



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

Time	Title	Speaker/Moderator
<u>1/15/2026, Thursday</u>		
<u>Frost Institute of Chemistry and Molecular Science</u>		
<u>1201 Memorial Dr, Coral Gables, FL 33146</u>		
8:00 to 8:40	Breakfast	
8:40 to 8:45	Opening Remarks by Dean Vincent Omachonu	
Session 1: 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	
Session 2: Particle Instrument Hands-on Demonstration		Chang-Yu Wu Yang Wang
13:30 to 14:00	Flash Talks from corporate attendees	
14:00 to 14:10	Group Picture	
14:10 to 17:00	Hands-on Demonstration: Malvern Panalytical, Netzsch, Aerosol Dynamics Inc., QuantAQ, TSI Inc., OpenCPC, Palas GmbH	
<u>1/16/2026, Friday</u>		
<u>Shalala Student Center</u>		
<u>1330 Miller Dr, Coral Gables, FL 33146</u>		
8:00 to 8:50	Breakfast	
8:50 to 9:00	Opening Remarks by Dean Benjamin Kirtman	
Session 3.a: Malvern Panalytical - Netzsch Special Session on Advanced Materials Characterizations (304 Activities Room North)		Samiul Amin
9:00 to 9:50	Characterizing nanoparticles using nanoparticle tracking analysis, dynamic light scattering, and electrophoretic light scattering: studying size, zeta potential, and concentration	Ragy Ragheb
9:50 to 10:15	Overview of surface area and density measurement technology used in pharmaceutical manufacturing	Jack Saad



10:15 to 11:05	Using rheology to characterize sprayable materials to eliminate sedimentation, optimize atomization and improve absorption	Philip Rolfe
11:05 to 11:30	Q&A and discussion	
Session 3.b: Fire Emissions and Public Health (306 Activities Room South)		Chang-Yu Wu Trishul Siddharthan
9:00 to 9:30	Epidemiology and air pollution	Jon Samet
9:30 to 10:00	Air quality and firefighter health	Erin Kobetz
10:00 to 10:15	The Environment-Health-Climate Nexus of Wildfires and the role of carbonaceous aerosols	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 4.a: Nanoparticle Technology: Synthesis, Characterization and Applications (304 Activities Room North)		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 15:30	Synthesis of metastable and disordered ceramic nanocomposites via non-equilibrium laser ablation techniques	Dibyendu Mukherjee
15:30 to 15:45	Shielding your skin: preventing cancer with sustainable sunscreen	Delia Shelton
15:45 to 16:30	Panel Discussion moderated by Samiul Amin and Dibyendu Mukherjee	
Session 4.b: Coastal Aerosols and Novel Observation Techniques (306 Activities Room South)		Cassandra Gaston Yang Wang
14:00 to 14:30	Harmful algal blooms and coastal aerosols	Andrew Ault
14:30 to 15:00	Exploring aerosols and aerosol-cloud interactions with NASA data	Lauren Zamora
15:00 to 15:15	Coastal water pollution and implications on air quality	Helena Solo-Gabriele
15:15 to 15:30	Air pollution in Miami – a community perspective	Camilo Mejia
15:30 to 15:45	Standard methods for quantifying microplastics	Sungyoon Jung
15:45 to 16:30	Panel Discussion moderated by Cassandra Gaston	
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

Helena Solo-Gabriele, Professor of the Department of Chemical, Environmental and Materials Engineering, University of Miami

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

Sungyoon Jung, Assistant Professor of the Department of Environmental Engineering Sciences, University of Florida

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

Benjamin Kirtman, Professor and Dean, Rosenstiel School of Marine, Atmospheric, and Earth Science, University of Miami

Camilo Mejia, Senior Director of Policy & Advocacy, Catalyst Miami

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

Vincent Omachonu, Professor and Dean, College of Engineering, University of Miami

Kristen Prinn, Principal Scientist Allergan/Abbvie

Ragy Ragheb, Senior Application Specialist, Malvern Panalytical Inc.

Ashish Rai, Senior R&D Manager, Cabot Corporation

Philip Rolfe, Rheology Product Manager & Sales, Netzsch

Jack Saad, Lab Manager, 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