



2nd Miami Workshop on Aerosol Science and Technology
Summer School in Winter
January 10 to 12, 2024
University of Miami
PROGRAM AGENDA

| Time | Title | Speaker/Moderator |
|---|--|---|
| 1/10/2024, Wednesday | | |
| Rosenstiel School of Marine, Atmospheric, and Earth Science, Auditorium | | |
| 13:00 to 13:50 | Tutorial I: Fundamentals of Aerosol Science and Technology | Pratim Biswas |
| 14:00 to 14:50 | Tutorial II: Low-cost Air Quality Sensor Calibration and Deployment | Jiayu Li |
| 15:00 to 15:50 | Tutorial III: Instrumentation for Particle Measurement | Yang Wang |
| 16:00 to 16:50 | Tutorial IV: Nanomaterial Synthesis, Characterization, and Application | Samiul Amin Pratim Biswas |
| 17:00 | Happy hour at Salt Waterfront Cafeteria | |
| 1/11/2024, Thursday | | |
| Frost Institute of Chemistry and Molecular Science, 1st Floor Seminar Room and 3rd Floor Lab | | |
| 8:00 to 8:50 | Breakfast | |
| 8:50 to 9:00 | Opening Remarks | |
| Session I: Nanoparticle Technology: Synthesis, Characterization and Applications | | Samiul Amin Yang Wang Pratim Biswas |
| 9:00 to 9:30 | Particle technology and its application to energy area | Woojin An |
| 9:30 to 10:00 | Life Cycle Assessments (LCA) Application in Framing Environmental Policies | Sarah Torkamani |
| 10:00 to 10:15 | Flame synthesized Pd-TiO ₂ catalysts for oxygen removal from CO ₂ -rich streams in oxy-combustion exhausts | Sungyoon Jung |
| 10:15 to 10:30 | Advancing materials synthesis and printing technologies with aerosol-based routes | Shalinee Kavadiya |
| 10:30 to 10:45 | Advanced nanomaterials for catalytic CO ₂ conversion to value-added products | Ying Li |
| 10:45 to 11:30 | Panel Discussion moderated by Pratim Biswas and Dibyendu Mukherjee | |
| 11:30 to 14:00 | Lunch and Poster Session (In-person Only) Three-Minute Research (3MR) Student Competition | |
| Session II: Particle Instrument Hands-on Demonstration | | Chang-Yu Wu Yang Wang |
| 14:00 to 14:30 | Introduction from Aerosol Instrument Industrial Attendees | |
| 14:30 to 16:00 | Hands-on Demonstration – Industrial attendees include: TSI, Handix, Particles Plus, Sunset Laboratory | |
| 16:00 to 17:00 | Group Picture and Lab Tour | |
| 1/12/2024, Friday | | |
| Frost Institute of Chemistry and Molecular Science | | |
| 8:00 to 9:00 | Breakfast | |
| Session III: Aerosols and Public Health | | Chang-Yu Wu |



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| | | Robert Makuch |
| 9:00 to 9:30 | An overview of the elusive pathway: airborne infection transmission | Donald Milton |
| 9:30 to 10:00 | Health effects of particulate matter air pollution under climate change | Kai Chen |
| 10:00 to 10:15 | NIOSH research to reduce exposure to airborne SARS-CoV-2 during the COVID-19 pandemic | Bill Lindsley |
| 10:15 to 10:30 | Health effects from wildfire smoke exposure | Ana Rappold |
| 10:30 to 10:45 | Clearing the Air: Key insights into leveraging low-cost air quality sensors and machine learning to investigate indoor PM _{2.5} from wildfire smoke | Eric Coker |
| 10:45 to 11:30 | Panel Discussion moderated by Chang-Yu Wu and Robert Makuch | |
| 11:30 to 14:00 | Lunch and Poster Session (In-person Only) | |
| Session IV: Aerosol and Dust Measurement | | Paquita Zuidema Joseph Prospero |
| 14:00 to 14:30 | Identification and measurement of dust events, and the impact these dust particles have on air quality and human health | Karin Ardon-Dryer |
| 14:30 to 15:00 | Urban new particle formation in Houston | Shanhu Lee |
| 15:00 to 15:30 | Laboratory studies of biomass burning emissions from African biomass fuels and research | Solomon Bililign |
| 15:30 to 15:45 | Exposure to indoor air pollution in hotels & restaurants | Howook Chang |
| 15:45 to 16:30 | Panel Discussion moderated by Paquita Zuidema and Joseph Prospero | |
| 16:30 | Closing | |

Speakers and Workshop Convenors:

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

Woojin An, Electrode Process Technology Manager at StarPlus Energy (Samsung SDI – Stellantis JV)

Karin Ardon-Dryer, Assistant Professor of the Department of Geosciences, Texas Tech University

Solomon Bililign, Professor of the Department of Physics, North Carolina Agricultural and Technical State University

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

Howook Chang, Associate Professor of the Chaplin School of Hospitality & Tourism Management, Florida International University

Kai Chen, Assistant Professor of Epidemiology (Environmental Health), Yale University

Eric Coker, Senior Scientist at the British Columbia Center for Disease Control Environmental Health Services (EHS) Program



Sungyoon Jung, Assistant Professor of Engineering School of Sustainable Infrastructure & Environment, University of Florida

Shalinee Kavadiya, Research Scientist of the Department of Chemical, Environmental and Materials Engineering, University of Miami

Shanhu Lee, Professor of the Department of Atmospheric and Earth Science, University of Alabama in Huntsville

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

Ying Li, Professor of the Department of Mechanical Engineering, Texas A&M University

Bill Lindsley, Research Biomedical Engineer of the National Institute for Occupational Safety and Health (NIOSH)

Donald Milton, Professor of Environmental Health at the University of Maryland School of Public Health, University of Maryland

Joseph M. Prospero, Professor Emeritus of the Department of Atmospheric Science & the Cooperative Institute for Marine and Atmospheric Studies, Rosenstiel School of Marine, Atmospheric, and Earth Science, University of Miami

Ana Rappold, Scientist of the Environmental Protection Agency

Sarah Torkamani, Director of Environmental & Energy Policy at Air Products and Chemicals, Inc.

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

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