

2023 ASEE Annual Conference & Exposition

Civil Engineering Division Call for Papers

Baltimore, Maryland | June 25-28, 2023

Call for Papers

The **CIVIL ENGINEERING (CE) DIVISION** seeks papers for presentation at the 2023 ASEE Annual Conference and Exposition to be held in Baltimore, Maryland, June 25-28, 2023. At any time, contact our Program Chair (Jenny Retherford, jgretherford@utk.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.

2023 ASCE Annual Conference & Exposition

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ASCE Liaison Committee

Leslie Nolen (lnolen@asce.org)

Scott Hamilton (shamilton@ycp.edu)

Educational & Professional Issues of Strategic Importance to the Civil Engineering Profession and ASCE.

This session will explore several of the important issues 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:

- The new Civil Engineering Program Criteria for 2024
- Changes to ABET EAC Criterion 5: How are we embracing diversity, equity, and inclusion as a profession?
- Preparing the future civil engineer; partnering with industry and academia to mentor students
- New initiatives from the Civil Engineering Education Summit Action Plan and the Committee on Reform of Structural Engineering Education (CROSEE2).
- Trends around declining professional participation: society membership, licensure, practicing engineers.
- Using ASCE's Future World Vision in the Classroom

Committee on Effective Teaching

Chair: Anuja Kamat (kamata@wit.edu), Manish Roy (manish.roy@uconn.edu)

Co-Chairs: Joan Carter (jcarter@inverhills.edu), Led Klosky (ledlie.klosky@westpoint.edu), Jakob Bruhl (jakob.bruhl@westpoint.edu), Shannon Parks (shannon.parks@pitt.edu), Ismail Halts (ismailhalts@kings.edu), Anthony Battistini (anthony.battistini@angelo.edu), Jim Hanson (hanson@rose-hulman.edu)

The Telltale Grade: Exploring New Assessment Strategies

This session seeks papers sharing best practices related to mastering grading efforts. Topics of interest include (but are not limited to): academic integrity, grade inflation, un-grading methods, professional skill development assignments, specifications grading or other evidence-based techniques.

Means and Methods for Deliberately Developing Creative and Innovative Engineers

Invited panelists will participate with attendees in an interactive, open-format discussion session focused on practical ways to integrate creativity in the curriculum. Discussion will include curricular and classroom techniques for growing creative and innovative engineers, sharing ideas for classroom activities and assignments, strategies for assessing student work, and techniques to create an organizational culture that encourages and celebrates creativity. Panelists will include a diverse group of professionals from engineering, architecture, and the fine arts. The session is intended to serve as a sharing ground for those seeking to develop

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student creativity, assign grades to creative activities, build consensus around creativity in the curriculum, and avoid common pitfalls experienced by both faculty and students. Attendees will leave with practical ideas to implement in their own courses and programs. Contact Led or Jakob for more information about being involved in this session.

Nevermore: Reimagining the Classroom Experience Part 1

Papers focused on new curriculum and teaching techniques are sought for this session aimed at sharing new means for effective teaching and learning. Topics may include focus on curricular changes, innovations in education on topics such as sustainability and other professional skills, and improvements to the classroom environment to enhance student learning.

SPECIAL NOTE for “Part 1”: Please submit a standard Abstract and full paper to participate in this session. Format for this session is intended to be a traditional podium or poster style. Contact the Program Chair (Jenny, jgretherford@utk.edu) to express interest in participating in a “mini-class demo” session.

Nevermore: Reimagining the Classroom Experience Part 2

In this engaging session, presenters are asked to demonstrate a mini-class and share methods used to effectively teach their students.

SPECIAL NOTE for “Part 2”: Please submit a standard Abstract to participate in this session and include “Mini-Class Demo” or similar language in the paper’s title; please limit paper length to two pages and focus content on the supporting literature, teaching concept, and means or mechanisms to implement the strategy. Selected authors will be provided more specific session instruction prior to the annual conference, but should anticipate offering a short demonstration/explanation and engaging in small group discussions.

Committee on Professional Practice

Chair: Joel Sloan (joel.sloan@afacademy.af.edu)

Co-Chairs: Paul McMullin (pmcmullin@uvu.edu)

Real Examples: Integration of Industry Professionals in Learning Activities

This session will be used to exchange ideas and best practices related to industry/professional interactions in classroom experiences and other learning activities. Topics may include strategies for initiating and maintaining relationships with partners, techniques to manage long-term programs such as capstone experiences, and may extend not only to best practices but unexpected failures. Rather than hypothetical or generic ideas, real examples of partnerships with detailed strategies for success are sought.

SPECIAL NOTE: Full papers are requested to build the scholarship of knowledge in this realm, but the session is intended to be hosted in a small group discussion style to facilitate conversations with authors. Ideally, collaboration between academics and professionals is desired for the paper and participation by representatives from both sides of partnerships in the conference session is requested.

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Committee on Instructional Technology

Chair: Kevin McMullen (kevin.mcmullen@westpoint.edu)

Co-Chairs: Shinae Jang (shinae.jang@uconn.edu), Jacob Henschen (jhensche@illinois.edu)

Teaching without Technology? Nevermore!

This session invites papers incorporating integration of innovative technology in the classroom for better student engagement. Topics include, but are not limited to:

- Use of mobile devices and apps
- Social media for student engagement
- Augmented or virtual reality
- Digital codes for design practices
- Mobile sensors and digital image correlation (DIC)
- 3D printing for design and demonstration

Other efforts to link technology to creative design or classroom demonstrations are welcomed.

Committee on Educational Policy

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

Co-Chairs: Jerry Wang (gjwang@cmu.edu), Mary Katherine Watson (mwatson9@citadel.edu), Tonya Nilsson (tnilsson@scu.edu)

Unique Pillars of Your Curriculum

This session looks for a broad discussion of unique programs or methods of integrating broader topics into our classrooms, our departments, and our curricula. Topics may include:

- Common themes/threads/pillars developed throughout your curriculum, especially those connecting professional skills such as leadership, unity, equity, ethics, inclusion, accessibility, sustainability, etc.
- Themes of Humanitarian Engineering
- Professional certifications or Minor programs
- Alignments between curriculum designs and department/college/university strategic plans, ABET requirements, quality enhancement plans, regional industry needs, school mission statements, and other drivers

Old Bay? Holistically Seasoning Students and Faculty

This session seeks insights on systems and programs used to holistically develop faculty and/or students as whole persons and whole engineers. Topics may include:

- Mentorship programs
- Self-directed learning
- Leadership development
- Community and team building
- Diversity, inclusion, and equity learning and support programs
- Intrinsic motivation frameworks in application

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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 (WIP)

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.

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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.
- Work-In-Progress 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: Open – October 3rd, 2022
- Abstract Submission: Due – October 31st, 2022
- Draft Paper Due – January 31st, 2023
- Revised Paper Due – March 21st, 2023

Contact Information:

For additional information, please contact:

CE Division 2022-2023 Division Chair

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CE Division 2022-2023 Program Chair

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