

2024 Meeting Summary

Teaching Tomorrow's Innovators

BME-IDEA Fosters Community and Collaboration for Engineering Educators Worldwide

The 2024 Biomedical Engineering, Innovation, Design, and Entrepreneurship Alliance (BME-IDEA) meeting held Oct 22-23, 2024 at Johns Hopkins University, brought together over 60 educators, researchers, and industry leaders to explore new directions in biomedical engineering design education. For over two decades, BME-IDEA has been a vibrant community of practice, where educators and professionals share best practices to shape the future of this field. Sponsored by VentureWell and the Johns Hopkins Center for Bioengineering and Design, this year's event served as a platform for knowledge exchange, networking, and collaboration.

Key Highlights

Spotlight on Alumni: Graduates shared candid reflections on their transition from the academic setting to industry and provided valuable perspective on what skills could better prepare the next generation of biomedical engineers. Recurring themes during the discussion included understanding the value and impact of their BME/biodesign degrees (both necessities and gaps), considering the industry-academia interface and its role in shaping curriculum. Panelists also recommended a balance between engineering design and entrepreneurship training in different levels of education. Overall, alumni stressed that while foundational engineering skills remain essential, there's a need to more deliberately integrate entrepreneurship, regulatory knowledge, industry exposure, and multidisciplinary collaboration into biomedical engineering and biodesign training programs.

Snapshots: Colleagues shared best practices and innovative teaching methods with the community. Presenters included Christopher Arena (Virginia Tech), David Bigio (Universidad de los Andes), Lyn Denend (Stanford University), Colin Drummon (Case Western Reserve University), Sys Zoffman Gud (Aarhus University), Julie Karand (University of Delaware) and Vicente Parot (Pontificia Universidad Católica de Chile).

Working Sessions: Attendees participated in hands-on, interactive sessions to get support from peers on specific aspects of their courses or programs. Key topics included preparing students for success in design programs, evaluating students work and performance, and commercialization and translation towards sustainable impact.

Pathways for Career Advancement: Another panel session focused on pathways for career advancement for faculty and staff, addressing the evolving landscape of professional growth for biomedical engineering educators. This session provided valuable insights and experiences for faculty and staff at all career stages and explored various advancement opportunities including administrative, leadership roles and tenure-track progression, funding opportunities for faculty and students, and biomedical engineering education research. This conversation underscored the importance of this community of practice where faculty can share experiences, challenges, and strategies for career advancement. Panelists included Timothy Allen (University of Virginia), David Jamison (Villanova University), Miiri Kotche (University of Illinois Chicago), Amy Lerner (University of Rochester), and Sarah Rooney (University of Delaware).

Focus on Output: Another major focus was to assist with the structuring, assessment, evaluation, dissemination, and funding of biomedical engineering education research. Experts in these topics presented their best practices, advice, and resources, including Kelly Cross (Georgia Tech), Jenny Amos (University of Illinois), Ann Saterbak (Duke University), and Sharon Miller (Purdue University).

International Partners Panel: A standout session of the conference was the panel of international partners, which brought together global leaders in biomedical engineering education to discuss shared challenges and opportunities for advancing design, innovation, and entrepreneurship education worldwide. Panelists included: David Bigio (Universidad de los Andes), Sys Zoffman Glud (Aarhus University), June Madete (Kenyatta University), Yujiro Maeda (Japan Biodesign), and Vicente Parot (Pontificia Universidad Católica de Chile).

Impact and Future Directions

The 2024 BME-IDEA reinforced the value of this community in supporting educators, building connections, and facilitating exchanges of ideas and strategies to integrate entrepreneurship and commercialization into biomedical engineering curricula. Plans for next year's BME-IDEA gathering are already underway. To learn more about the organization's journey and impact and for a summary of the 2023 meeting, read "[BME-IDEA: 20 Years of Impact and Mapping the Path for the Next 20](#)". Stay connected with our community by subscribing to the [VentureWell newsletter](#) and visiting the [BME-IDEA website](#).
