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Message from the 2024 Division Chair

Dr. Dave Saftner, University of Minnesota Duluth

Civil Engineering Division,

I'm very excited and a little nervous to be serving as our great Division's Chair this year. I have a tough act to follow, thank you very much, Jenny Retherford, for your outstanding leadership! I'm looking forward to working with Mary Katherine Watson in her role as our Program Chair. She'll plan a great program for Montreal, be sure not to miss it. The Division's initiatives this year include another outstanding Annual Meeting and new recruitment efforts. If you have ideas on how the Civil Engineering Division can better serve our



professional community, please let me know. Our Division has made a huge impact on my professional career. The Division's welcoming atmosphere was an essential part in finding my place in academia. Every student that I interact with benefits from the lessons I have learned through my work with the Civil Engineering Division. Thank you for all you do to make our Division such a great group. Please let me know if there's anything I can help with. Thank you and I look forward to seeing you!

Message from the 2024 Program Chair

Dr. Mary Katherine Watson, The Citadel



Hello CE Division members and friends!

I am sincerely looking forward to serving as our Program Chair for the upcoming conference in Montreal, Quebec, Canada. As the new academic year approaches, please consider developing a submission to share your scholarly work as a full paper, work-in-progress report, and/or case study. In particular, I encourage submissions that align with the topics of interest outlined by our standing committees (see Call for Papers). We are also exploring potential collaborations with the Experimentation and Laboratory-Oriented Studies, Public Policy, and Engineering Leadership Development Divisions. If you have a paper that you would like to see in a joint session with one of these divisions, please reach out to me. I am looking forward to a fun, productive conference where we can share ideas and grow as engineering educators!

2024 ASEE Annual Conference

Civil Engineering Division Call for Papers

2025 Call for Papers

The 2025 American Society for Engineering Education (ASEE) Annual Conference will be held in Montreal, Quebec, Canada, June 22 - 25. The Civil Engineering (CE) Division seeks papers to be presented as podium or poster presentations. Accepted papers will be published in the conference proceedings.

We encourage submissions that align with areas of interest outlined below by the Division's five Standing Committees: ASCE Liaison Committee, Effective Teaching, Professional Practice, Instructional Technology, and Educational Policy. In addition, we are planning joint sessions with the Experimentation and Laboratory-Oriented Studies, Mechanics, Engineering and Public Policy, and Engineering Leadership Development Divisions.

The CE Division is accepting three paper types: (1) full papers; (2) work-in-progress (WIP) reports; and (3) case studies, with required elements of each provided in the Author Information section below. Please include the phrase "Work-In-Progress" or "Case Study" in the title of papers to ensure appropriate consideration during the review process and session planning.

Please reference ASEE.org for abstract, draft, and revised draft due dates.

At any time, contact our Program Chair (Mary Katherine Watson, mwatson9@citadel.edu) with questions.

ASCE Liaison Committee

Chair: Leslie Nolen (lnolen@asce.org)

Co-Chair: Aaron Hill (aaron.hill@westpoint.edu)

ASCE Potpourri

We invite papers that cover a range of topics of importance to the civil engineering profession, including:

- CEBOK 4th ed: Documenting the startup process
- Using the CEBOK as a framework for ABET continuous improvement
- Using ASCE Student Symposia to complement program curricular objectives
- Shaping the Future of Engineering Education: Recommendations for Meeting the Profession's Needs (changes implemented after 2019 and 2023 Civil Engineering Education Summits)
- Using "Cities of the Future" in the classroom
- Using current events relevant to civil engineering to excite and recruit students
- Is your civil engineering program growing? What are you doing to recruit more students?
- Preparing civil engineering students for mentored experience after graduation

Instilling leadership and professionalism in the curriculum

Committee on Educational Policy

Chair: Laura Doyle (ldoyle@scu.edu)

Co-Chair: Scott Hamilton (shamilton@ycp.edu)

Closing the Loop: Using Data to Effect Change
Educators have access to a large quantity of data. For example, data is generated through institutional research, departmental assessments, and instructor-level efforts. We invite papers detailing how stakeholders are leveraging such data to inform curricular change, departmental policies, faculty development, and other initiatives.

2024 ASEE Annual Conference

Civil Engineering Division Call for Papers

CE for Good: Equipping Students to Change the World

In recent years, educators have strived to motivate and equip students to “change the world.” For example, curricular and co-curricular experiences have been designed to introduce topics of sustainability, environmental justice, social justice/equity, and others. We invite papers that describe efforts to assess the effectiveness of such experiences at improving student interest in and abilities to affect change.

Committee on Effective Teaching

Chairs: Anthony Battistini (anthony.battistini@angelo.edu)

Co-Chair: Jim Hanson (hanson@rose-hulman.edu)

Cirque du AI

The potential impacts, positive and negative, of artificial intelligence (AI) on engineering education are, perhaps, innumerable. We invite papers that share philosophies, pedagogies, and/or strategies for using AI to enhance student learning and development. Examples include use of AI to: enhance student engagement; prepare students for professional practice; adapt assessments to account for access to AI; and streamline instructor responsibilities.

Instructor 2024

A variety of pedagogies and modalities are prevalent in engineering education. For example: project-based learning, peer teaching, mentor model, gamification, skills-and contract-based instruction, and more. In addition to face-to-face offerings, courses are also available online in both synchronous and asynchronous formats. In many cases, the instructor is no longer the sole source of knowledge. We invite papers that propose, explore, and/or demonstrate the role of the instructor in 2024 and beyond.

Committee on Instructional Technology

Chair: Manish Roy (manish.roy@uconn.edu)

Co-Chair: Carmen Grayson (cagrayson@pvcc.edu)

Innovative Technology for Student Engagement

Technology has become an increasingly powerful tool for transforming engineering education. For example, technology is used to engage with K12 audiences, enhance classroom demonstrations, and widen course modalities. We invite papers that share innovative strategies for using technology to positively impact the student experience.

Committee on Professional Practice

Chair: Kevin Hall (khall@uark.edu)

Co-Chair: Jenny Retherford (jretherf@utk.edu)

CAPSTONE

The capstone experience represents the culmination of the student’s educational program – and serves as a glimpse into the “real world” of practicing engineers. Valid questions, then, include: (1) What is *taught* in capstone courses? (2) *Why* is this content taught in capstone? (3) How are programs defining concepts such as “open-ended” problems (4) Are research-related questions valid topics for capstone? We invite papers from programs that have intentionally designed and implemented “taught content” in the capstone experience – detailing the motivations for doing so and tracking the impact on student learning and achievement.

Pushing the Undergraduate Curriculum to the Edge

One of the hottest topics in engineering is “innovation” - trying to instill in students the drive to be innovative in their approach and solutions to problems. But: What about our approaches to the curriculum? We propose a session to highlight programs that are intentionally seeking to “push” their curricula to the limits – or even beyond – limits set by external stakeholders (e.g., ABET, state laws, etc.). We invite papers from programs that have implemented curriculum changes that redefine traditional civil engineering education and identify the impacts on student learning and achievement. Papers from programs actively pursuing change are also welcome.

2024 ASEE Annual Conference

Civil Engineering Division Call for Papers

Joint Sessions

Pending interest, we will be coordinating joint sessions with the following divisions:

Engineering and Public Policy

Experimentation and Laboratory-Oriented Studies

Engineering and Public Policy

Mechanics Division (Best in 5 Minutes Demonstrations)

Author Information

Paper submission is a two-phase process: (1) abstract submission, review, and acceptance; followed by (2) paper submission, review, and acceptance. The submission and review processes are double blind; please do not include names of authors or institutions before the final submission.

Abstracts are limited to 500 words and should provide a clear statement of the objectives of the work, relevance to the civil engineering community, assessment methods used, and major findings. Authors of accepted abstracts will be invited to prepare full papers for peer review.

Full papers should contain a research question and content contributing to the advancement of engineering education in the civil engineering discipline. All work should clearly demonstrate scholarly effort including details such as relevant background or purpose, applied literature, a deliberate research plan, collection of information or supporting data, and conclusions aligned with the developed research question. Evidence-based reports should build upon existing reference materials, clearly demonstrate new outcomes or findings, be supported by appropriate assessment techniques, and provide evidence aligned with the research question posed.

WIP reports should include a research question, comprehensive literature review, methodology, significance of the work to the civil engineering discipline, and results or anticipated results for the work.

WIP reports should be no more than five pages (excluding references) and include “Work-In-Progress” or “(WIP)” in the title.

Case studies are also accepted by the Division to share scholarly evidence of engagement or pedagogical techniques. Case studies do not necessarily require a research method or assessment strategy. However, the institutional/course context, details of the innovation/intervention, and reflections should be provided to support others in adapting and translating the work. Case studies should be no more than five pages (excluding references) and include “Case Study” in the title.

All submissions should include appropriate citations and bibliographies to situate the work in the existing literature and illustrate impact to civil engineering education.

All papers submitted at the Draft phase should be in final form. Authors should not leave significant content unfinished at this review stage.

Contact Information:

For additional information, please contact:

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2023 ASEE Annual Conference *Civil Engineering Division Award Winners*



ASCE JCEE Outstanding Associate Editor Award

C.J. Riley, Ph.D., P.E., F.ASCE, Oregon Institute of Technology

The *Journal of Civil Engineering Education* presents issues of broad professional interest and diverse views of engineering education, and professional practice. Topics include engineering education at all levels, professional practice issues, ethics, and history/heritage. Old title is the Journal of Professional Issues in Engineering Education and Practice.



ASCE ExCEED Teaching Award

Adrian Biggerstaff, Ph.D., P.E., M.ASCE, United States Military Academy at West Point

The award was established by ASCE's Project ExCEED and the Committee on faculty development to recognize and reward outstanding new faculty. Nominees are judged based on a Letter of Endorsement from their current Department Chair/Dean, Curriculum Vitae, and Teaching Portfolio.



ASCE ExCEED Thomas A. Lenox Leadership Award

David A. Dzombak, Ph.D., P.E., BCEE, BCWRE, Dist.M.ASCE, NAE, Carnegie-Mellon University

The award honors an ASCE member who has shown exceptional leadership and dedication to educational activities within the organization and is presented at the American Society for Engineering Education Annual Conference.



ASEE CED Emerging Leader Fellow Award

Manish Roy, Ph.D., University of Connecticut

The Emerging Leader Fellow Award is awarded to a member of the Division who has been a member of the division for no longer than five years and aspires to a leadership position. The purpose of the award is to recruit and support promising members of the division to participate in and learn more about Division leadership activities.

2023 ASEE Annual Conference *Civil Engineering Division Award Winners*



ASEE CED Stephen J. Ressler Best Paper Award

MAJ Brett Rocha, Kevin McMullen, Ph.D., P.E., and MAJ Michael Rocha, United States Military Academy at West Point, "Say Yes to the Stress: Escape Rooms in Civil Engineering Classrooms"

The Stephen J. Ressler Best Paper Award is given for the best paper on a topic in civil engineering education, presented at the ASEE annual conference and published in the Proceedings in the year prior to the award. Each co-author is awarded an engraved plaque and one complimentary ticket to all CE Division social events at the ASEE annual conference at which the award is presented.



ASEE CED Glen L. Martin Practitioner Service Award

Robert B. Turner, P.E., F.ASCE, City of Spokane Valley

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 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.



ASEE CED George K. Wadlin Distinguished Service Award

Andrea Welker, Ph.D., P.E., The College of New Jersey

The George K. Wadlin Distinguished Service Award is given to a member of the Division for outstanding service in support of civil engineering education and the Civil Engineering Division of ASEE. The recipient is awarded an engraved plaque and a complimentary ticket to all CE Division social events at the ASEE annual conference.



ASEE CED Gerald R. Seeley New Faculty Best Paper Award

Anjali Mulchandani, Ph.D., University of New Mexico, "The role of sociotechnical design challenges in the early formation of civil engineers"

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 Division session at the ASEE Annual Conference. The award consists of a \$500 reimbursement for conference registration. The recipient receives an ASEE certificate and is invited to attend CE Division events.

2023 ASEE Annual Conference
Civil Engineering Division Award Winners

ASCE JCEE Best Technical Paper Award

Michaela LaPatin, P.E., S.M.ASCE, “Engineering in a Crisis: Observing Students’ Perceptions of Macro-ethical Responsibilities during Pandemics and Natural Disasters”

ASCE JCEE Best Cast Study Award

Duo Zhang, Ph.D, “Open-Topic Project-Based Learning and Its Gender-Related Effect on Students’ Exam Performance in Engineering Mechanics”

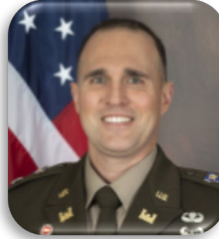
Congratulations to all our award winners!

Civil Engineering Division Officers 2024 - 2025



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Mid-Term Director

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2024 ASEE Annual Conference

Session Summaries

Monday, 6/24/2024

M206 – CIVIL Poster Session

Board 29: A Service-Learning Project for Surveying Students: Establishing Base-Flood Elevations in Special Flood Hazard Area A [\[view paper\]](#)

Dr. Salvatore Marsico (Pennsylvania State University) and Henrique Candido de Oliveira (Pennsylvania State University)

Board 30: The Ecological Choice for Engineering Education: Decisions on Sustainability in Civil Engineering and the Impact of Cognitive Bias [\[view paper\]](#)

Charlotte Robison (Oregon State University) and Cristina G Wilson (Oregon State University)

Board 31: Case Study: Reimagining a Design Project with 3D-printed Concrete [\[view paper\]](#)

Afeefa Rahman (University of Illinois Urbana-Champaign), Casey J Rodgers (University of Illinois Urbana-Champaign), and Prof. Jacob Henschen (University of Illinois Urbana-Champaign)

Board 32: Designing a Graduate Course in Sustainable Transportation and Human Rights with a Student-Centered Approach [\[view paper\]](#)

Leana Santos (University of Connecticut) and Dr. Davis Chacon-Hurtado (University of Connecticut)

Board 33: Enhancing Self-Efficacy Among Transportation Engineering Undergraduates Using Hands-On Pedagogy. [\[view paper\]](#)

Mr. Adebayo Iyanuoluwa Olude (Morgan State University), Mr. Pelumi Olaitan Abiodun (Morgan State University), and Dr. Oludare Adegbola Owolabi P.E. (Morgan State University)

Board 34: Equity Diversity and Inclusion (EDI) and Entrepreneurial Mindset Learning (EML) in Core Engineering Classes: A Case Study in Statics [\[view paper\]](#)

Dr. Ghina Absi (Vanderbilt University) and Emily Williams Van Schaack (Vanderbilt University)

Board 35: Essentials of the Nurse + Engineer: Defining Public Value for Civil Engineers [\[view paper\]](#)

Dr. Daniel B Oerther P.E. (Missouri University of Science and Technology) and Sarah Oerther (Affiliation unknown)

Board 36: Exploration of the Impact of Brief Mindfulness Practices on Student Attention and Focus in Civil-Engineering Design Classes

Dr. Priyantha Wijesinghe (University of Vermont), Holly Ann Buckland Parker (University of Vermont), and Ethan Stein (University of Vermont)

Board 37: Integration of Project-based Learning in a Surveying Course [\[view paper\]](#)

Dr. Fahmida Rahman (Rowan University), Aaron Nolan (Rowan University), Dr. Kauser Jahan (Rowan University), and Eric DuBois (Affiliation unknown)

Board 38: Student-led Curriculum Development: Incorporating Mechanics of Materials Students in the Design of Statics Curricula (Work in Progress) [\[view paper\]](#)

Dr. Matthew Stephen Barner (University of Portland), Mr. Sean Lyle Gestson (University of Portland), and Audrey Dewey (Affiliation unknown)

Board 39: Student Opinions on Example Problem 'Solution Walkthroughs' for Civil Engineering Topics [\[view paper\]](#)

Dr. Joel Lanning (University of California, Irvine)

Board 40: Work in Progress: Generative AI to Support Critical Thinking in Water Resources Students [\[view paper\]](#)

Sixto Duran Ballen (Affiliation unknown), Daniel Eduardo Abril (Affiliation unknown), and Dr. Miguel Andres Guerra (Universidad San Francisco de Quito USFQ)

Board 41: Work in Progress: Unlocking Student Success: The Power of Public Speaking AI Software in Engineering Education [\[view paper\]](#)

Mrs. Rachelle L Beckner (Clemson University) and Dr. Robert M O'Hara (Clemson University)

M406 – Effective Teaching 1



Moderators: Dr. Monica Palomo, P.E., and Dr. Anthony Battistini

Creating a Pipeline of Civil Engineering Students Through Innovative Summer Course [\[view paper\]](#)

Jose Capa Salinas (Purdue University) and Dr. Morgan R Broberg (Purdue Applied Research Institute)

2022 ASEE Annual Conference

Session Summaries

Need for Strengthening the Transferability Skills in Undergraduate Civil Engineering Students [[view paper](#)]

Dr. Roshina Babu (University of Utah) and Prof. Praveen A (APJ Abdul Kalam Technological University Kerala)

Pedagogical Changes to a Capstone Course to Foster Refinement of Professional Skills [[view paper](#)]

Dr. Corinna Marie Fleischmann P.E. (United States Coast Guard Academy), Prof. Hudson V. Jackson P.E. (United States Coast Guard Academy), and Dr. Kassim M. Tarhini P.E. (United States Coast Guard Academy)

Syllabi Indicators of Learning Community Supports in Civil Engineering Classrooms [[view paper](#)]

Jessica Momanyi (William Paterson University), Dr. Grace Panther (University of Nebraska, Lincoln), and Prof. Heidi A. Diefes-Dux (University of Nebraska, Lincoln)

Work-In-Progress: What Goes into an Engineering Decision: An Infrastructure Decision-Making Game for Exploratory Equity Learning (Phase 2 Multiple Stakeholders) [[view paper](#)]

Abigail Louise Beck (University of Illinois Urbana-Champaign), Prof. Eun Jeong Cha (University of Illinois Urbana-Champaign), Luc Paquette (University of Illinois Urbana-Champaign), and Eric G Shaffer (University of Illinois Urbana-Champaign)

Tuesday, 6/25/2024

T206 – Instructional Technology 1



Moderators: Dr. Gary A Jordan and Dr. Manish Roy

A Flipped Classroom Setting Trial in GIS Course [[view paper](#)]

Dr. Namita Shrestha (Rose-Hulman Institute of Technology) and Dr. Timothy Chow (Rose-Hulman Institute of Technology)

A Methodology to Replicate Cutting-Edge Surveying Equipment Using Cost-Sensitive Devices to Promote Innovative Mapping Solutions in Undergraduate Engineering [[view paper](#)]

Dr. Salvatore Marsico (Penn State University), Dr. Henrique Oliveira (University of Campinas), and Mrs. Débora Paula Simões (University of Campinas)

[Case Study] "Any Given Classroom": Seemingly Small Deliberate Moves (48 Inches) Gets You Big Space Gains (1,100 square feet) [[view paper](#)]

Major Joseph Speight P.E. (United States Military Academy), Major Brett Rocha P.E. (United States Military Academy), and Dr. Brock E. Barry P.E. (United States Military Academy)

Infrastructure Live! A Hands-On Electric Power Classroom Experience Requiring a Single Rolling Chalkboard [[view paper](#)]

Major Kevin Taylor Scruggs (United States Military Academy), Mr. Scott M. Katalenich P.E. (United States Military Academy), and Dr. James Ledlie Klosky PE (United States Military Academy)

Student Perceptions of Artificial Intelligence and Relevance for Professional Preparation in Civil Engineering [[view paper](#)]

Dr. Mary Kay Camarillo P.E. (University of the Pacific), Dr. Luke S. Lee P.E. (University of the Pacific), and Ciara Swan MFA-W (University of the Pacific)

T306 – ASCE Collaborations



Moderators: Ms. Leslie Nolen and Dr. Scott R Hamilton P.E.

2022 ASEE Annual Conference

Session Summaries

A Comparison of Civil Engineering Curriculum and EAC-ABET Civil Engineering Program Criteria [\[view paper\]](#)

Dr. Matthew K Swenty P.E. (Virginia Military Institute) and Dr. Brian J. Swenty P.E. (University of Evansville)

Advancing the ASCE ExCEED Teaching Workshop: A Multi-Year, Multi-Stage Evaluation Process and Implementation Plan [\[view paper\]](#)

Dr. Daniel Ivan Castaneda (James Madison University), Afeefa Rahman (University of Illinois Urbana-Champaign), Casey J Rodgers (University of Illinois Urbana-Champaign), Patricia Clayton (Wake Forest University), Mr. Dion Karean Coward (Affiliation unknown), Prof. Jacob Henschen (University of Illinois Urbana-Champaign), Dr. Tanya Kunberger P.E. (University of Pittsburgh at Johnstown), Ms. Leslie Nolen (American Society of Civil Engineers), Dr. Pinar Omur-Ozbek (Colorado State University), Dr. Monica Palomo (California State Polytechnic University, Pomona), Carolyn M Rodak (State University of New York, Polytechnic Institute), and Dr. David A Saftner (University of Minnesota Duluth)

Designing a New Civil Engineering Curriculum to Prepare Tomorrow's Engineer [\[view paper\]](#)

Dr. Elizabeth G. Jones (University of Nebraska, Lincoln)

How Do We Take Full Advantage of the Academic Benefits of Student Competitions [\[view paper\]](#)

Carly Woelfel (United States Military Academy), Major Brett Rocha P.E. (United States Military Academy), Dr. Kevin Francis McMullen (United States Military Academy), Major Kevin Taylor Scruggs (United States Military Academy), Dr. Talal Salem (United States Military Academy), and Col. Aaron T Hill Jr. P.E. (United States Military Academy)

Integrating Professional Credentialing in Sustainability into Civil Engineering Curriculum: A Case Study [\[view paper\]](#)

Timmy Elwin Kipfmiller III (United States Military Academy), Alexander Tucker (United States Military Academy), Charles James Richardson Reeves (United States Military Academy), Nicholas Ryan Parker (United States Military Academy), and Lt. Col. Scott M. Katalenich (United States Military Academy)

T406. Effective Teaching 2



Moderators: Dr. Carles Riley P.E., and Ms. Morgan R. Broberg

Does Congruency Between Homework and Test Problems Improve Test Performance? [\[view paper\]](#)

Dr. Jacqueline Jenkins (Cleveland State University)

Equation Sheets: Are We Helping or Hurting our Students? [\[view paper\]](#)

Lt. Col. William Graves (United States Military Academy) and Dr. Gary A Jordan (United States Military Academy)

Incorporating Evidence-based Teaching Practices in an Engineering Course to Improve Learning [\[view paper\]](#)

Julie Anne Wildschut (Calvin University)

Using Start-Up Questions to Effectively Prepare Engineers for the Fundamentals of Engineering Exam [\[view paper\]](#)

Dr. Matthew K Swenty P.E. (Virginia Military Institute), Dr. Benjamin Z. Dymond (Northern Arizona University), Dr. Kacie Caple D'Alessandro (Virginia Military Institute), Dr. Joshua T. Hewes P.E. (Northern Arizona University), Dr. Robin Tuchscherer (Northern Arizona University), Dr. Rebekah Martin (Virginia Military Institute), and Dr. Charles D Newhouse P.E. (Virginia Military Institute)

What's in a Grade? Current Practices and Strategies to Evaluate Learning in Engineering Courses [\[view paper\]](#)

Dr. Scott R Hamilton P.E. (York College of Pennsylvania), Dr. Camilla M. Saviz P.E. (University of the Pacific), Dr. David A Saftner (University of Minnesota Duluth), and Dr. Tanya Kunberger P.E. (University of Pittsburgh at Johnstown)

2022 ASEE Annual Conference Session Summaries

T426B – Joint Session: Experimentation and Laboratory-Oriented Studies Division (DELOS) and Civil Engineering Division (CIVIL)



Moderators: Mr. Scott M. Katalenich, P.E., and Dr. Natasha Smith, P.E.

Integrating a Design Project to Bridge Experiment for Statics learning in General Engineering Education [\[view paper\]](#)

Dr. Yingxiao Song (Muskingum University)

Do Independent Studies Help Students Learn Better? A Case Study on Student Perception and Attitude [\[view paper\]](#)

Dr. M A Karim (Kennesaw State University), Dr. Youngguk Seo (Kennesaw State University), and Parth Bhavsar (Kennesaw State University)

Impact of Learning Transfer-focused Lab Writing Modules to the Writing Instructional Materials by Engineering Lab Instructors [\[view paper\]](#)

Dr. Dave Kim (Washington State University, Vancouver), Dr. Charles Riley P.E. (Oregon Institute of Technology), Dr. John D Lynch (Washington State University), Dr. Ken Lulay P.E. (University of Portland), and Dr. Sean St. Clair (Oregon Institute of Technology)

The Implementation and Assessment of the Effectiveness of Peer-Teaching Instructional Technique in Lecture and Laboratory Courses [\[view paper\]](#)

Dr. Simon Thomas Ghanat P.E. (The Citadel), Dr. Ronald W. Welch P.E. (The Citadel), and Dr. William J. Davis P.E. (The Citadel)

T506A. Professional Practice 1



Moderators: Dr. Kristen L. Sanford, P.E. and Dr. Matthew D. Lovell, P.E.

Exploring Civil Engineering and Construction Management Students' Perceptions of Equity in Developing Infrastructure Resilience [\[view paper\]](#)

Miss Rubaya Rahat (Florida International University) and Mr. Mohamed ElZomor P.E. (Florida International University)

Navigating Ethical Dilemmas in Civil and Environmental Engineering: Ethical Case Studies Based on Experiences of Early-Career Engineers [\[view paper\]](#)

Dr. Pinar Omur-Ozbek (Colorado State University), Dr. Rebecca A Atadero (Colorado State University), Dr. Amir Hedayati Mehdiabadi (University of New Mexico), Chika Winnifred Agha (Colorado State University), and Carlotta Duenninger (Affiliation unknown)

Social Justice within Civil and Environmental Engineering: Curricular Interventions and Professional Implications [\[view paper\]](#)

Dr. Rebekah Oulton (California Polytechnic State University, San Luis Obispo)

Teaching First-year Students to See Infrastructure Issues as Equity Issues [\[view paper\]](#)

Dr. Kristen L. Sanford P.E. (Lafayette College), Dr. Angela R Bielefeldt (University of Colorado Boulder), and Dr. Rhonda K Young (Gonzaga University)

The role of Socio-technical Design Challenges in the Early Formation of Civil Engineers [\[view paper\]](#)

Sydney Donohue Jobe (University of New Mexico), Ms. Madalyn Wilson-Fetrow (University of New Mexico), Mr. Ruben D. Lopez-Parra (Purdue University), Paris Eisenman (University of New Mexico), Ethan Kapp (University of New Mexico), Carl Lyle Abadam (University of New Mexico), Dr. Vanessa Svihla (University of Texas at Austin), and Prof. Anjali Mulchandani (University of New Mexico)

2022 ASEE Annual Conference

Session Summaries

Wednesday 6/26/2024

W106B – Effective Teaching 3



Moderators: Dr. Rhonda K. Young, P.E. and Dr. Sean St. Clair, P.E.

Case Study: Civil Engineering Student Mental Health and Watching Football? [\[view paper\]](#)

Dr. Angela R Bielefeldt (University of Colorado Boulder)

Creating a CIT-E Framework for Addressing Infrastructure Inequities through the Use of Case Studies [\[view paper\]](#)

Dr. Nicholas Tymvios (Bucknell University), Dr. Claudia Mara Dias Wilson (New Mexico Institute of Mining and Technology), Dr. Corrie Walton-Macaulay (Saint Martin's University), Dr. Moses Tefe (Norwich University), Dr. Scott R Hamilton P.E. (York College of Pennsylvania), Dr. Xiaomei Wang (Brigham Young University), Gloria Faraone (Affiliation unknown), and Thais Alves (San Diego State University)

Fostering Student Ownership and Active Learning through Student-Led Group Lectures in a Civil Engineering Materials Course [\[view paper\]](#)

Dr. Shenghua Wu (University of South Alabama) and Basant Bhatt (University of South Alabama)

Neurodivergent Student Characteristics and Engineering Course Outcomes [\[view paper\]](#)

Dr. Manish Roy (University of Connecticut), Dr. Christa L. Taylor (University of Connecticut), and Dr. Maria Chrysochoou (University of Connecticut)

Optimizing Co-Teaching Strategies for Success in a Neuroinclusive Large Mechanics of Materials Class [\[view paper\]](#)

Dr. Sarira Motaref (University of Connecticut) and Dr. Alexandra Hain (University of Connecticut)

W306 – Professional Practice 2



Moderators: Dr. Joel Sloan, P.E., and Dr. Andrea L. Welker, P.E.

Application of Employee Appraisal Forms to Facilitate Assessment of Student Outcomes in the Engineering Capstone Course (Work-In-Progress) [\[view paper\]](#)

Major Brett Rocha (United States Military Academy) and Mr. Scott M. Katalenich P.E. (United States Military Academy)

By the Book: Is Induced Travel Missing from Transportation Engineering Textbooks? [\[view paper\]](#)

Prof. Kelcie Mechelle Ralph (Rutgers, The State University of New Jersey) and Ellen Oettinger White (State University of New York College of Environmental Science and Forestry)

Leveraging the ASCE ExCEED Model to Design a Course on Sustainable Infrastructure Development [\[view paper\]](#)

Capt. Matthew Glavin (United States Military Academy), Capt. Robert Hume (United States Military Academy), Lt. Col. Scott M. Katalenich (United States Military Academy), and William Graves (United States Military Academy)

Prevention Through Design (PtD): Addressing Engineers' Knowledge Gaps [\[view paper\]](#)

Dr. Ahmed Jalil Al-Bayati (Lawrence Technological University), Dr. Elin Jensen (Lawrence Technological University), and Karim Bazzi (Affiliation unknown)

Re-designing a Technical Communications Course to Address Scaling Challenges [\[view paper\]](#)

Dr. Jennifer Retherford (University of Tennessee at Knoxville) and Dr. Sarah Mobley (University of Tennessee at Knoxville)

2022 ASEE Annual Conference

Session Summaries

W406. Instructional Technology 2



Moderators: Ann C. Sychterz, and Dr. Jennifer Retherford, P.E.

Developing Augmented Reality Applications to Help Engineering Students Learn Spatial Structural Engineering Concepts [\[view paper\]](#)

Ayatollah S Yehia (University of Virginia), Prof. Devin K. Harris (University of Virginia), and Dr. Diana Bairaktarova (Virginia Polytechnic Institute and State University)

Development of the AISC "Days of Steel" Video Series to Engage Students Through Fun Online Videos (Case Study) [\[view paper\]](#)

Dr. Anthony Battistini (Angelo State University)

Exploring Educational Needs and Practices in Structural Analysis [\[view paper\]](#)

Dr. Joel Lanning (University of California, Irvine), Dr. Matthew W Roberts (Southern Utah University), and Prof. Brandon K Wiggins (Southern Utah University)

Software Applications and Pedagogical Strategies for Improving Student Understanding of Structural Analysis and Dynamics (Works-In-Progress) [\[view paper\]](#)

Dr. Tamecia R. Jones (North Carolina State University at Raleigh) and Prof. Kevin Han (North Carolina State University at Raleigh)

Tangible Digital Twins: Experiencing Structural Mechanics by Inducing the Sense of Stiffness via Hand Gestures in Virtual Reality [\[view paper\]](#)

Kaiyuan Wang (University of Illinois Urbana-Champaign), Mr. Yuxiang Zhao (University of Illinois at Urbana-Champaign), Ishfaq Aziz (University of Illinois Urbana-Champaign), and Dr. Mohamad Alipour (University of Illinois Urbana-Champaign)

W506A – Effective Teaching 4



Moderators: Dr. Tonya Lynn Nilsson, P.E., and Dr. Haritha Malladi

A Case Study on Using a Mini Project in Structural Material Testing to Address ABET Student Outcomes [\[view paper\]](#)

Dr. Lekshmi Sasidharan (University of Arkansas), Tariq Sweidan (University of Arkansas), Ms. Abigail Mayhan (University of Arkansas), Pratik Ghimire (University of Arkansas), and Suman Kumar Mitra (University of Arkansas)

Mass Timber Structural Engineering Curriculum: Assessment of Current Teaching and Resource Needs [\[view paper\]](#)

Cade Person (Michigan State University), Christiana Kiesling (Michigan State University), and George H. Berghorn (Michigan State University)

Relationships Between Student Self-Assessment Ability and Performance [\[view paper\]](#)

Col. Joel Sloan (United States Air Force Academy) and Timothy Frank (United States Air Force Academy)

Sticking Points: Reasons Why Civil Engineering Students Make Errors Solving Engineering Mechanics Problems [\[view paper\]](#)

Major Brett Rocha (United States Military Academy), Dr. Kevin Francis McMullen (United States Military Academy), Dr. Adrian Owen Biggerstaff (United States Military Academy), Capt. Robert Hume (United States Military Academy), and Dr. Eric B. Williamson P.E. (United States Military Academy)

That Was a Blast! Air Cannons as an Introduction to Blast Loading of Structures [\[view paper\]](#)

Dr. Charles Riley (Oregon Institute of Technology)

Thank you very much for your contribution!

The Historian's Report

Important Notes

Past Division Chair Highlight

The 2024 Past Division Chair Highlight focused on Dr. Lewis K. Downing, Chair 1959-60. Dr. Downing was the first African-American chair of the Civil Engineering Division. A one-page document detailing Dr. Downing's accomplishments was prepared and distributed to the Division Membership.

Civil Engineering Division's Historical Files

The Historian maintains many Division documents (agendas, minutes, treasurer reports, and past newsletters). 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. The Historian also maintains a database of Division Officers and award winners between 1975 and the present – available upon request. The entire volume of historical documents were scanned in 2021 and filed in the Division's cloud-based storage. That material is updated annually. This material is available for Division members to review upon request. An attempt is made each year to update the Civil Engineering Division page of the ASEE website with the latest information.

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The Historian (2020 -)
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Historian's Report

Highlighted Division Chair

Civil Engineering Division of ASEE

2023 Highlighted Division Chair – Dr. Lewis K. Downing



Dr. Lewis K. Downing was Chair of the American Society for Engineering Education (ASEE), Civil Engineering Division from 1959 to 1960.

Lewis King Downing was born in Roanoke City, Virginia in 1896. He was a 1916 graduate from Johns C. Smith University and a 1921 graduate from Howard University where he earned a Bachelor of Science degree in civil engineering. He then went on to attend the Massachusetts Institute of Technology, where he was the first African American graduate of the Sloan School of Management undergraduate program.

In 1924 he joined the faculty at Howard University as an Instructor of civil engineering in the school of engineering and architecture. In 1926 he was promoted to Assistant Professor and Acting Dean. He received a Master of Science in Engineering degree from the University of Michigan in 1932. He was promoted to the academic rank of Professor and Dean of the school of engineering and architecture at Howard University where he remained until his retirement in 1964.

Under his leadership, Howard University became the first historically black college or university to establish a fully accredited engineering program. Enrollment increased significantly and at the time of his retirement Howard University had graduated more African American engineers than all of the nation's other colleges and universities combined, while more than 500 companies were recruiting graduates of Howard University's engineering program.

Dr. Downing received many honors including two honorary degrees: ScD from Johnson C. Smith University in 1953 and ScD from Virginia State College in 1959. He is believed to be the first African American inducted into Tau Beta Pi. He was elected a Fellow of the American Society of Civil Engineers. Howard University named their engineering building after Dr. Downing for his tireless work to create opportunities in engineering and architecture for students of color.

Dr. Lewis K. Downing passed away on October 19, 1967.

Resources: <https://www.tbp.org/other/Downing.pdf>.

American Society for Engineering Education, Civil Engineering Division, Division Chairs, 1935-1993.

Historian's Report

Past Conferences

Year	Annual Meeting	Chair
2024-2025	Montreal, Quebec, Canada	David Saftner
2023-2024	Portland, OR	Jennifer Retherford
2022-2023	Baltimore, MD	Tonya Nilsson
2021-2022	Minneapolis, MN	Matthew Lovell
2020-2021	Long Beach, CA (Virtual)	Steve Burian
2019-2020	Montreal, CA (Virtual)	Charles J. Riley
2018-2019	Tampa, FL	Andrea Welker
2017-2018	Salt Lake City, UT	Sean St. Clair
2016-2017	Columbus, OH	Brock Barry
2015-2016	New Orleans, LA	Kevin Hall
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

Historian's Report

Past Conferences

Year	Annual Meeting	Chair
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
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