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Call for Papers: A Special Issue of the Journal of Pre-College Engineering Education Research on “The Impact of Covid-19 on Pre-College Engineering Education”

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Abstract

We invite original manuscripts that explore and document how COVID-19 has impacted pre-college engineering education.

Document Type

Front Matter

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Call for Papers: A Special Issue of the Journal of Pre-College Engineering Education Research on “The Impact of Covid-19 on Pre-College Engineering Education”

Guest Editors: Meltem Alemdar, Roxanne Moore, and Hoda Ehsan

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The COVID-19 pandemic influenced many aspects of life around the world and, in particular, education systems. Most countries decided to close educational institutions temporarily in order to reduce the spread of COVID-19 (UN, 2020; UNESCO, 2020). Because of these closures, millions of children missed out on critical learning opportunities. In cases where schools have reopened, educators have carried the new burdens of ensuring hygiene needed to prevent the transmission of the virus and supporting their students’ well-being. The pandemic also stressed existing inequalities across and within countries. Since March 2020, P-12 schools have been struggling to provide equitable and quality education to support student learning in in-person, remote, and hybrid settings (National Academies of Science, Engineering, and Medicine, 2020; Pew Research Center, 2020; UNESCO, 2020). While the pandemic has affected student learning in many subjects, it also has posed unprecedented challenges for pre-college engineering education.

Engineering educators quickly adopted new technologies for teaching and adapted hands-on activities into remote and at-home learning experiences. Even within the physical classroom, teachers and students now follow new COVID protocols, such as keeping six feet of distance and avoiding touching common tools, creating challenges for collaborative work. The pandemic has also impacted engineering-focused informal education including museum and after-school programs. Moreover, the pandemic has had an impact on teacher education, teacher training programs, interventions, and funded research programs. Although it was a challenging year, there were important lessons learned that may guide the future of pre-college engineering education.

This special issue will explore and document how COVID-19 has impacted pre-college engineering education. Specifically, we seek manuscripts including but not limited to the following:

- 1) Studies that demonstrate how engineering curricula in pre-college were altered under COVID-19. These studies may include engineering curricula, lesson plans, or other learning opportunities adapted to the online or hybrid learning setting, as well as adaptations and changes to engineering teacher professional learning, and challenges that were addressed. Such studies can include a wide range of both formal and informal learning settings.
- 2) Studies that capture the impact of the pandemic on engineering education. These studies may investigate how COVID-19 affected different groups such as engineering educators, students, and/or care-givers. Such studies may include impacts on wellbeing, learning, engagement, and access.
- 3) Many research or intervention projects impacted by the COVID-19 pandemic required adaptation. Studies focusing on addressing COVID-19 impacts within the designed interventions and research settings would be of interest for this special issue.
- 4) Literature synthesis focusing on COVID-19 impact in the field of pre-college engineering education will also be considered.

Review Criteria

Manuscripts will be evaluated on the ways in which they (1) speak clearly to the special issue theme, (2) meet the review and publication deadlines, and (3) follow J-PEER's author guidelines, which are available at https://docs.lib.purdue.edu/jpeer/jpeer_author_guidelines.html.

Authors are encouraged to reach out to guest editors with questions about fit.

Timeline

- **Extended Abstracts:** Structured 500-word abstracts will be accepted on a rolling basis through August 30, 2021. Abstracts should include the following sections: Purpose, Background/Framework, Methods, Findings, and Conclusions. Abstracts should be sent directly to all the guest editors.
- **Invitations:** Invitations to submit full manuscripts will be sent to authors on a rolling basis, but no later than September 5, 2021. The authors will be invited to submit their full manuscripts to the J-PEER system by selecting the *Special Issue on the Impact of Covid-19* option.
- **Initial Submissions:** Full manuscripts are due by October 1, 2021 and will be sent for review at that time. Full manuscripts are expected to follow J-PEER's author guidelines (fully blinded, maximum 300-word abstract, maximum 10,000 words excluding abstract and references). Full manuscripts should be submitted to the journal by selecting the appropriate special issue paper category.
- **Decisions:** Initial reviews and decisions will be returned on December 15, 2021. Authors will be notified with an initial decision (accepted, minor revisions required, major revisions required, or rejected) and reviewer comments. The initial acceptance does not guarantee publication, as that decision will depend on the quality of the final manuscript.
- **Revised Manuscripts:** Revisions are due by March 1, 2022. Feedback on revisions will be returned by April 15, 2022.
- **Final Manuscripts:** Finalized manuscripts should be submitted and ready for copy-editing by July 15, 2022.
- **Anticipated Publication Date:** October 2022.

Submission Instructions

Structured abstracts should be emailed directly to the guest editors at Meltem Alemdar (meltem.alemdar@ceismc.gatech.edu), Roxanne Moore (roxanne.moore@gatech.edu), and Hoda Ehsan (hodaehsan@gmail.com).

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