



SPRING 2021

From the Editor

HOLLY M. MATUSOVICH

I am truly honored to be selected as the next Editor-in-Chief of Advances in Engineering Education (AEE). I am thankful to Dr. Norman Fortenberry and ASEE for this opportunity to contribute to the engineering education community. I enter this role recognizing and appreciating the hard work of Dr. Larry Shuman, the Founding Editor and prior Editor-in-Chief, who started this journal in 2006 to create a space in the engineering education community to share tried and tested innovations in engineering education. In that spirit, he leaves a solid legacy on which I endeavor to build. With the COVID-19 pandemic, the impacts of George Floyd's murder, the marginalization of the LGBTQ+ community, and the current national and international landscapes, it is an important time to reflect, plan, and build. In the coming months, we will reassess AEE and consider how it can better serve the engineering education and broader STEM communities.

VISION FOR AEE

In interviewing for the Editor-in-Chief position, my vision for AEE was to embrace the Research-Practice Cycle (Jamieson & Lohmann, 2009) and to emerge as the premier journal for research-informed practice within engineering education. With its already strong history of reporting on outcomes from implementations of innovative pedagogies, AEE's enhanced focus will be on research-informed practice and the adoption of innovations. The intent is to promote scholarly advancement that draws on prior works and use theories and frameworks to situate, evaluate, and propagate educational innovations. This vision encompasses a broad definition of educational innovations such that they include not only classroom-based pedagogical developments, but also innovations related to the whole enterprise of educating engineers at all levels.

But, as with any vision, we must adjust as landscapes change and look for ways that enlarge our field of view. Coley, Simmons, and Lord (2021) offered a call to action for the Journal of Engineering Education (JEE) regarding the lack of inclusivity in people and processes. That call is a gift to AEE as well by offering a critical lens through which to review our current functioning.



For example, AEE can use language suggested by Coley, Simmons, and Lord (2021) for JEE's mission statement in order to create a more explicit standard towards inclusivity within our vision. Adding the italicized language, the words suggested by Coley, Simmons, and Lord (2021), creates a vision for AEE to be a journal for *inclusive* research-informed practice within engineering education *that is free from biased language*. To achieve this outcome, AEE would engage in critical, substantive, and meaningful reflection to develop plans for building in inclusive ways.

Meaningful and lasting change requires understanding how the organization came to its current state in order to retain and grow its strengths while identifying gaps and developing informed action plans. To that end, we will do our homework in examining AEE and developing go-forward plans. We will leverage calls to disrupt systems built for exclusion rather than inclusion (Cross, 2020), promote anti-racism in our study methodologies (Holly, 2020), and create a system of constructive review and feedback (Benson, 2019; Martin, 2020). We can advance and grow the current community of practice (Wenger, 1999) associated with AEE by actively engaging broader groups of stakeholders as authors, reviewers, editors, and readers. As we move forward, community members can anticipate changes in author guidelines, review criteria and practices, and more voice in those changes as we build our community of practice.

Some foundational change work is already underway, and I am confident that progress will become more and more visible with every issue. Over the past six months, Larry has published three AEE issues, including an expanded COVID special edition. We are on our way towards a regular publication schedule of four issues per year while working to advance manuscripts currently caught in the system. Though the pandemic has had a significant impact on our ability to recruit reviewers and on turnaround, we are implementing changes to reduce manuscript review times, such as adding Associate Editors and expanding our pool of reviewers.

EDITORIAL BOARD UPDATES

We have had several changes to the editorial board over the past six months. We thank Drs. Tom Litzinger, Gul Kremer, Larry Richards, Sheryl Sorby, and Bev Watford, many of whom have been with Larry from the start, for their service and commitment to Advances in Engineering Education. We welcome three new Associate Editors to the Board. Drs. Mayra Artiles, Carlotta Berry, and Idalis Villanueva join on-going associated editors Drs. John Chen, Renee Clark, Kevin Dahm, Trevor Harding, Gary Lichtenstein, Daniel Moore, Bill Oakes, and Susan Walden. Profiles for all of our exceptional Associate Editors can be found on the AEE website (<https://advances.asee.org/associate-editors/>).



THE CURRENT ISSUE

Over the past six months, Larry and I have been working on the editor transition and this issue is my first. However, many of the articles herein were cultivated by Larry, and I again thank him for his work. I am excited that this issue opens with a guest editorial by Dr. Leroy Long III that was co-published in the Journal of Engineering Education in October 2020. Dr. Long provides a starter kit to help educators address issues of equity and justice by moving towards an antiracist classroom. I am hopeful readers will immediately leverage suggestions in their teaching and scholarship. Though not curated as a special issue, the current issue has a thread that ties the articles together: building community and creating welcoming spaces in engineering education. Mollica et al. describe toy adaptation for children with special needs as a way to incorporate community-engaged learning into engineering classrooms. Sochacka et al. describe an educational innovation designed to teach engineering students empathic communication skills and offer insights from propagating that innovation to other settings. Morelock et al. describe the development and evaluation of a simulation game activity to help senior industrial engineering students experience realistic decision-making problems. At the graduate level, London et al. describe the impact of using the Engineering Education Pioneers Project's stories about early contributors in engineering education as part of socializing graduate students in a new engineering education Ph.D. In pre-college pathways to engineering, we have an international perspective by Bampesidis et al. who describe an underwater robotics project run in Greek secondary schools, and a project-based program for high school students that teaches fundamental programming, robotics, and control engineering concepts by Copp et al. Finally, in a Looking Ahead piece, Coblentz et al. provide an early look at their work on fostering effective team dynamics in engineering classrooms and beyond.

WITH GRATITUDE

I have deliberately used the pronoun "we" numerous times in this editorial, none of the great work already in place and to come could happen without a strong community and much support. I am also thankful for the financial support from Dr. Jennifer Case, Department Head of Engineering Education at Virginia Tech that provides logistics and administrative support. Also, when I say "we" in this editorial, in many cases, I am referring to Carol Geary, a graduate student who has been working with me examining systems, processes, and procedures suggesting and implementing change. Within the ASEE organization, Nathan Kahl, Drew Hallett, Eva Miller, Jenn Pocock, and Kresimir Ozbolt have facilitated the editorial transition process and support on-going change. I also thank



Drs. Lisa Benson, Kelly Cross, Rachel Kajfez, Gary Lichtenstein, Marie Parette, and Larry Shuman for reviewing early drafts of this first editorial and helping to shape my thinking.

In closing, AEE has a solid foundation and a great deal of potential to realize for the future. I invite the community on this exciting journey and look forward to what we will accomplish.

REFERENCES

Benson, L. (2019). Reflecting, rebooting, and reviewing. *Journal of Engineering Education*, 108(3), 311-312. <https://doi.org/10.1002/jee.20288>

Coley, B. C., Simmons, D. R., & Lord, S. M. (2021). Dissolving the margins: LEANING INTO an antiracist review process. *Journal of Engineering Education*, 1-7. <https://doi.org/10.1002/jee.20375>

Cross, K. J. (2020). Racism is the manifestation of White supremacy and anti-racism is the answer. *Journal of Engineering Education*, 109(4), 625-628. <https://doi.org/10.1002/jee.20362>

Holly, J. (2020). Disentangling engineering education research's anti-Blackness. *Journal of Engineering Education*, 109(4), 629-635. <https://doi.org/10.1002/jee.20364>

Jamieson, L., & Lohmann, J. (2009). *Creating a Culture for Scholarly and Systematic Innovation in Engineering Education* (Phase 1; p. 32). American Society for Engineering Education. <http://doi.wiley.com/10.1002/j.2168-9830.2009.tb01019.x>

Martin, J. (2020). Time for a culture change-moving academic from destructive to constructive feedback. *Journal of Women and Minorities in Science and Engineering*, 26(1). <https://doi.org/10.1615/JWomenMinorScienEng.2020033945>

Wenger, E. (1999). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge University Press.