

CALL FOR PAPERS
2021 ASEE ANNUAL CONFERENCE
Liberal Education/Engineering & Society (LEES) Division

The Liberal Education/Engineering & Society (LEES) Division invites abstracts for papers and proposals for partial or full sessions, panel discussions, and innovative session formats for the ASEE Annual Conference, June 27- 30, 2021, in Long Beach, California. LEES provides a diverse and dynamic forum for those concerned with integrating the humanities, arts, and social sciences into engineering education and practice. The division is dedicated to helping understand and improve the processes that contribute to engineers' development of essential skills in communication, teamwork, engagement with local and international communities, ethical and professional responsibility, and lifelong learning. LEES scholars explore social, historical, political, and cultural contexts co-constituted with technological development. As stated in the bylaws, LEES seeks to:

1. Promote the concept that the humanities and social sciences are an integral and significant part of engineering education, as well as being inherently important in themselves as branches of learning.
2. Provide ways for people who teach the humanities and social sciences in engineering programs to share their ideas and concerns.
3. Provide ways for people in humanities, social sciences, and engineering to interact – in the discovery and development of scholarly and curricular relationships.
4. Express its concern for and involvement in engineering education on an international scale.

LEES welcomes papers, roundtables, workshops and unconventionally structured sessions based on topics pertaining to the broader division goals of critically engaging with the formation of engineers¹, but is especially encouraging submissions pertaining to the following specific themes for the 2021 conference. Please notify the program chair directly if you are submitting a paper for a specific thematic session or if you wish to discuss a novel session format.

Theme 1: Engineers' Social Responsibility in the Times of Covid-19, Racial Unrest, and Heightened Social Uncertainty: There is a critical need for engineering educators to rethink the social responsibility of engineers as we face momentous challenges. LEES calls for papers that highlight how the pandemic, racial unrest, and other forms of social insecurity in the US and around the world require us to rethink the role of engineers in confronting these challenges, including, but not limited to:

- 1) new and/or alternative normative frameworks (ethics, social justice, activism, decolonization, Critical Race Theory, Black Feminist Thought, Queer Theory, Crip Theory, etc.) to guide the behavior of engineers, and how to teach these in engineering education;
- 2) faculty and students' experiences and initiatives in dealing with these challenges in and out of the classroom;

¹ According to Michel Fabre, "[T]o form is more ontological than to instruct or educate..., [for] one's entire being is at stake" (trans. G. Downey). Michel Fabre, *Penser la Formation*. Paris: Presses Universitaires de France, 1994.

- 3) theoretical frameworks (transnational feminism, Marxist thought, etc.) that address transnational conditions of contemporary engineering education and practice (including globalization, global climate- and immigration-related conditions, etc.); and,
- 4) engineering as it engages with the state through projects of infrastructure, surveillance, incarceration and defense.

Theme 2: Minoritization Processes in Engineering Education: Now more than ever, there is a critical need for theory and praxis on minoritization in engineering education. LEES would like to include papers attending to (but not limited to) the following domains:

- 1) engineering education experiences of peoples of color, disabled people, LGBTQ communities, immigrants and children of immigrants, or low-income and first-generation students, especially in times of Covid-19, the Black Lives Matter movement, racial unrest, austerity, and other forms of social insecurity;
- 2) intersectional approaches to identity and how these inform how we teach and how students experience engineering education;
- 3) the implications and uses of prevailing framings of 'diversity' and 'inclusion' for maintaining (or challenging) the status quo in academic research, teaching, administration, and other forms of practice in engineering education; and,
- 4) means of interrogating the power relations inherent in majority-dominated research, funding and employment structures, including building theory and praxis around whiteness, maleness, cis-identity, abled identities and other prevailing categories of privilege.

Theme 3: Problematization and Overhaul of the Term "Soft Skills": While significant LEES scholarship and practices aim at the integration of the social and the technical in the education and professional practice of engineers, this goal remains difficult to achieve for different complex reasons, including the power and persistence of the ideology of depolitization and one of its most common and popular manifestations: the invocation of "soft skills" that at once proclaims their importance while also treating these skills as lesser-than technical knowledge (note that LEES does not condone the usage of this term). Soft skills are labeled as something important for engineers to have to be effective in so-called human interactions (e.g., presentations, negotiations, team interactions, management, leading others, etc.) yet often valued as something less than the "hard" scientific and technological content of engineering education. LEES calls for papers that highlight:

- 1) discriminatory formulations of the intellectual capacity and categorization of "soft skills"; and,
- 2) the marginalization of significant social aspects of engineering education and practice through the use of that term.

Theme 4: Communication Across Divisions Initiative: Issues surrounding communication are addressed across ASEE's divisions. As in the past several years, we plan to coordinate joint sessions on engineering communication with a range of

other divisions. As part of this initiative, LEES would like to strongly urge researchers to consider LISTENING as perhaps one of the most important yet neglected dimensions of communication. Many other divisions use listening as a core skill (e.g., to build empathy for human-centered design or for community engagement) yet take it for granted without much theorizing about listening as complex practice or thinking how it can be effectively taught and learned in engineering curricula.

Theme 5: Personal and Institutional Experiences with Integrating Liberal Arts in Engineering: This theme calls for authors to share their personal accounts with integrating the liberal arts into engineering curriculum in specific institutional settings. Many instructors may need to overcome a fear of co-optation (selling out) in our teaching and research as we apply the liberal arts to contexts wherein it is undervalued. Others might want to share experiences of the teaching of liberal education in engineering in times of economic austerity. Papers, performances or alternative session formats pertaining to this theme will bring a much-needed critical perspective to engineering education, and will showcase both challenges and success stories.

Important information

The complete programs from the 2019 and 2020 conferences are available on the LEES website (<https://sites.asee.org/lees/annual-conference>). For each technical session we have also provided a brief summary and a list of possible topics for future papers and collaborations. We welcome submissions that address topics and questions other than those included on this website, but we hope the material posted there will be helpful both for those who are new to LEES and those seeking broader collaborations within LEES. For those who have been a part of LEES we encourage reflection on prior scholarship as a starting point for critique or synthesis.

All paper submissions are publish-to-present. Papers submitted to technical sessions are peer reviewed through the LEES Division process, and those accepted will appear in ASEE Proceedings. The first step in proposing a paper is to submit an abstract to the ASEE paper management by **Monday, October 12, 2020**. Abstracts for papers should be approximately 500 words long and will be peer reviewed. Once your abstract has been accepted, the first draft paper deadline is **Monday, February 8, 2020**. Paper submissions may include research reports, classroom applications, or other frameworks. We encourage review papers that synthesize and identify trends in research of interest to the division, especially those aligned with the themes above. Papers published through LEES in the conference proceedings are typically 10-15 pages and include a substantial literature review.

In addition to technical papers, we also welcome proposals for partial or complete sessions. If you are proposing a paper as part of a partial or complete session (including but not limited to the themes listed above), please inform the Program Chair, Juan Lucena, by email at jlucena@mines.edu and provide the names of all authors intended to make up this partial or complete session. All paper abstracts, including those proposed as parts of such planned sessions, will be reviewed on an individual basis.

Important Dates:

- Abstract Submission Open – September 8, 2020
- Abstract Submission Due – October 12, 2020
- Draft Paper Due – February 8, 2021
- Revised Paper Due – March 22, 2021