

Electrostatics
Society of America



2026 ANNUAL MEETING OF THE ELECTROSTATICS SOCIETY OF AMERICA

June 14-17, 2026

Cocoa Beach, Florida, United States

General Chair: Monica Hooks, NASA Kennedy Space Center, USA

Technical Chairs: Dr. Charlie Buhler, NASA Kennedy Space Center, USA

Dr. Simon Jantac, ISTA, Austria

Preliminary Program

Sunday, June 14th

08:30 – 09:00	Registration
09:00 – 10:30	Tutorial Session A
10:30 – 11:00	Coffee Break
11:00 – 12:30	Tutorial Session B
12:30 – 13:30	Lunch
13:30 – 15:00	Tutorial Session C
15:00 – 15:30	Coffee Break
15:30 – 17:00	Tutorial Session D
17:00 – 19:00	Informal Reception

Monday, June 15th

06:45 – 07:30	Registration & Breakfast
07:30 – 07:40	Welcome Address
07:40 – 08:30	<u>Keynote I</u> : Scott Waitukaitis
08:30 – 08:40	<i>Coffee Break</i>
08:40 – 10:20	<u>Session A</u> : Contact charging and triboelectric effects
10:20 – 10:40	<i>Coffee Break</i>
10:40 – 12:00	<u>Session B</u> : Charge motion and static dissipation & Dielectrics and insulators
12:00 – 13:00	<i>Lunch</i>
13:00 – 14:40	<u>Session C</u> : Atmospheric and space applications
14:40 – 14:50	<i>Coffee Break</i>
14:50 – 16:10	<u>Session D</u> : Atmospheric and space applications & Contact charging and triboelectric effects
16:10 – 16:20	<i>Coffee Break</i>
16:20 – 17:20	<u>Session E</u> : Contact charging and triboelectric effects
17:30 – 19:30	Poster Presentation

Tuesday, June 16th

07:00 – 07:40	Registration & Breakfast
07:40 – 08:30	<u>Keynote II</u> : Elena Besley
08:30 – 08:40	<i>Coffee Break</i>
08:40 – 10:20	<u>Session F</u> : Measurements and instrumentation & Safety and hazards
10:20 – 10:40	<i>Coffee Break</i>
10:40 – 12:00	<u>Session G</u> : Electrohydrodynamics

12:00 – 13:40	<i>Lunch & ESA Business Meeting</i>
13:40 – 14:40	<u>Session H:</u> Contact charging and triboelectric effects
14:40 – 14:50	<i>Coffee Break</i>
14:50 – 16:10	<u>Session I:</u> Breakdown, gas discharges and plasmas
16:10 – 16:20	<i>Coffee Break</i>
16:20 – 17:20	<u>Session J:</u> Breakdown, gas discharges and plasmas
17:20 – 17:30	<i>Coffee Break</i>
17:30 – 18:10	<u>Session K:</u> Electrostatic manipulation of particles, droplets, and biological cells

Wednesday, June 17th

07:00 – 07:40	Breakfast
07:40 – 08:30	<u>Keynote III:</u> Mihály Horányi
08:30 – 08:40	<i>Coffee Break</i>
08:40 – 10:40	<u>Session L:</u> Special technical session on electrostatic discharge
10:40 – 11:00	<i>Coffee Break</i>
11:00 – 12:00	<u>Session M:</u> Electrostatic precipitation & Electrostatic processes and technologies
12:00 – 13:00	<i>Lunch</i>
13:00 – 14:40	<u>Session N:</u> Electrospinning and electrospraying & Biological and medical applications
14:40 – 14:50	<i>Coffee Break</i>
14:50 – 16:10	<u>Session O:</u> Contact charging and triboelectric effects
16:10 – 16:20	<i>Coffee Break</i>
16:20 – 17:20	<u>Session P:</u> Contact charging and triboelectric effects
17:30 – 19:00	<i>Happy Hour</i>
19:00 – 21:00	<i>Conference Banquet, Recognitions and Awards</i>

Note: Keynote Lectures are 40 min + 10 min for questions; Regular Talks are 15 min + 5 min for questions

Preliminary Presentation Schedule

Names in bold are student presentations.

Monday, June 15th

07:40 – 08:30	Scott Waitukaitis – Adventitious carbon breaks symmetry in oxide contact electrification
08:30 – 08:40	<i>Coffee Break</i>
08:40 – 09:00	Lilian Hsiao – Contact electrification and electrostatic induction in porous elastomers
09:00 – 09:20	Xu Deng – Hand-powered interfacial electric-field-enhanced water disinfection system
09:20 – 09:40	Hermann Nienhaus – A model system` the electrification of Au spheres upon contact with doped H:Si(111) surfaces
09:40 – 10:00	Andre Mölleken – Charge localization in contact electrification detected for a rotating sphere
10:00 – 10:20	Rolf Moeller – Contact electrification between dielectric oxides and metals for different surface preparations
10:20 – 10:40	<i>Coffee Break</i>
10:40 – 11:00	Mario Navarro Rodríguez – Analysis of Surface Charge Dynamics with AFM: Theory and Experiment
11:00 – 11:20	Anthony Dinsmore – Cohesion, Brittle Fracture, and weeks-long charge decay in negatively-charged piles of hydrophobic grains
11:20 – 11:40	Enrique Montero – Spectrally resolved Photon-Induced Electron Detachment from Plasma-Charged Fused Silica
11:40 – 12:00	Noah Hollingsworth – Experimental studies of electrostatic breakdown from charged dielectrics
12:00 – 13:00	<i>Lunch</i>
13:00 – 13:20	Jade Delea – Electrostatic effects on dust emission and radionuclide dispersion
13:20 – 13:40	Joseph Minow – Electrostatic Charging and Arcing of International Space Station Solar Arrays
13:40 – 14:00	Masato Adachi – Lunar Regolith Removal Using an Electrodynamic Dust Shield Under Charging Source Irradiation
14:00 – 14:20	Anatalya Piatigorsky – The Evolution of Atmospheric Charged Dust as Cloud Condensation Nuclei
14:20 – 14:40	Krystal Acosta – Electrostatic Characterization of Lunar Dust Simulants
14:40 – 14:50	<i>Coffee Break</i>
14:50 – 15:10	Joseph DeRienzo – Electrostatics on the Moon: Performance Testing of the LEDM Tool at PLANET
15:10 – 15:30	Markus Felber – Studying contact electrification of identical metals with acoustic levitation

15:30 – 15:50	Melissa Buys – Triboelectric Charging of Mesh Objects in a Discrete Element Method Simulation Framework for Lunar Surface Applications
15:50 – 16:10	Thomas Gemine – Experimental Study of Triboelectric Charging of Granular Materials Transported by Airflow
16:10 – 16:20	<i>Coffee Break</i>
16:20 – 16:40	Saykat Poddar – Eulerian Models for Electrostatic Phenomena in Gas–Particle Flows
16:40 – 17:00	Ben Christensen – The effect of electrostatic forces on the rheology of granular flows
17:00 – 17:20	Robert Vermillion: CubeSats Require ESD Qualification and Handling Protocols for Launch & Space Survivability
17:30 – 19:30	<i>Poster Presentation</i>

Tuesday, June 16th

07:40 – 08:30	Elena Besley – Recent developments in the methods and applications of electrostatic theory.
08:30 – 08:40	<i>Coffee Break</i>
08:40 – 09:00	Chadi El Hamdouchi – Investigation of the relationship between electrostatic probe signals and the degree of static build up in a gas–solid fluidized bed
09:00 – 09:20	Aurélien Neveu – Evaluation of powder triboelectric properties: a must have for material optimization
09:20 – 09:40	Rahaf Bahajry – Characterization of Triboelectrically Charged Microparticles via Aerosol Instrumentation
09:40 – 10:00	Tatsushi Matsuyama – Charge Generation from Showerheads
10:00 – 10:20	Jacques De Beer – Static Electricity Practices Applied to the Petrochemical Industry
10:20 – 10:40	<i>Coffee Break</i>
10:40 – 11:00	A K M Monayem Mazumder – Numerical Study on a Two–Stage EHD Gas Pump with One–inch–wide Grounded Electrode
11:00 – 11:20	Nathan Croll Dawes – Time–Resolved Stroboscopic Studies of Field–Induced Droplet Ionisation of Nanolitre Droplets: Investigation of Oscillations and Jetting Dynamics
11:20 – 11:40	Schuyler Arn – The electrostatic charge on exuded liquid drops
11:40 – 12:00	Matthew Catuccio – Dielectrophoretically Enhanced Pool Boiling in Zero– and Multi–gravity Environment Aboard Blue Origin New Shepard Flight
12:00 – 13:40	<i>Lunch & ESA Business Meeting</i>
13:40 – 14:00	Holger Grosshans – A novel apparatus for particle–particle single contact triboelectrification experiments
14:00 – 14:20	Zemene Tegegn – Is Electronegativity a Driving Force for Triboelectric Charging?
14:20 – 14:40	Felix Pertl – Spontaneous Formation of Charged Rings after Droplet Evaporation
14:40 – 14:50	<i>Coffee Break</i>

14:50 – 15:10	Nadarajah Manivannan – Optical Emission Spectroscopic Analysis of a Non–Thermal Plasma DBD Jet with various Feed Gases
15:10 – 15:30	Seth Gerow – Investigating similarity law and the secondary electron emission using experimental Paschen curves
15:30 – 15:50	Poupak Mehrani – Contribution of Argon and its Concentration as a Static Charge Mitigation Technique in Gas–phase Polyethylene Fluidized Bed Reactors
15:50 – 16:10	Charles Durfee – Integrated electrical, optical and computational investigations of near–threshold electrostatic sparks
16:10 – 16:20	<i>Coffee Break</i>
16:20 – 16:40	Sarah Hinnegan – Physics and Applications of Ultraviolet Laser Triggering of Electrostatic Discharges
16:40 – 17:00	Calvin Bavor – Energy Partitioning between Spark Channel and Victim Load in Threshold Electrostatic Discharge Events Characterized with Varying Electrical Parameters
17:00 – 17:20	Joshua Méndez Harper: Shining Light on Glowing Pickles
17:20 – 17:30	<i>Coffee Break</i>
17:30 – 17:50	Niels Smith – Electric Forces on Conducting Spheres in Millimeter Sized High–Voltage Gaps
17:50 – 18:10	Justin Burton – Electrostatics facilitate midair host attachment in parasitic jumping nematodes

Wednesday, June 17th

07:40 – 08:30	Mihály Horányi – Dust charging in space and the laboratory
08:30 – 08:40	<i>Coffee Break</i>
08:40 – 09:00	Chuck McClain – ESD in Space: What Changes When You Leave Earth?
09:00 – 09:20	Chuck McClain – Space Suit Triboelectrification & Static Decay: Materials, Mechanisms, and Risk
09:20 – 09:40	David E. Swenson – Electrostatic Charging Risks in Polymer Containers: Induced Charging, Handling, and Discharge Hazards
09:40 – 10:00	Jay Skolnik – Static Control in Explosive Manufacturing: Process Aids, Fixtures, and Tooling as Hidden Risk Drivers
10:00 – 10:20	David E. Swenson – Shock in the Shower: Everyday Electrostatics Causing Repeated Shocks & Fires
10:20 – 10:40	Carl Newberg – Industry Standards – What is Working and What Is Not – Status of Standards Activities in Electrostatic Control
10:40 – 11:00	<i>Coffee Break</i>
11:00 – 11:20	Hak Joon Kim – A Novel Wearable Respiratory Protection System Combining an Air Curtain Shield and Two-Stage Curved Electrostatic Precipitation
11:20 – 11:40	Gwangtaek Lee – Design and Optimization of an Ion-Spray Electrostatic Air Cleaner for Efficient Particle Removal with Low Ozone Emission

11:40 – 12:00	Benjamin Hotte – Electric Vehicle Battery Material Upgrading using Contact Charging and Electrostatic Free-Fall Separation
12:00 – 13:00	<i>Lunch</i>
13:00 – 13:20	Matthew McLaughlin – Water-Borne Self-Limiting Electrospray Deposition for Post-Processing of Additive Manufacturing
13:20 – 13:40	Manoj Kumar Patel – Advanced Aerial Electrostatic Spraying Technology for Agricultural Pest Management and Control
13:40 – 14:00	Lei Zhai – Functional Electrospun Nanofibers with Embedded Nanoparticles
14:00 – 14:20	Morgan Tatge – Parallel Immersed Finite Element Particle-In-Cell (PIFE-PIC) Simulations of Bipolar Ionic Electrospray Thruster Plume
14:20 – 14:40	Shreyashi Kumar – Harnessing Nature's Needles: A Bio-Sourced Alternative to Microneedle Arrays for Transdermal Drug Delivery
14:40 – 14:50	<i>Coffee Break</i>
14:50 – 15:10	John Hoffman – Binding affinity controls ion transfer in ionomer contact electrification
15:10 – 15:30	Nicolás Mujica – Particle size scaling of non-Gaussian granular charge distributions. Experiments and microscopic model.
15:30 – 15:50	Gustavo Castillo – Impact of Initial Charge Distributions on the Kinetics of Charged Particle Coagulation
15:50 – 16:10	Thiago Burgo – Evaporation-Induced Charging of Water Droplets in Air and on Dielectric Surfaces
16:10 – 16:20	<i>Coffee Break</i>
16:20 – 16:40	James Chen – Dipole model for particles with heterogenous surface charges in turbulent flow
16:40 – 17:00	Rutvik Lathia – Slide Electrification of Liquid and Ice
17:00 – 17:20	Simon Jantač – Bipolar charging of dissimilar materials
TBD	<i>Conference Banquet, Recognitions and Awards</i>

Poster Presentations

No	Name – Title
1	Jonathan Singer – Theory of SLEDeverything
2	Ashish Jindal – Preliminary Design Model for Pin-to-Plane Breakdown with Dielectric Film
3	Maciej Noras – Long-Term Characterization Platform for Dielectric Properties Under Thermal and Field Stress
4	Kushal Yadav – Triboelectric charge generation in porous elastomer
5	Tomás Cerda – Charge in Leidenfrost Droplets
6	Adrian Ieta – Characterization of Ionic Wind in Oxygen-Containing Gas Mixtures Using a Rotary Ionic Engine (RIE)
7	Milton Neto – Electrostatic Charging in 3D Printing: Triboelectric Generator with Printed Electrets

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| 8 | Mizuki Shoyama – Electrostatic Discharges in an Industrial-Scale Powder Silo under Controlled Humidity Conditions |
| 9 | Misaki Oki – Effects of Charging Lunar Regolith Using an Electron Gun on the Removal Performance of an Electrodynastic Dust Shield |
| 10 | Takuto Hibi – Self-healing wire system based on dielectrophoretic assembly of metallic nanoparticles under low-pressure conditions |
| 11 | Brandon Doyle – Gas-Dust Interactions in an Afterglow Plasma |
| 12 | Maximillian Daughtry – Characterizing Triboelectric Charge on Regolith Simulants |