

2022 ASEE Annual Conference & Exposition

Civil Engineering Division Call for Papers

Minneapolis, MN | June 26-30, 2022

The **CIVIL ENGINEERING (CE) DIVISION** seeks papers for presentation at the 2022 ASEE Annual Conference and Exposition to be held in Minneapolis, MN, June 26-29, 2022. Paper submission is a two-step process: (1) Abstract submission, review, and acceptance; followed by (2) Paper submission, review, and acceptance. The submission and review process is double blind; please do not include names of authors or institutions within the title or body of the Abstract. Abstracts are limited to 500 words and should provide a clear statement of the objectives of the work with the research question(s) addressed, its 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. The CE Division invites papers on topics listed below, organized into sessions proposed by the Division's Standing Committees.

ASCE Liaison Committee

Leslie Nolen; lnolen@asce.org, 703-295-6106

Scott Hamilton; shamilton@ycp.edu

Educational & Professional Issues of Strategic Importance to the Civil Engineering Profession and ASCE. The purpose of this session is to explore several of the key educational and professional issues of strategic importance to the civil engineering profession that are being addressed (or should be addressed) by ASCE and/or other civil engineers. These issues might include, but are not limited to, the following:

- The New Civil Engineering Program Criteria for 2024: Update
- The "Engineer Tomorrow" Initiative: Current Status & Future Direction
- Communicating the CEBOK to the Civil Engineering Profession
- Empowered to Innovate: The Civil Engineering Education Summit Action Plan
- Engaging practitioners in educational policy and direction
- Using the Civil Engineering Program Criteria Commentary as a Department Chair
- What Motivates Programs to Accredit Their Master's-Level Engineering Programs.
- Does ASCE Need Masters-Level Program Criteria?
- Issues of Diversity, Equity, & Inclusion in the Civil Engineering Profession.
- How Relevant is Professional Licensure to the Next Generation of Civil Engineers?

Committee on Effective Teaching

Chair: Anthony Battistini, anthony.battistini@angelo.edu, 609-774-4413

Co-Chairs: Gerald "Jerry" Wang, gjwang@cmu.edu

The New Normal of Teaching Effectiveness – What did we learn during COVID that resulted in more effective teaching? What did we keep from the COVID experience when we went "back to normal"? What are universities doing to capitalize on this information, including but not limited to, workshops, instructor resources, etc. and what are the effects of these efforts?

Huh? What did you say? Practicing engineers must effectively communicate with colleagues, agencies, clients and the general public. This session offers effective ways to develop and improve communication skills of engineering students. Techniques for integrating these skills in

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technical courses such that these skills are not neglected during the technically heavy upper-division courses are of interest.

Best in 5 Minutes: Demonstrating Interactive Teaching Activities. This interactive and open-format session invites short papers describing your most impactful classroom moments including demonstrations, student activities, or experiences. In this unique session, papers do not require a research question, data or conclusion. Presentations should be short (<5 minutes) and should include an interactive component as session attendees will have the opportunity to circulate the room and experience your impactful teaching activity. The demonstrations, accompanied with pedagogy-rich papers, could include physical models, interactive videos, or embedded technology. All civil-engineering sub-disciplines and related fields are welcome!

Committee on Professional Practice

Chair: Jakob Bruhl, Jakob.bruhl@westpoint.edu, 845-938-3131

Co-Chairs: Paul Leidig, pleidig@purdue.edu

Exploring Connections Between Academia and Practice. This interactive panel discussion is a call to practitioners and to encourage co-created papers by academics and practitioners. Session topics would focus on connections between academia and practice including but not limited to: capstone projects, mentoring, ASCE student chapters, course development, etc.

Innovative Connections to and Through Professional Practice. This session seeks research papers on topics broadly discussing innovative ways to engage practitioners (beyond typical paths of ASCE student chapters and capstone programs), support and engage engineers in their transition to professional practice, and drive life-long learning and growth as practitioners.

Committee on Instructional Technology

Chair: Shinae Jang, shinae.jang@uconn.edu, (860) 486-0540

Co-Chairs: Matt Lovell, lovellmd@rose-hulman.edu

Engagement in the Cloud: Reaching Students with Technology. The proliferation of technologies that occurred during the pandemic has given us many ways to reach our students. This session is intended to spotlight particularly effective technologies as well as the diverse ways we attempted to connect with students in the remote environment:

- Virtual collaboration tools
- Simulated experiments, AR/VR tools
- At-home experiments and kits
- Synthetic service-learning

Papers might also explore the challenges that emerged with multiple platforms or tools and the impact of too much technology on our students with respect to social engagement, cognitive overload, and challenges with distraction.

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The new normal - enduring technology improvements in the classroom. The rapid transition to virtual learning experiences due to the COVID-19 pandemic resulted in some positive side effects: faculty were required to become much more adept at implementing technology into their classrooms. While not all of these interventions were successful, some activities proved to be superior at engaging students in the classroom. This session calls for papers highlighting effective implementation of technology in the CE classroom. Examples can include hybrid support - facilities, hardware, software, and implementation to streamline hybrid delivery; new tools for assessment of student learning in the remote and online environment; and structured organization of virtual content in the remote world. Authors are encouraged to include evidence of the effectiveness of these new approaches.

Committee on Educational Policy

Chair: Anuja Kamat, kamata@wit.edu, 605-929-1124

Co-Chairs: Kristen Sanford, sanfordk@lafayette.edu

What are the boundaries of the classroom? Papers in this session will address topics such as:

- Who can engage in the virtual classroom (e.g. registered students versus others in proximity to the session).
- How much control faculty can have in the physical environment of those participating in virtual lessons.
- How the politicizing of higher education impacts classroom climate and classroom experiences.
- Challenges and opportunities that exist around the politicizing of higher education.
- How governmental policies impact Civil Engineering education.
- Other topics focused on overcoming / addressing classroom boundaries

Integration of Engineering and/or Technical Rigor with Diversity, Equity, Inclusion and Justice. Papers in this session will address topics such as:

- Use of assessment methods such as labor-based grading, contract grading, upgrading, etc. to improve classroom equity and learning outcome achievement.
- Curricular and instructional practices that improve technical learning outcome achievement and classroom equity.
- How do Diversity, Equity, Inclusion, and Justice (DEIJ) impact classroom climate?
- How to incorporate DEIJ in the curriculum (issues, particular academic interventions, best integration practices)?
- How to incorporate DEIJ in extra-curricular activities (student chapters activities, competitions, outreach activities, faculty service, others)?
- How to do the assessment of DEIJ in the classroom, or program?
- Other topics that address DEIJ in Civil Engineering

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Important Dates:

- Abstract Submission: Open – October 11, 2021
- Abstract Submission: Due – November 8, 2021
- Draft Paper Due – February 7, 2022
- Revised Paper Due – March 28, 2022
- Final Paper Due – May 16, 2022

Please note that the Civil Engineering Division requires that oral and poster presenters publish their papers in the ASEE conference proceedings. Additionally, the papers and presentations are expected to contain a research question, assessment methods and results, unless otherwise noted in the session description. If the paper is a “Work-in-Progress” for a designated session, please include that in the title.

For additional information, please contact:

CE Division 2021-2022 Division Chair

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