

## Call for Papers

The **CIVIL ENGINEERING (CE) DIVISION** seeks papers for presentation at the 2024 ASEE Annual Conference and Exposition to be held in Portland, Oregon, June 23-26, 2024. At any time, contact our Program Chair (David Saftner, [dsaftner@d.umn.edu](mailto:dsaftner@d.umn.edu)) with questions.

### Major Takeaways:

1. The CE Division seeks papers supporting our five Standing Committees: ASCE, Effective Teaching, Professional Practice, Instructional Technology, and Educational Policy.
2. The CE Division is excited to offer engaging and active sessions. Authors are encouraged to review the details included herein to recognize some unique sessions being planned for the upcoming conference.
3. Work-in-progress and case study papers are accepted in our Division, but **should be labeled in the paper's title** so review strategies can be adjusted accordingly.

## Author Information

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 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. The CE Division invites papers on topics proposed by the Division's Standing Committees.

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. Work-in-progress (WIP) reports should include comprehensive background and literature reviews, methodology for the research question identified, significance of the work to the civil engineering discipline, and results or anticipated results for the work. Case studies are also accepted by the Division and work sharing scholarly evidence of engagement or pedagogical techniques, but without a research method or assessment strategy, are welcomed.

Please include "Work-In-Progress" or "(WIP)" in your paper's title to improve the quality of review for work with limited or no assessment data.

Include "Case Study" in your paper's title for papers without assessment plans, but with relevant scholarly information and detailed summaries of outcomes or observations.

## **ASCE Liaison Committee**

Leslie Nolen (lnolen@asce.org)

Scott Hamilton (shamilton@ycp.edu)

Aaron Hill (aaron.hill@westpoint.edu)

### ***Resilience: Education of students and professional approaches***

This session will explore several of the important issues that are being addressed (or should be addressed) by ASCE. Authors are not required to be representatives of an ASCE organizational unit. Topics might include, but are not limited to, the following:

- Intersection between justice, equity, diversity, and inclusion (JEDI) and the new ABET CE Program Criteria. How to incorporate JEDI into the engineering curriculum?
- How to incorporate sustainability, risk, and resilience into the engineering curriculum?
- How to incorporate professional ethics into the engineering curriculum?
- Best practices for both domestic and international approaches for JEDI in light of the new ABET CE Program Criteria.

### ***Innovations in the curriculum***

This session will explore several of the important issues that are being addressed (or should be addressed) by ASCE. Authors are not required to be representatives of an ASCE organizational unit. Topics might include, but are not limited to, the following:

- Update on actions recommended by the 2019 Educational Summit
- Using artificial intelligence and ChatGPT in practice and in education
- How to increase the “cool” quotient of civil engineering and increase enrollments
- Impact of ACSE’s Future World Vision in our classrooms.
- How do we take full advantage of the academic benefits of student competitions?

### ***Faculty development following the pandemic***

This session will explore several of the important issues that are being addressed (or should be addressed) by ASCE. Authors are not required to be representatives of an ASCE organizational unit. Topics might include, but are not limited to, the following:

- Changes to the ASCE Excellence in Civil Engineering Education (ExCEED) Teaching Workshop (ETW) following the external review. What was the goal of the changes and what has been accomplished?
- Comparison of in-person and remote ETW?

## **Committee on Educational Policy**

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

Co-Chairs: Gary Jordan (gary.jordan@rose-hulman.edu), Tonya Nilsson (tnilsson@scu.edu)

### ***Context counts: Civil engineering as a socio-technical endeavor***

Students must learn to develop designs and make ethical judgments that consider public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors, as

recently highlighted in ABET Outcomes 2 and 4. Papers in this session would describe efforts to incorporate this into curriculums and might address doing so while navigating current institutional and/or political landscapes.

***Achieving the balance: How do we develop engineers who can define the problem when we only ask them to solve the problems?***

ASCE and ABET focus on global, societal, and environmental impacts, encouraging the development of well rounded civil engineering students who can think beyond traditional problem solving. This session is looking for papers focused on combining the following in our curriculum:

- theory and practice
- engineering technology vs. engineering
- socially aware engineers

***Equipping today's faculty to prepare tomorrow's engineers***

This session explores efforts to help faculty incorporate “why” in addition to “how” in the context of teaching students engineering problem solving and design.

**Committee on Effective Teaching**

Chair: Anthony Battistini (anthony.battistini@angelo.edu), Jose Capa Salinas (jcapasal@purdue.edu), Anuja Kamat (kamata@wit.edu), Monica Palomo (mpalomo@cpp.edu),  
Co-Chairs: Carmen Grayson (cagrayson@pvcc.edu), Jim Hanson (hanson@rose-hulman.edu), Haritha Malladi (malladi@udel.edu), Rhonda Young (youngr1@gonzaga.edu)

***Pioneering trails through the curriculum***

Weaving professional skills through the curriculum is becoming popular but still has significant challenges: changing instructors, faculty buyin, academic freedom, and assessment, for example. What has crashed and burned? What has worked well? Share what you have learned, the good and the bad.

***A Bigfoot forward: Never been seen before innovations in classroom engagement***

This session is searching for unique demonstrations of teaching effectiveness and student engagement. Examples may include: new ways to engage students, innovative teaching methods, fostering student-faculty interactions, peer-to-peer learning, and service-based learning. Papers should include details on implementation, assessment methods, and evaluation of effectiveness.

***Biking together to incorporate social connectedness in the civil engineering curriculum to meet ABET criteria***

This session invites paper related to unconventional methods and curriculum implementation to meet ABET criteria in topics related to innovation, socioeconomic and cultural awareness, global impact, sustainability, and JEDI.

***Innovation pioneers: Best teaching and assessment practice in unconventional classroom settings***

This session invites papers that share best teaching practices and effectively evaluate assessment practices related to emotional intelligence, resilience, sense of belonging, intersectionality, training in unconventional settings, AI, and unique topics in unconventional classrooms settings. Together we can make the unconventional a common place.

**Committee on Instructional Technology**

Chair: Ann Sychterz (asychter@illinois.edu)

Co-Chairs: Jacob Henschen (jhensche@illinois.edu)

***Trailblazing technologies in the CE curriculum***

This session will include emerging technologies in the CE curriculum which include but are not limited to: AI, VR/AR, additive manufacturing, auto-grading systems, alternative assignments (videos, podcasts, etc.), preferred note-taking strategies, and image generation.

***Swoosh: Ushering in a new age of faculty-student communication***

The pandemic forced students and faculty to learn and adopt new methods to communicate. Topics in the session will include new methods students use to communicate between each other and with their faculty. Likewise, this session will explore how faculty have adopted new communication and classroom management systems.

## Reviewer Information

The Civil Engineering Division seeks papers supporting the scholarly progression of engineering education in the civil engineering realm. Scholarship is encouraged in the development of research and theory as well as case studies and applications of new pedagogical approaches to civil engineering courses. Please provide review feedback based on the type of conference paper provided. Some guidance is as follows:

### Research & Theoretical Topics

Papers containing research questions and data collection should be reviewed considerate of the quality of alignment between the research question, existing literature, methodology, results, and conclusions. Review comments improving the agreement between the research question, results, and conclusions drawn will be valuable to the learning community.

### Works in Progress

Works in progress (WIP) reports can be valuable resources for distributing advanced literature studies and preliminary results from work initiated. The division recognizes these papers as valid to the development of quality pedagogical work and as a tool for faculty to seek collaborators for the work.

Reviewers are encouraged to provide feedback to ensure the papers have sufficient literature and background information, are pursuing a defined methodology with valid approaches, and are seeking to address specified teaching or learning questions relevant to the Division.

Reviewers should confirm the following traits:

1. The paper presents a comprehensive literature review supporting a research question or theme.
2. The paper defines deliberate objectives and presents an aligned methodology.
3. The paper presents work in progress and initial findings relevant to the objectives.

### Case Studies

Case studies should provide useful information for members of the division. Papers should be encouraged to include sufficient background and literature information to support the work achieved by the author(s). Papers should include some narrative discussing outcomes of the work with little bias or subjectivity.

Reviewers are encouraged to offer feedback to ensure the information presented in the final paper provides an objective summary of the work performed by the author(s) so a reader could implement the methods and obtain similar results. Reviewers should confirm the following traits:

1. The paper presents literature supporting the case study performed.
2. The paper describes the methods used to create the case study.
3. The paper provides a summary of observed outcomes aligned with the goals and methods of the work.

## **Closing Remarks:**

The Civil Engineering Division requires podium and poster presenters to publish their papers in the ASEE conference proceedings. Additionally, the papers and presentations are expected to contain assessment methods and results, unless otherwise noted in the session description.

Please include the phrase “Work-In-Progress”/“WIP” or “Case Study in the title of papers to improve the review process and session planning. The Division sees value in these contributions to scholarship and is excited to learn from a variety of engineering educators. The rigorous review process needs to adjust to these different scholarship types and the titles improve the effectiveness and efficiency for our reviewers and conference planners.

Review of Draft and Final papers will be performed considerate of these traits:

- All papers submitted at the Draft phase should be in final form. Authors should not leave significant content unfinished at this review stage.
- The WIP and case study papers should clearly articulate the relevance to scholarship within the CE Division. Backgrounds and literature reviews should be included in the work. **Please limit lengths of these types of papers to 5 pages (not including references) and write concisely.**
- All papers should include appropriate citations and bibliographies demonstrating the clear historical status and thereby developing the value of the work contained in the paper.
- Work should demonstrate appropriate engineering processes and research strategies. Assessment plans should be clearly defined and objective conclusions expressed. Biased or subjective content should be avoided.

## **Anticipated Timeline (visit the ASEE Conference website for precise dates):**

- Abstract Submission Due – October 31st, 2023
- Draft Paper Due – January 31st, 2024
- Revised Paper Due – March 21st, 2024

## **Contact Information:**

For additional information, please contact:

### **CE Division 2023-2024 Division Chair**

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