

ASEE & SEFI Joint Statement on Diversity, Equity, and Inclusion

A Call and Pledge for Action

April 2020

ASEE believes that diversity and inclusiveness is essential to enriching educational experiences and innovations that drive the development of creative solutions in addressing the world’s challenges. ASEE is committed to increasing the participation, inclusion, and empowerment of historically under-represented segments of society in all venues where engineering is taught, practiced, and supported.

[ASEE Statement on Diversity and Inclusiveness](#)

SEFI strongly believes that everybody must be provided with equality of opportunity, to pursue and advance their engineering careers, and that no individual should experience discrimination, marginalization or have their contributions or talents excluded because of conscious or unconscious biases. SEFI is committed to diversity, equality and inclusion within the engineering education and research community.

[SEFI Position paper on Diversity, Equality and Inclusiveness in Engineering Education](#)

A Call for Action

Engineering changes the world. Engineers have been at the forefront of technological wonders with huge impacts on our lives — from transportation, clean water, and life-saving diagnostics and therapeutics to computer technologies, automation, and broadband networks. Although pushing the boundaries of what is possible, engineers have not consistently made informed judgements that consider equitably the far-reaching societal impacts of engineering solutions. History has shown that new technologies benefiting one part of society sometimes have less fortunate impacts on other segments. These unintended consequences partially result from an engineering profession with a limited diversity of lived experiences.

We believe that diversity across all dimensions is essential to enriching engineering educational and professional experiences. Diversity fuels innovative and creative solutions to address the world’s complex challenges as it also ensures that engineered solutions meet the needs of all people.

Historically, the demographic of practicing engineers has not reflected societal heterogeneity. This lack of diversity has created a professional culture with focus, values, and priorities that are grounded in the biases of its uniform, advantaged, and dominant groups.

A homogeneous engineering profession is absent the diversity of needs and experiences with engineered technologies, is unaware of barriers and problems that impact minoritized communities, and is insensitive of cultural values and perspectives — it is unable to fully accomplish its professional mandate to serve the whole of society.

Thus, our engineering scientific methods and institutions, institutional cultures, and classrooms unintentionally replicate discriminatory dynamics through preserving unexamined norms and values. These dynamics disadvantage many members of public society, all of whom live in an engineered world. We acknowledge that these disadvantages are time and context specific. However, regardless of historical and societal differences between the United States and European nations, ***we, as an international engineering community, commit to ensuring that we continually challenge ourselves to deepen and broaden our understanding of inequities, so that we are prepared to take action to transform our institutions, universities, and the whole of the engineering community.*** We assert that inaction perpetuates inequitable systems and outcomes.

We envision a culture of engineering that values different perspectives, represents, celebrates, and serves the whole of society.

We recognize that steady gains have been made, for example, in decreasing gender imbalance for white women and increasing the participation of other groups that yet remain under-represented. Substantial progress is still required to reach a state where engineering is fully empowered by and for all segments of our society, including minoritized races, immigrant populations, disabled persons, and economically-marginalized groups.

We must actively promote diversity in engineering, particularly supporting those who have been continuously disadvantaged, and also ensure that all individuals are provided with equal opportunity to access, pursue, and advance in engineering careers.

Achieving the epitome of our professional creeds [e.g., 1-2] requires examining the focus, content, values, and norms of engineering and its educational environments. We are therefore compelled by our professional and ethical commitments to exercise leadership to create and maintain collaborative and inclusive environments that value equity and celebrate diversity. To do so, we must actively dissolve the systemic barriers that engineers have enacted against those who are implicitly and explicitly excluded from our engineering community.

The engineering profession and institutions of higher education must implement equitable and inclusive practices. Equity means focused, restorative action, starting with those populations most egregiously impacted through historic, cultural dynamics. Inclusion means an ever-widening scope of restorative action that includes self-awareness, advocacy, allyship, and creatively collaborating to establish goals, plan tasks, and meet objectives toward an engineering profession that equally honors all people and reflects the natural diversity of the society it serves.

With equity and inclusion, our society will systematically evolve. Engineering solutions will consider all societal contexts and truly serve all society's well-being.

A Pledge for Action

We strongly believe that no one should experience marginalization and exclusion of their contributions or talents because of visible or invisible differences. It is our engineering duty to ensure that no one is disadvantaged or receives less favourable treatment because of age, disability, neurodiversity, gender, gender identity and expression, sexual orientation, race, ethnicity, religion or belief, socio-economic status, national status, pregnancy and maternity, marriage and civil partnership, or any other minority status.

We are committed to increasing the participation, inclusion, and empowerment of minoritized individuals who are commonly under-represented in all venues where engineering is taught, practiced, and supported. These include pre-college, college, and industry environments as well as professional engineering organizations. In order to create the types of environments in which equity can thrive, we must find better ways to recruit, retain, support, and celebrate all students and staff, regardless of their personal backgrounds and experiences.

Substantial progress must still be made to achieve our shared vision — a state where engineering education is diverse, inclusive, and fully empowered by all segments of our societies — globally. Creating such a culture of inclusion involves everyone and is not just fixed by special targeted action towards under-represented groups. It is every engineer’s responsibility! We invite you to expand our engineering professional creeds [1-2] by committing to the mission to serve all society’s well-being above all other considerations:

As a member of a global engineering community, I pledge to celebrate diversity, create opportunities, and actively support inclusive environments, in which all my students, colleagues, and members of the wider society are welcomed, respected, and valued. I acknowledge that a path with no examination, reflection, and action perpetuates an inequitable status quo. I commit to work collaboratively with all engineering community members and stakeholders to disrupt systemic exclusion and to create a culture where all will thrive.

Resources/References

[1] “The decisions and actions of engineers have a large impact on the environment and on society. The engineering profession thus has an obligation to ensure that it works in the public interest and with regard for health, safety and sustainability.” FEANI position paper on [Code of Conduct: Ethics and Conduct of Professional Engineers, 2006](#).

[2] “As a Professional Engineer, I dedicate my professional knowledge and skill to the advancement and betterment of human welfare. I pledge: To give the utmost of performance; To participate in none but honest enterprise; To live and work according to the laws of man and the highest standards of professional conduct; To place service before profit, the honor and standing of the profession before personal advantage, and the public welfare above all other considerations...” [National Society of Professional Engineers Creed, 1954](#).

This joint statement was collaboratively written by the following group.

Susan E. Walden|Director of Research Institute for STEM Education, University of Oklahoma

Inês Direito|Senior Research Fellow - Centre for Engineering Education, University College London

Lesley Berhan|Associate Dean for Diversity, Inclusion, and Community Engagement, University of Toledo (OH, USA)

Sara Clavero|Senior Postdoctoral Researcher, Directorate of Equality, Diversity and Inclusion - Technological University Dublin

Yvonne Galligan|Director of Equality, Diversity and Inclusion - Technological University Dublin

Anne-Marie Jolly|Former Professor and Director at Polytech Orléans. Vice-president of the French Engineering School Accreditation

Eric Specking|Director of Undergraduate Recruitment, Outreach, & Summer Programs, University of Arkansas

Linda Vanasupa|Professor of Materials Engineering, Franklin W. Olin College, Needham, Massachusetts

We thank all those from our communities who contributed to the creation of this paper. The following ASEE members not appointed to the writing task force made critical contributions: Rebecca Bates, Minnesota State University-Mankato; Jean Bossart, University of Florida; Karin Jeanne Jensen, University of Illinois; Liz Litzler, University of Washington; and Tasha Zepherin, Purdue University. SEFI acknowledges additional contributions by: Gabrielle Orbaek White, Swansea University; Bill Williams, Instituto Superior Técnico & Technological University Dublin; Martin Vigild, Technical University Denmark. We also extend our gratitude to the former ASEE and SEFI Presidents whose conversations initiated this effort: Stephanie Farrell, Rowan University, ASEE 2018-19; Bevee Watford, Virginia Tech, ASEE 2017-18; and Mike Murphy, Technological University Dublin, SEFI 2017-2019.

This statement was approved by the Board of Directors of the European Society for Engineering Education: SEFI on 27 April 2020 and the Board of Directors of the American Society for Engineering Education: ASEE on 23 March 2020.

Yolande Berbers, President, SEFI

Stephanie G. Adams, President, ASEE



www.sefi.be



www.asee.org