

Nomination of Dr. Mauro Sardela, Jr. for the AVS Excellence in Leadership

Dr. Mauro Sardela, Jr., Frederick Seitz Materials Research Laboratory, University of Illinois at Urbana-Champaign, Sardela@illinois.edu, <http://mrl.illinois.edu/facilities>

Scientific Achievements: Mauro Sardela, Jr. is the Director of Central Research Facilities at the Frederick Seitz Materials Research Laboratory (FS-MRL) at the University of Illinois at Urbana-Champaign (UIUC) overseeing a ~ 30,000 sqft research facility including ~ 150 instrumentation for microstructural, optical, electrical and chemical characterization and nano/microfabrication of materials, operated by ~ 20 scientific staff. Since 1998 Mauro has been also responsible for education and training of hundreds of students and researchers in the field of X-ray scattering, in addition to contributing to instrument development in the area and research achievements in several materials of particular interest to the AVS community (novel nitride and oxide thin films grown by sputtering, pulsed laser deposition and molecular beam epitaxy). Under Mauro's leadership the FS-MRL facilities enable full access of thousands of students from any part of the country to state-of-the-art instrumentation and training in various research fields. The facilities support ~ 1,000 active users per year, with over 100,000 hours of usage. In addition to over 50 publications in the field, Mauro has also edited and co-authored a book on materials characterization particularly aimed to young scientists starting in the area.



Mentoring: for more than 20 years Mauro has played an active role in educating and training thousands of students in the areas of X-ray scattering, thin film grown and general materials characterization. Approximately 75% of the users of the FS-MRL research facilities are undergraduate and graduate students, which underlines Mauro's educational mission. With a Hispanic ethnic background himself, Mauro has had an active role in outreach programs to integrate minorities in science and engineering by organizing tours and lab demos for the UIUC Society for Women Engineers (see attached photo from an April 15 recruiting event), the Society of Hispanic Professional Engineers and annual science camp for high-school students at the FS-MRL. Within the local community Mauro has also been an active, licensed sports coach helping several minority children to integrate in the society and participate in healthy activities. Ten years ago Mauro started the Advanced Materials Characterization Workshop at the UIUC, geared toward beginners in the field. This event has now grown to be one of the largest materials characterization workshops in the country attended by hundreds of researchers, mostly students, and over 20 corporate sponsors every year. Mauro has also been engaged in the organization of other events such as the annual Bio Conference at the UIUC in addition of the 2012 AVS Prairie Chapter Symposium and the 2013 AVS Applied Surface Analysis Symposium both held at the UIUC. Mauro is also a currently advisor of the AVS Student Chapter at the UIUC which aims to promote AVS awareness and recruit young scientists to the society.

Short Bio: Mauro Sardela received his Ph.D. degree in materials science from Linköping University, Sweden (1994) working on thin film growth, X-ray scattering and device fabrication under Prof. G.V. Hansson, in collaboration with Drs. J.-E. Sundgren and L. Hultman. Previously, Mauro was awarded a M.Sc. degree in Physics from University of São Paulo, Brazil (1988). He held a post-doctoral appointment at the UIUC working with laser-assisted thin film grown under Profs. J.E. Greene and I. Petrov (1994-1996). Mauro was also principal analyst at Evans Analytical Laboratories (1996-1998) working with surface analytical techniques. Since 1998 Mauro has been senior research scientist at the FS-MRL; he became the director of FS-MRL central research facilities in 2015.