire Louise Antaya Dancz (Arizona State University), Kevin J. Ketchman (Affiliation unknown), Dr. Melissa M. Bilec (University of Pittsburgh), and Prof. Amy E. Landis (Arizona State University)

*“Making Students Cognizant of Sustainability through a Multidisciplinary Term Project in Low-Level Courses”* by Dr. Goli Nossoni (Manhattan College) and Dr. Nicole Leo Braxtan (Manhattan College)

*“Correlation of Personality Type with Student Interest in Sustainability in Civil Engineering”* by Dr. Nicole Leo Braxtan (Manhattan College) and Dr. Goli Nossoni (Manhattan College)

*“Introducing Sustainability into the Civil Engineering Curriculum”* by Dr. Virginia Sisiopiku (University of Alabama, Birmingham), Dr. Robert W. Peters (University of Alabama, Birmingham), and Dr. O. E. Ramadan (University of Alabama, Birmingham)



*Goli Nossoni linking personality type with engagement/interest in sustainability concepts.*

## **W206•Civil Engineering Division Technical Session 6**

*Moderators: Ron Welch*

### **Papers Presented**

*“Refinement of a Concept Inventory to Assess Conceptual Understanding in Civil Engineering Fluid Mechanics”* by Dr. Mary Katherine Watson (The Citadel, The Military College of South Carolina), Amber Renee Mills (The Citadel), Dr. Kevin C. Bower (The Citadel), Dr. Kenneth Brannan (The Citadel), Dr. Michael H. Woo (The Citadel), and Dr. Ronald W. Welch P.E. (The Citadel)

*“Concept Inventory for Engineering Hydrology – Development and Implementation”* by Dr. Isaac W. Wait (Marshall University) and Dr. E. James Nelson (Brigham Young University)

*“Project-Based Learning of Environmental Engineering: A Case Study”* by Dr. M. A. Karim (Kennesaw State University)

*“Cross-Institution Collaborative Learning (CICL) to Connect Water Resources Design with Sustainability Analysis”* by Dr. Steven J. Burian (University of Utah) and Dr. Defne S. Apul (University of Toledo)

**W406•Civil Engineering Division Technical Session 7**

*Moderators: Norm Dennis*

**Papers Presented**

*“Student Communication Improvements during an Industry-Sponsored Civil Engineering Senior Design Course”* by Dr. Ryan Fries P.E. (Southern Illinois University, Edwardsville), Dr. Brad Cross P.E. (Southern Illinois University, Edwardsville), Dr. Jianpeng Zhou (Southern Illinois University, Edwardsville), and Chad Verbais (Southern Illinois University, Edwardsville)

*“Adding an International Senior Design Component into the Civil Curriculum”* by Dr. Dan Budny P.E. (University of Pittsburgh), Mr. Sina Arjmand (University of Pittsburgh), and Dr. David V.P. Sanchez (University of Pittsburgh)

*“What a Systematic Literature Review Tells Us About Transportation Engineering Education”* by Dr. Rhonda K. Young (University of Wyoming), Dr. Kristen L. Sanford Bernhardt (Lafayette College), Dr. David S. Hurwitz (Oregon State University), and Dr. Rod E. Turochy P.E. (Auburn University)

*“Learning Challenges and Opportunities from Seismic Retrofit Capstone Projects”* by Dr. John Paul Smith-Pardo (Seattle University), Dr. Katie Kuder P.E. (Seattle University), and Dr. Nirmala Gnanapragasam P.E. (Seattle University)



*Dan Bundy discussing an international senior design component in a CE curriculum*

**Thank you** for taking the time to read this newsletter and for sending me your feedback. If you have suggestions, please call me at (812)877-8318 or send an e-mail to: [lovellmd@rose-hulman.edu](mailto:lovellmd@rose-hulman.edu), Matthew D. Lovell - Editor.

**W506•Civil Engineering Division Technical Session 8**

*Moderators: Ron Welch*

**Papers Presented**

*“Engagement of Practitioners to Produce Balanced and Fundamentally Well-Grounded Civil Engineers”* by Dr. Isaac L. Howard PE (Mississippi State University)

*“Recruiting and Retaining Women Engineers: An Analysis of a Successful College Program”* by Dr. Andrea L. Welker (Villanova University), Mrs. Kathleen Louise Nazar (Affiliation unknown), and Paul Bonfanti (Villanova University)

*“Opening the Classroom to the Civil Engineering Profession through Web-based Class Projects: Assessment of Student Learning”* by William Greenwood (University of Michigan) and Prof. Dimitrios Zekkos P.E. (University of Michigan, Ann Arbor)

*“A Female-Oriented Capstone Experience: Generations of Engineers Passing the Torch”* by Prof. John V. Tocco J.D. (Lawrence Technological University)



*Andrea Welker bring a strong message of how successful college programs recruit and retain female engineers.*



**W606•Civil Engineering Division Technical Session 9**

*Moderators: Kevin Hall*

**Papers Presented**

*“An Innovative Solution to Teaching the Principle of Virtual Work”* by Mrs. Heather Annette Sustersic (Pennsylvania State University) and Caroline June Klatman (Pennsylvania State University)

*“Exploring the Relationship between Dynamics and Stability”* by William G. Rosenblatt (California Polytechnic State University, San Luis Obispo), Dr. Peter Laursen P.E. (California Polytechnic State University), Dr. Graham C. Archer P.Eng (California Polytechnic State University), and Dr. Cole C. McDaniel (California Polytechnic State University)

*“Impact of Upgrading Equipment for Strength of Materials Labs on Student Perceptions, Motivation, and Learning”* by Harry G. Cooke (Rochester Institute of Technology (CAST)) and Mr. M.D. Abdullah Al Faruque (Rochester Institute of Technology)

*“Active Learning Pedagogies Promoting the Art of Structural and Civil Engineering”* by Dr. Aatish Bhatia (Princeton University) and Peter Christopher Chen (Affiliation unknown)



*Aatish Bhatia with the tough role of being the last presenter for the division bringing (in the opinion of the editor) the best presentation of the week... integrating art in structural and civil engineering.*

**Thank you** for taking the time to read this newsletter and for sending me your feedback. If you have suggestions, please call me at (812)877-8318 or send an e-mail to: [lovellmd@rose-hulman.edu](mailto:lovellmd@rose-hulman.edu), Matthew D. Lovell - Editor.

## Report from The Historian

*Dr. Ronald Welch, P.E., The Citadel*

*ronald.welch@citadel.edu*

### CE Division's Historical Files

The Historian maintains many administrative documents (agendas, minutes, and treasurer reports), past newsletters, and approximately 30 copies of the booklet ASEE Civil Engineering Division – Divisions Chairs 1935-1993. These files are fairly complete for the period from 1975 to the present. There are no documents on file for any date prior to 1975. And the Historian maintains a database of Division Officers and award winners between 1975 and the present – available upon request.

### Inventory of Division Newsletters

Our semiannual newsletters are a valuable source of historical information. In 2006, we scanned our entire inventory of past newsletters into PDF files. This inventory has been continually updated since 2006, and was maintained on a website by our past Webmaster (michael.woo@citadel.edu) at [http://engineering.citadel.edu/ASEE\\_CE\\_Division.htm](http://engineering.citadel.edu/ASEE_CE_Division.htm). This has been moved to the ASEE website.

### ASEE Civil Engineering Division – Divisions Chairs 1935-1993 and Beyond

Single copies of ASEE Civil Engineering Division, Division Chairs, 1935-1993 will be distributed free of charge to any Division member upon request. To supplement Division Chairs, 1935-1993, the Historian has been collecting the pictures and biographies of all Division Chairs for the years since 1993. We have obtained a short biographical sketch and an acceptable head-and-shoulders color picture from MOST (but not all!) of our Past Chairs between 1993 and 2013. The Division is positioned to have a more “dynamic” Division Chairs document – posted to a Division web site.

### Special Thanks to our Division members!

We are blessed by having many long term members who have served our division in so many capacities. As you will note from the trivia questions, many of our past leaders have retired or stopped participating in our annual conference. Please help me congratulate all of our long-standing members who were part of division activities prior to 2003! Let's celebrate our future by asking those that have been participating since 2008 to be recognized! All of us must reach out to our CE faculty peers and get them involved both at the regional and national level of ASEE! Just as Tom Lenox and Marvin Criswell have been the strongest supporters/workers within our division, we must mentor others as they have mentored so many of us to ensure we have a terrific Division with great programs, engaged members, and outstanding leaders. May we all continue to “Raise the Bar!” There is still much work to be done.



## Past Civil Engineering Division Meetings

Year	Annual Meeting	Chair
2014-2015	Seattle, WA	Yusuf Mehta
2013-2014	Indianapolis, IN	Matthew Roberts
2012-2013	Atlanta, GA	M. Asghar Bhatti
2011-2012	San Antonio, TX	Shashi Nambisan
2010-2011	Vancouver, BC, CAN	Kevin Sutterer
2009-2010	Louisville, KY	Norm Dennis
2008-2009	Austin, TX	Dennis Fallon
2007-2008	Pittsburgh, PA	Ron Welch
2006-2007	Honolulu, HI	Kristen Sanford Bernhardt
2005-2006	Chicago, IL	Jim Hanson
2004-2005	Portland, OR	Wilf Nixon
2003-2004	Salt Lake City, UT	Vince Drnevich
2002-2003	Nashville, TN	Steve Ressler
2001-2002	Montreal, Quebec, CAN	J. P. Mohsen
2000-2001	Albuquerque, NM	Sam Clemence
1999-2000	St. Louis, MO	Jim Nau
1998-1999	Charlotte, NC	Alan Prasuhn
1997-1998	Seattle, WA	Tom Lenox
1996-1997	Milwaukee, WI	Howard Dunn
1995-1996	Washington, DC	William Kelly
1994-1995	Anaheim, CA	Tom Mulinazzi
1993-1994	Edmonton, Alberta, CAN	Bob Henry
1992-1993	University of Illinois at Urbana-Champaign, , IL	Fred Beaufait
1991-1992	Toledo, OH	Edward Reitz
1990-1991	New Orleans, LA	M. Dean Parsons
1989-1990	Toronto, Ontario, CAN	William Highter
1988-1989	Lincoln, NE	Noel Tolbert
1987-1988	Portland, OR	Mardith Thomas
1986-1987	Reno, NV	Gerald Seeley
1985-1986	Cincinnati, OH	Colby Ardis
1984-1985	Atlanta, GA	Roger Seals
1983-1984	Salt Lake City, UT	Ron Eck
1982-1983	Rochester Institute of Technology, Rochester, NY	Jim McDonough

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1981-1982	Texas A&M University, College Station, TX	Marvin Criswell
1980-1981	University of Southern California, Los Angeles, CA	Gordon Batson
1979-1980	University of Massachusetts, Amherst, MA	Eugene Chesson
1978-1979	Louisiana State University, Baton Rouge, LA	Donald L. Bender
1977-1978	University of British Columbia, Vancouver, CAN	William J. Wilhelm

## Civil Engineering Division of ASEE

### Trivia for 2015 Meeting in Seattle, WA

#### **30 Years Ago (AY 1984-85)**

- The annual conference was held in Atlanta, Georgia. One of the sessions was titled “Should Every Freshman Be Required to Buy a \_\_\_\_\_?”
- A banquet was held on Tuesday evening. At the banquet, \_\_\_\_\_ entertained the attendees with several quasi-politically-incorrect jokes.

#### **20 Years Ago (AY 1994-95)**

- The annual conference was held in Anaheim, California. \_\_\_\_\_ gave a brief report on the recent ASCE Education Conference in Denver. He reported that an eight person task force is to be named to “*create a new model for civil engineering education that might require a \_\_\_\_\_ for professional practice.*”
- A rap session was conducted on Monday evening in the \_\_\_\_\_ – reportedly some members were loud, boisterous, and had one beer too many.
- A banquet was held on Tuesday evening in the \_\_\_\_\_. At the banquet, Bill Wilhelm entertained the attendees with several quasi-politically-incorrect jokes.

#### **15 Years Ago (AY 1999-2000)**

- The Division Chair was \_\_\_\_\_ of North Carolina State University; the annual conference was held in St. Louis, MO.
- The Sec/Treasurer (K.C. Mahboub) tried to educate the ExCOM about the difference between the “\_\_\_\_\_ Account” and the “\_\_\_\_\_ Account” – he was unsuccessful!
- Dan McGinley edited his last division newsletter; the new editor was \_\_\_\_\_.
- A rap session was conducted on Monday evening at the Morgan Street Brewery; a banquet was held on Tuesday evening at Charlie Gitto’s.

#### **10 Years Ago (AY 2004-05)**

- The Division Chair was \_\_\_\_\_ of University of Iowa; the annual conference was held in Portland, OR.
- Steve Ressler presented two proposals to the ExCOM including (1) a “\_\_\_\_\_” system and (2) a new standing committee named the \_\_\_\_\_ Committee.
- The most controversial paper on the Division’s program (presented by Ernie Smerdon) recommended that ABET \_\_\_\_\_.
- A banquet was held on Tuesday evening the Portland City Grill on the 30<sup>th</sup> floor of the Unico Bancorp Tower.

#### **5 Years Ago (AY 2009-10)**

- The Division Chair was \_\_\_\_\_ of University of Arkansas; the annual conference was held in Louisville, KY.
- The Glenn L. Martin Best paper went to \_\_\_\_\_ and \_\_\_\_\_ with the paper titled: \_\_\_\_\_.
- The session **International Aspects of Civil Engineering** was dominated by presentations from \_\_\_\_\_ (School Name) \_\_\_\_\_.