UNIVERSITY OF MIAMI

CAST
CENTER FOR AEROSOL SCIENCE AND TECHNOLOGY
UNIVERSITY OF MIAMI

4th Miami Workshop on Aerosol Science and Technology
Summer School in Winter
January 15 to 16, 2026
University of Miami
Program Agenda

Time	Title	Speaker/Moderator
1/15/2026, Thursday **Frost Institute of Chemistry and Molecular Science** 1201 Memorial Dr, Coral Gables, FL 33146		
8:00 to 8:40	Breakfast	
8:40 to 8:45	Opening Remarks	
Session I: Tutorials on Aerosol Science and Technology		
8:45 to 9:35	Tutorial I: Portable and wearable sensors: design and applications	Pratim Biswas
9:45 to 10:35	Tutorial II: Microplastics and PFAS: sources, characterizations, and toxicity	Virender Sharma
10:45 to 11:35	Tutorial III: Modeling the climate impact of atmospheric aerosols	Siyuan Wang
11:35 to 13:30	Lunch	
13:30 to 14:20	Tutorial IV: Theoretical basis of optical particle measurement/characterization	Malvern Panalytical
Session II: Particle Instrument Hands-on Demonstration		Chang-Yu Wu Yang Wang
14:30 to 15:00	Flash Talks from Particle Instrument Industrial Attendees	
15:00 to 17:00	Hands-on Demonstration and Lab Tour Malvern Panalytical, Handix LLC, TSI Inc., Magee Scientific, and Others	
17:00 to 17:20	Group Picture	
1/16/2026, Friday **Frost Institute of Chemistry and Molecular Science** 1201 Memorial Dr, Coral Gables, FL 33146		
8:00 to 9:00	Breakfast	
Session III.a: Malvern Panalytical and Netzsch Special Session on Advanced Materials Characterizations (Room A)		Samiul Amin
9:00 to 12:00	Presentations and discussions covering targeted drug delivery, sprays, nanoparticle characterization, and pharmaceuticals	Malvern Panalytical
Session III.b: Fire Emissions and Public Health (Room B)		Chang-Yu Wu Trishul Siddharthan
9:00 to 9:30	Epidemiological perspectives on air quality	Jon Samet
9:30 to 10:00	Air quality and firefighter health	Erin Kobetz
10:00 to 10:15	Health effects of aerosols from fire emissions	Philip Demokritou
10:15 to 10:30	Air quality, sleep, and respiratory health	Trishul Siddharthan
10:15 to 10:30	Fire emission and planning from prescribed burns	Holly Nowell
10:30 to 11:30	Panel Discussion moderated by Chang-Yu Wu and Trishul Siddharthan	
11:30 to 14:00	Lunch and Poster Session (In-person Only)	

Session IV.a: Nanoparticle Technology: Synthesis, Characterization and Applications (Room A)		Samiul Amin Dibyendu Mukherjee
14:00 to 14:30	Advanced characterization of functional nanomaterials	Aristide Dogariu
14:30 to 15:00	Industrial applications of nanomaterials	Kristen Prinn
15:00 to 15:15	Environmental impact of functional nanomaterials	Delia Shelton
15:15 to 15:30	Technical presentation	TBD
15:30 to 15:45	Technical presentation	TBD
15:45 to 16:30	Panel Discussion moderated by Samiul Amin and Dibyendu Mukherjee	
Session IV.b: Coastal Aerosols and Novel Observation Techniques (Room B)		Cassandra Gaston Yang Wang
14:00 to 14:30	Harmful algal blooms and coastal aerosols	Andrew Ault
14:30 to 15:00	Satellite observation of atmospheric aerosols: a NASA perspective	Lauren Zamora
15:00 to 15:15	Technical presentation	TBD
15:15 to 15:30	Technical presentation	TBD
15:30 to 15:45	Technical presentation	TBD
15:45 to 16:30	Panel Discussion moderated by Cassandra Gaston and Yang Wang	
16:30	Closing	

Speakers and Workshop Convenors:

Samiul Amin, Professor of Practice of the Department of Chemical, Environmental and Materials Engineering, University of Miami

Andrew Ault, Professor of Chemistry, University of Michigan

Pratim Biswas, Professor of the Department of Chemical, Environmental and Materials Engineering & Department of Atmospheric Science, Member of the National Academy of Engineering, University of Miami

Philip Demokritou, Henry Rutgers Chair and Professor, Department of Nanoscience and Environmental Bioengineering, Rutgers School of Public Health

Aristide Dogariu, UCF Trustee Chair Pegasus Professor, Optics & Photonics, University of Central Florida

Cassandra Gaston, Associate Professor of the Department of Atmospheric Sciences, University of Miami

Erin Kobetz, Vice President for Health Promotion and Chief Wellbeing Officer, John K. and Judy H. Schulte Senior Endowed Chair in Cancer Research, Miller School of Medicine, University of Miami

Jiayu Li, Assistant Professor of the Department of Mechanical and Aerospace Engineering, University of Miami

Daniel Mangel, Malvern Panalytical Inc.

Dibyendu Mukherjee, Associate Professor of Practice of the Department of Chemical, Environmental and Materials Engineering, University of Miami

Holly Nowell, Smoke Science Program Director, Tall Timbers Research Station and Land Conservancy

Kristen Prinn, Principal Scientist Allergan/Abbvie

Ragy Ragheb, Malvern Panalytical Inc.

Jon Samet, Professor of Department of Environmental & Occupational Health and Department of Epidemiology, Colorado School of Public Health

Delia Shelton, Assistant Professor, Department of Biology, University of Miami

Trishul Siddharthan, Associate Professor, Pulmonary, Critical Care and Sleep Medicine, Miller School of Medicine, University of Miami

Virender Sharma, Professor of Practice of the Department of Chemical, Environmental and Materials Engineering, University of Miami

Siyuan Wang, Associate Professor of the Department of Atmospheric Sciences, University of Miami

Yang Wang, Assistant Professor of the Department of Chemical, Environmental and Materials Engineering, University of Miami

Chang-Yu Wu, Professor and Chair of the Department of Chemical, Environmental and Materials Engineering, University of Miami

Lauren Zamora, Associate Research Scientist at the Earth System Science Interdisciplinary Center (ESSIC), University of Maryland

Paquita Zuidema, Professor and Chair of the Department of Atmospheric Sciences, University of Miami