DEBBIE GUSTAFSON

CEO at Energetiq Technology, Inc. – A Hamamatsu Company
Board Member at Omega Optical

Education

MBA, Bentley University

B.S. in Mechanical Engineering, University of Massachusetts – Dartmouth

Technical Activities/Interests

- Broadband Light Sources
- EUV Light Sources
- Semiconductor Processing, Metrology
- CW Diode Lasers
- Supercontinuum Light Sources
- Optics
- Women in STEM

Services to the Technical Community

- Advisory Board, UMass Dartmouth College of Engineering (2019–Present)
- SEMI Foundation Board (2021–Present)
- SEMI North America Advisory Board (2016–2023)
- Optica Innovation School Speaker
- Chapter Author, EUV Lithography SPIE Press (2018 and 2024)
- Steering Committee, Optica High-Brightness EUV & X-Ray Congress
- Multiple Technical Presentations and Investments in EUV
- Steering Committee, EUV Litho Source and Lithography Workshop

Service to SPIE

- SPIE Nominating Committee (2020)
- SPIE Executive Advisory Group (2019–2022), Co-Chair (2022–Present)
- Subcommittee Working on DE&I Framework Toolkit
- SPIE Prism Award Presenter (2018, 2023)
- Prism Award Winner, Energetiq (2011)

Professional Honors

- SPIE Fellow (2023)
- Sr. Member SPIE (2021)
- Women in Optics Planner (2021)
- SPIE Community Champion (2019/2020)

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Election Statement

I'm passionate about building the optics and photonics community and expanding our reach globally. As CEO of Energetiq Technology I've been able to travel around the world getting to know our customers, suppliers and partners and have seen the importance of bringing together brilliant minds and technologies to enable innovation.

My first experience with SPIE came when I joined Energetiq Technology, a start-up company developing an EUV light source, and gave a technical presentation at SPIE Advanced Lithography in 2005. My background was in the plasma processing area of the semiconductor industry, and I quickly had to learn about using plasmas to create light! The SPIE community was instrumental in my education as I was able to gain insight into the photonics space through conversations with SPIE members and by attending several courses and technical presentations during this conference. For almost 20 years, I have been very involved with the SPIE community regarding EUV development. SPIE played an instrumental role in shaping this new technology and succeeded in bringing together a team capable of solving numerous complex challenges.

The overlap between the optics and photonics field and the semiconductor industry is large. My career has been dedicated to the semiconductor industry, starting out as a service engineer when I first graduated as an undergraduate until today. I have been a member of the SEMI North America Advisory Board have witnessed how critical it is to be involved with industry associations and how much of an impact they can have. In 2019, I was elected to the SPIE Executive Advisory Group (EAG). They saw the importance of having representation from a smaller sized company and recognized the importance of adding some diversity to the group. The EAG advises the SPIE CEO on how the industry is growing and what SPIE can do to further support that growth. One of our first assignments was to create a Diversity, Equity & Inclusion (DE&I) Framework Toolkit for small and medium-sized companies to foster diversity in their organizations. In 2022, I stepped into the co-chair role and have continued to help SPIE better serve their members, specifically commercial organizations.

I am passionate about bringing more diverse voices to the table within the industry. I work tirelessly to mentor, speak, write, and teach about what organizations need to do to hire and retain diverse talent. I have connected SPIE to SEMI so that the two associations can work together on policy, talent, and diversity. A key focus of the SPIE EAG is to ensure that we bring talent into the industry to support the growth we forecast. Since optics and photonics has such a wide base of technology, it is quite a challenge. There are many programs working on finding and honing talent, and we want to make it easier for member companies to hire this talent, train and support them to offer prosperous career opportunities.

If I am elected to the board of directors, I will continue to work toward the goal of ensuring that everyone has a voice and can help shape the industry together. I love both the conferences and the overall energy at SPIE; it's a great place to build a career, and the continuous innovation is incredible. I have been able to experience this firsthand and value every day that I can help this industry grow!