

NOSA Symposium 2021

15th to 17th of March, 2021



Program

(all times in CET)

Monday March 15th

12:00-12:15	Welcome and practicalities: Dr. Risto Makkonen, NOSA president
12:15-13:00	Keynote: Dr. Julia Schmale, " <i>Arctic Aerosol Processes and Insights from MOSAiC and Other Research Efforts</i> "
13:00-13:15	Break
13:15-14:20	Oral session: <i>Observations and measurement techniques</i>
14:20-14:40	Break
14:40-15:40	Tutorial: Dr. Ralph Kahn, " <i>Wildfire smoke, desert dust, volcanic ash, urban and industrial pollution: What we are learning about airborne particles from space-based remote sensing</i> "
15:40-15:55	Break
15:55-17:00	Oral session: <i>Basic aerosol processes and atmospheric aerosol studies</i>

Tuesday March 16th

12:00-12:15	Presentation of NOSA ECS Aerosologist Award
12:15-13:00	Keynote: Dr. Otmar Schmidt, " <i>Aerosol Inhalation and Relevance for COVID-19</i> "
13:00-13:15	Break
13:15-14:20	"Poster session": 2-minute talks followed by discussion in breakout rooms
14:20-14:40	Break (discussion rooms remain open)
14:40-15:45	Oral session: <i>Aerosols and health</i>
15:45-15:55	Break
15:55-17:00	Oral session: <i>Atmospheric aerosol studies</i>

Wednesday March 17th

12:00-13:00	Tutorial: Dr. Moa Sporre, " <i>Biogenic Volatile Organic Compounds (BVOC) Climate Effects in Global Models</i> "
13:00-13:15	Break
13:15-14:20	"Poster session": 2-minute talks followed by discussion in breakout rooms
14:20-14:40	Break (discussion rooms remain open)
14:40-15:45	Oral session: <i>Atmospheric aerosol studies</i>
15:45-15:55	Break
15:55-17:00	Oral session: <i>Basic aerosol processes</i>

Oral session schedule:

Monday March 15th	Tuesday March 16th	Wednesday March 17th
Observations and measurement techniques		
<p>13:15-13:20 Sponsor presentation (TBC)</p> <p>13:20-13:35 Lisa Beck <i>“Above the boreal forest (300-3000 m asl): what does the composition of negative ions tell us about new particle formation?”</i></p> <p>13:35-13:50 Daniel Thomas <i>“The optical properties and radiative forcing potential of aerosols in Northeastern Greenland”</i></p> <p>13:50-14:05 Dominik Stolzenburg <i>“Cluster Dynamics Resolved: Combining instrument inversions for sub-10 nm aerosol measurements.”</i></p> <p>14:05-14:20 Milla Friman <i>“Utilization of scattering and absorption-based particulate matter sensors in the environment impacted by residential wood combustion.”</i></p>	<p>“Poster session” See schedule below</p>	<p>“Poster session” See schedule below</p>
14:20-14:40: Break	14:20-14:40: Break	14:20-14:40: Break
	Aerosols and health	Atmospheric aerosol studies
Tutorial	<p>14:40-14:45 Sponsor presentation (TBC)</p> <p>14:45-15:00 Mike Priestly <i>“Are wood pellets a cleaner fuel source than wood logs for residential wood combustion?”</i></p> <p>15:00-15:15 Malin Alsved <i>“Droplet, aerosol, and SARS-CoV-2 emissions during singing and talking.”</i></p> <p>15:15-15:30 Julia Dobric <i>“Estimating minute ventilation from accelerometer data to assess individual exposure of air pollution in preschool children.”</i></p>	<p>14:40-14:45 Sponsor presentation (TBC)</p> <p>14:45-15:00 Marje Prank <i>“Modelling the impact of marine organic emissions on stratocumulus clouds using a large eddy simulator with detailed aerosol processes.”</i></p> <p>15:00-15:15 Martin B. Enghoff [TITLE MISSING]</p> <p>15:15-15:30 Joonas Merikanto <i>“How Asian aerosols impact surface temperatures across the globe.”</i></p>

	15:30-15:45 Madeleine P. Sjögren "Aerosol nanoparticle lung deposition as a method for measuring alveolar dimensions."	15:30-15:45 Ingeborg R. Julsrud "Dimming and brightening in observations and CMIP6."
15:40-15:55: Break	15:40-15:55: Break	15:40-15:55: Break
Basic aerosol processes/atmos. aerosol studies	Atmospheric aerosol studies	Basic aerosol processes
<p>15:55-16:00 Sponsor presentation (TBC)</p> <p>16:00-16:15 Jenni Kontkanen "Growth of sub-10 nm atmospheric particles in the presence of sulfuric acid and organic vapors."</p> <p>16:15-16:30 Carlton Xavier "A modeling study to understand the chemical and meteorological effects on New particle Formation at Mt Zeppelin, Ny-Ålesund".</p> <p>16:30-16:45 Robin W. de Jonge "Improved mechanistic understanding of the formation and growth of secondary aerosol particles from dimethyl sulfide - a modeling study based on smog chamber experiments."</p> <p>16:45-17:00 Pontus Roldin "Mechanistic understanding of the biological, meteorological, chemical and microphysics conditions driving atmospheric new particle formation events in coastal Antarctica."</p>	<p>15:55-16:00 Sponsor presentation (TBC)</p> <p>16:00-16:15 Tina Šantl-Temkiv "Bioaerosol partitioning between the interstitial and the condensed phase in mixed-phase clouds."</p> <p>16:15-16:30 Thomas B. Kristensen "Ambient concentrations of ice nucleating particles in Southern Sweden with significant links to aerosol properties."</p> <p>16:30-16:45 Jonas Jacobson "Characteristics of the Lund University Cold Stage (LUCS) in measurements of ambient INP concentrations and time-dependency experiments."</p> <p>16:45-17:00 Olli Pakarinen "Effect of water confinement on heterogeneous ice nucleation."</p>	<p>15:55-16:00: Sponsor presentation (TBC)</p> <p>16:00-16:15 Sigurd Christiansen "Sea spray aerosols: Particle size distributions and CCN activity during the initial phytoplankton growth on the Faroe Shelf."</p> <p>16:15-16:30 Bernhard Reischl "Collision rate enhancement of atmospheric molecules, ions, and clusters, due to long-range interactions."</p> <p>16:30-16:45 Nanna Mylly "Easy proxies to estimate new particle formation rates."</p> <p>16:45-17:00 Melissa Meder "Elucidating formation pathways of highly oxygenated organic molecules (HOM) from α-pinene ozonolysis using selective deuteration."</p>

Poster session schedule: each session has 8 x 2-minute presentations by poster presenter, before splitting into two discussion rooms

13:15-14:20	Tuesday March 16th	Wednesday March 17th
<p>Parallel session 1</p>	<p>Breakout room 1.1: "Aerosol observations"</p> <p>Jakob Pernov "Trend analysis of aerosol particle physical properties at Villum Research Station, Northern Greenland"</p> <p>Adam Kristensson "The aerosol chase"</p> <p>Freja Hasager "Impact of Relative Humidity on Aerosol Light Scattering in the High Arctic"</p> <p>Asta Gregorič "Characterization of black carbon sources in Longyearbyen (Svalbard): local vs. regional contribution"</p> <p>Breakout room 1.2: "Aerosols and health/air quality"</p> <p>Sara Thuresson "Air sampling of SARS-CoV-2 in a hospital setting"</p> <p>Jorge Vidal "Influence of electric buses to observed lung deposited surface area (LDSA) concentrations in urban environments – preliminary results."</p> <p>Yeanice Vasquez "Integrating low-cost sensor in air quality networks with official and advanced monitoring systems to study source of PM2.5 in the cities of Talca and Maule Chile- Preliminary results"</p> <p>Luis Barreira "In-depth characterization of particulate matter at a street canyon site in Northern Europe"</p>	<p>Breakout room 1.1: "Aerosol sources"</p> <p>Kimmo Teinilä "Particulate sources in residential area in Helsinki"</p> <p>Sofia Ahumada "Comparison of source apportionment and elements concentrations of PM2.5 in four Chilean cities."</p> <p>Fanni Mylläri "Black Carbon and secondary emissions from a 100 MW heating plant firing wood pellets"</p> <p>Christian Mark Salvador "Contribution of Secondary Chemistry in the Formation of Nitro-Aromatic Compounds in Rural China"</p> <p>Breakout room 1.2: "Global aerosols"</p> <p>Haruka Matsumoto "The Effect of Forbush Decreases on Atmospheric Aerosols and Clouds from The PATMOS-x Satellite from 1978 to 2018"</p> <p>Putian Zhou "A simulation of SOA over Green Sahara in Mid-Holocene period"</p> <p>Tommi Bergman "Evaluation of a Secondary Organic Aerosol and New Particle Formation Scheme within TM5-MP"</p> <p>Dominic Samra "Modelling Mineral Snowflakes on Gas-Giant and Ultra-Hot Exoplanets"</p>
<p>Parallel session 2</p>	<p>Breakout room 2.1: "Aerosols and ice nuclei/clouds"</p> <p>Kevin Cheuk Hang Sze "Do residential biomass heat stoves comprise a source of ice nucleating particles?"</p> <p>Jonathan Duplissy "Can viruses act as ice nuclei and enhance clouds glaciation?"</p> <p>Athanasios Nenes "Understanding when hydrometer formation is driven by aerosol variations"</p>	<p>Breakout room 2.1: "Aerosol simulations/technology"</p> <p>Valtteri Tikkanen "Molecular dynamics simulations of homogeneous CO2 nucleation"</p> <p>Franz Kanngiesser "Modelling depolarisation by complex sea salt aerosol particles"</p> <p>Markus Snellman "Continuous Gas-phase Synthesis of Core-shell Nanoparticles via Surface Segregation"</p>

Erik Thomson *“Effects of Marine Fuel Sulfur Content and Abatement measures on Cloud Forming Particle Emissions”*

Breakout room 2.2: “Aerosols and chemistry”

Siddharth Iyer *“Molecular mechanism for rapid autoxidation in alpha-pinene ozonolysis”*

Shawon Barua *“Investigation of aldehyde oxidation chemistry leading to the rapid formation of highly oxygenated organic molecules (HOM)”*

Ditte Thomsen *“Discrepancy in Formation of Secondary Organic Aerosol from Structurally Similar Monoterpenes”*

Noora Hyttinen *“Gas-to-particle partitioning of cyclohexene- and α -pinene-derived HOM dimers evaluated using COSMOtherm”*

Namsoon Eom *“General Trends in Core-shell Preferences for Bimetallic Nanoparticles”*

Breakout room 2.2: “Black carbon”

Teemu Lepistö *“Connection between ambient black carbon (BC) and lung deposited surface area (LDSA) concentrations – preliminary results”*

Laura Salo *“Comparing BC instrument responses to primary, fresh, and aged exhaust aerosol”*

Balint Alfoldy *“Determination of Black Carbon Emission Factors by Combining the Aethalometer Model with Multi-linear Regression Method – a Case Study of Ljubljana, Slovenia”*

Lovisa Nilsson *“Laboratory study of single particle soot photometer (SP2) response to soot of different maturity”*