



Professor Ursula Gibson served on the faculties of the University of Arizona Optical Sciences Center and the Thayer School of Engineering at Dartmouth College, and currently holds a professorship in the Physics department at the Norwegian University of Science and Technology (NTNU), where she has been since 2010. She holds adjunct positions in the Department of Applied Physics at the KTH Royal Institute of Technology in Stockholm and the Chemistry department at Dartmouth.

She has held visiting positions at the United States Air Force Academy, NASA's Marshall Space Flight Center, Tampere University of Technology (Finland), Chalmers University (Sweden), and the University of Queensland (Australia), among others. In 2008, she was awarded a Fulbright Fellowship, working at the VTT Research facility in Espoo, Finland. Professional activities include service on the Executive Committee of the Vacuum Society of America (Thin Films Division), as an organizer for a Materials Society Symposium and service on the Editorial Boards for the Journal of Vacuum Science and Technology, NanoEthics, and Materials Characterization. She has served on the Board of the Optical Society, OSA, and was elected as the 2019 President of this 20,000 member organization.

Her research on optical materials has been wide ranging, including polymers, protein crystals and semiconductors, with an emphasis on limited dimension structures such as thin films and waveguides. Prof. Gibson's present research is focused on semiconductor-core optical fibers.

Women in Optics

The core values of OSA summarize my vision of Women in Optics rather well; these are innovation, integrity, inclusivity and impact ("i4"). It is clear that the third value, inclusivity, is essential for women to participate in the other three. Critical contributions are provision of opportunities, and recognition of accomplishments.

My role in the OSA is partly due to an 'affirmative action' policy - OSA now alternates election slates that are single-gender, assuring that the leadership will be 50% female, providing role models. In addition, there are funds provided to increase the number of female invited speakers, and initiatives to increase the fraction of women nominated for awards.

Experience:

Women are often in the minority in science and engineering, and I have been part of a sub-10% fraction in most of my professional (and, come to think of it, extracurricular) activities. This has been true despite the recognition by administrations and governments that gender equality is a worthy goal.

Recently, things have been less isolated; both the OSA and Norway take inclusivity very seriously. There are 25% women faculty in the Physics department at NTNU. That drops to 17% at the full professor level, but it is promising. The use of both targeted funding, and assuring that any majority candidate selections are thoroughly justified and documented contributes to the higher than usual representation, but does not bring the representation in line with the numbers of high-school female achievers. More incentives need to be present at the critical undergraduate/graduate education level. As a member of OSA since the 1980s, I have seen dramatic changes in the makeup of the staff, and hope to see continued evolution of the membership gender balance in the future.