

PERSPECTIVE

Empowering voices, engineering change: Unveiling the remarkable journey of women engineering leaders

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It is with deep gratitude to my friends and colleagues at Tsinghua University, China that along with its many readers I welcome their invitation to contribute to the inaugural edition of the *Engineering Education Review* Journal. The debut of this new publication is the result of months of dedication and work on the part of the Journal team. What you will find between the pages of this first and all future editions are contributions from leaders in engineering education professionals from around the world. You will find a diverse and dynamic collection of thoughtful articles and opinion pieces, well informed by experience and perspective, catalytic in terms of prompting connection and dialogue among readers and written with passion as well as wisdom. I am honored to be a contributor to this breakthrough publication, and I look forward to engaging and supporting this journey moving forward.

As a global, multi-disciplinary leader who has closely collaborated with academic, governmental, corporate and Non-Governmental Organization (NGO) professionals for years on all continents, I have now the privilege and pleasure of collaborating, working in close partnership with and supporting the work of some of the most well-recognized engineering leaders around the world. In my role leading the International Federation of Engineering Education Societies (IFEES) and the Global Engineering Deans Council (GEDC), I take pride in the part that my team, and our network of members and partners have played over the past fifteen years in developing programs designed and implemented in service of advancing innovation in the field and supporting the individuals engaged in practice. At the forefront of these meaningful

and high-impact programs is the Rising to the Top series of books written by women engineering leaders globally. <https://www.gedcouncil.org/rising-to-the-top/>.

While engineering is very often seen as a male-dominated field, the simple fact is that to continue engineering's legacy of innovation, problem-solving and meeting the grand challenges that face humanity and our planet we must do all that we can to balance gender representation in the field and ensure that engineering education and practice include all members of global society - crossing socio-economic, cultural and national boundaries. Addressing this issue, in 2019 IFEES and GEDC pledged a commitment to inspire, motivate and support women in pursuit of Science, Technol, Engineering, Mathematic (STEM) studies and careers as demonstrated through the publication of our four editions.

Here's how the idea of creating a book series started with an article in our IFEES/GEDC Global Engineer Bulletin. The article authored by Tagwa Musa, at that time the only female engineering dean in Sudan, told the story of the challenges she faced and the opportunities she seized on her journey to academic engineering leadership. This thoughtful article generated such incredible interest from women engineering leaders around the world that we asked them if they would be willing to share their personal and professional stories by writing a chapter of the first volume of the Rising to the Top series. The first edition featured 32 women authors from 16 countries and 5 continents. To date we have published four volumes in four years, telling the compelling stories of 114 authors in their own words

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about their fascinating journey to positions of leadership in education, business and government in their own countries, as well as becoming part of a global community and network of women changing the profession and the world. There are two additional volumes currently in development. We received generous support from Arcelik and numerous leaders of IFEES and the GEDC.

These women are motivated to inspire a new generation of female engineering leaders. At the same time, an equally important goal behind the series is that many of our male colleagues will seriously reflect on how they can be more effective, engaged and sensitive in terms of supporting their women colleagues. As one of our Rising to the Top authors has said “After all, we are women and men...but we are all engineers!”

The co-authors and support teams for the Rising to the Top series come from North America, Latin America, Africa, India, Australia, MENA, Asia and Southeast

Asia, and Europe. They represent not only multiple regions and cultures but also a diversity of professional norms and education and business systems and practices. Regardless, I feel inspired, humbled and grateful for the opportunity to be a part of what I believe all of us want to believe, welcome and practice: That only through a global appreciation for diversity, a respect for differences, and a real understanding that collaboration is an absolute, not an option, will we realize and sustain peace and welfare among all peoples.

DECLARATIONS

Author Contributions

Hans J. Hoyer has accepted responsibility for the entire content of this manuscript and approved its submission.

Conflict of interest

Hans J. Hoyer is an Editorial Board Member of the journal. The article was subject to the journal’s standard procedures.