Alexandra Joshi-Imre, PhD

Senior Process Engineer

Cleanroom Research Laboratory

Office of Research and Innovation

The University of Texas at Dallas

800 W Campbell Rd, Richardson, TX 75080

Alexandra.Joshi-Imre@utdallas.edu

Biography

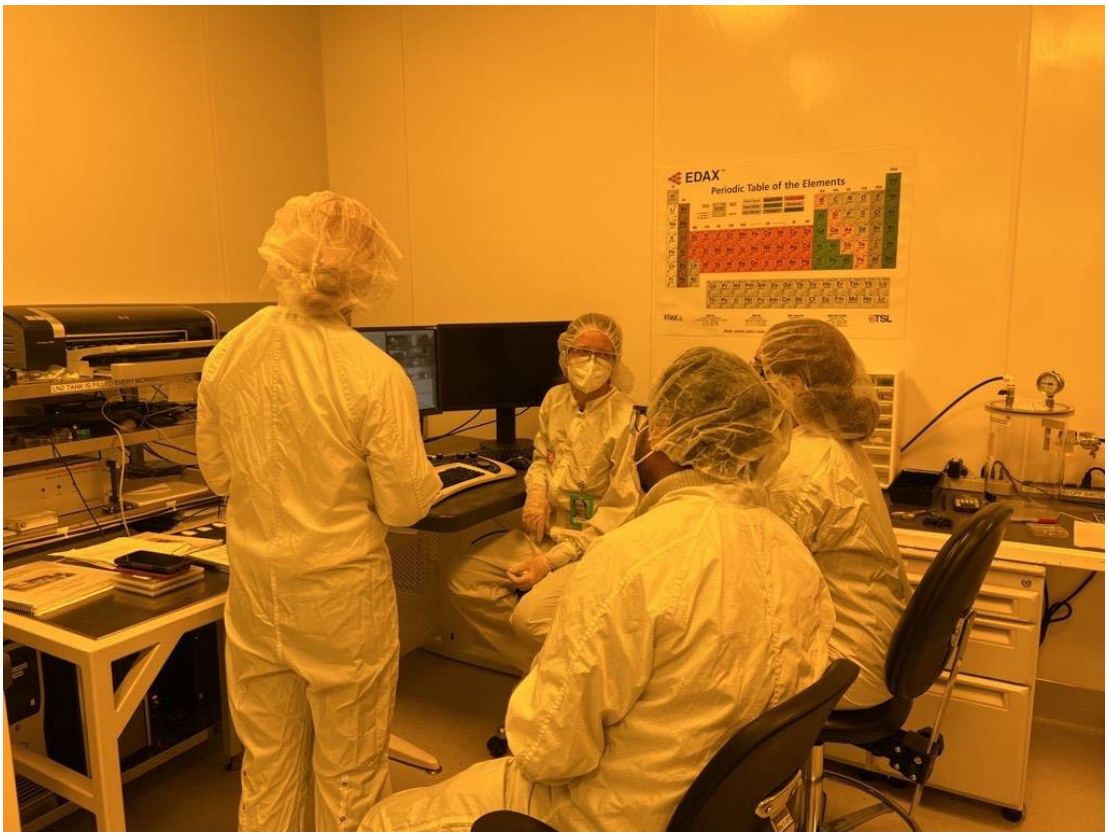
Dr. Joshi-Imre teaches thin film processing and characterization as a cleanroom staff and leads microfabrication-technology development for chronic neural interface devices as a research affiliate at The University of Texas at Dallas. She has an interdisciplinary academic training in the fields of electrical engineering and materials science and a research portfolio focusing on micro- and nano-scale phenomena for nearly two decades. She received her M.S. in Electrical Engineering in 2001 from the Budapest University of Technology and Economics, Hungary, and her PhD in Electrical Engineering in 2005 from the University of Notre Dame, Indiana. She joined the Materials Science Division at Argonne National Laboratory in 2006 as a post-doctoral appointee, where she later transitioned to the Center for Nanoscale Materials to serve as an assistant scientist in the Nanofabrication and Devices Group. She joined The University of Texas at Dallas in 2014 to participate in a diverse research program in the fields of materials science, chemistry, electrical engineering, mechanical engineering, and biomedical engineering.

Mentorship activities

Dr. Joshi-Imre has an extensive history of mentoring in her field, reaching back to the years of her post-graduate studies at the University of Notre Dame, where she led many undergraduate students in their research endeavor through regular meetings and discussions over the course of their summer programs. Later, at Argonne National Laboratory, she has hosted and mentored high school students and high school teachers, and for the latter she received an “Outstanding Research Mentor Award” from the US Department of Energy, Office of Science in 2010.

After joining the University of Texas at Dallas, she began working with graduate students and got involved with multiple outreach efforts of the university. As participant of the Nanoexplorers Program (https://nanotech.utdallas.edu/for-students/nanoexplorers/), she gets to involve high school students in research activities over a summer semester. This is a competitive program bringing in high performing students. Interaction with these students often continue beyond the Nanoexplorers Program, as students wish to take their work to competitions and request recommendations. Another outreach program, the Young WISE Investigators Program (https://community.utdallas.edu/college-preparation-programs/ywisei/), recruits high school students of disadvantaged backgrounds, with aims of exciting interest and providing confidence for the students, and ultimately increasing the diversity of college graduates in the fields of science, technology, engineering and mathematics (STEM). This program runs in teams over a whole academic year. Dr. Joshi-Imre has been serving as a faculty mentor every year since 2016, and some of her team members not only completed the program but received academic scholarships to attend college.

Most recently, Dr. Joshi-Imre became a registered adult leader with the Boy Scouts of America, where she holds Nova Counselor and Supernova Mentor positions (https://www.scouting.org/stem-nova-awards/). The Nova Program aims to attract interest in and support intellectual development through STEM activities arranged for kids and teenagers, 7 to 18 years old. Dr Joshi-Imre organizes and leads such activities in small groups.



Dr Alexandra Joshi-Imre conducting Scanning Electron Microscope (SEM) training sessions in the UTD Cleanroom