



**2019 Annual Meeting of the AES Electrophoresis Society @ SciX**  
**October 13-16 2019; Palm Springs Convention Center, Palm Springs, CA**  
 Thanks to our organizers Adam Woolley and Sagnik Basuray!

Visit [www.aesociety.org](http://www.aesociety.org) for a comprehensive resource on electrokinetics, microfluidics and related techniques

## SUNDAY PROGRAM, October 13th

**Sunday Keynote: Sunday October 13<sup>th</sup>, 6:15–7 pm - *The Convergence of Measurement and Data Sciences: A Great Exchange***

Prof. Rohit Bharghava (University of Illinois).

**AES Blue Fingers Award for Anna V. Nielsen, Sunday 10/13/19, 7:30 - 9:00 pm, Renaissance Ballroom**

The AES Blue Fingers Student Award recognizes the most outstanding student paper submitted for the AES Annual Conference by a graduate student. This award is presented as part of the student award ceremony at SciX.

**(19MPAES) 9:45 AM - 10:45 AM - AES POSTER SESSION**  
 Location: Primrose Lobby  
 Sponsored by [Springer](http://Springer.com) and [Wiley](http://Wiley.com)

**Workshop: Electrokinetic Microfluidics: Theory and Hands-on Simulations, 9 am-noon**

Prof. Cornelius (Neil) Ivory, Washington State University  
**Cost:** \$25 for students, \$225 for conferee and \$325 for non-conferee.  
 Sign up for the workshop during conference registration.

**Partial Description:** This 3-hour workshop will focus on applying electrokinetic theory to relevant subjects on a number of microfluidic platforms including capillaries and microchips.

**8:30 AM: PLENARY - *Digitizing Endocrine Tissue Secretions into Nanoliter Droplets for Analysis of Hormones and Metabolites at High Temporal Resolution***  
**AES Electrophoresis Mid-Career Award Plenary**  
 by Prof. Christopher J. Easley  
 Location: Primrose A



**ELECTROPHORESIS**

**MONDAY, October 14**

**TUESDAY, October 15**

**WEDNESDAY, October 16**

**(19AES01) Electrokinetic Fundamentals**  
 Location: Mesquite D  
 Chairs: Aliaksei Boika & Karina Torres Castro

**(19AES04) 3D Printed Microfluidics: New Materials and New Applications**  
 Location: Mesquite D  
 Chairs: Scott Martin & Ana Egatz



**(19AWD07) AES Mid-Career Award Symposium Honoring Chris Easley**  
 Location: Mesquite D  
 Chairs: Jason Dwyer & Chris Harrison

**Morning Session**

10:50	Gigantic Dielectrophoresis of Proteins in Solution Author: Dmitry Matyushov
11:10	Exploiting Dielectrophoresis to Separate Single Walled Carbon Nanotubes Author: Alexandra Ros
11:30	AC Electrokinetic Phenomena in Electroanalysis Author: Aliaksei Boika
11:50	Strategies for dynamic particle manipulation and assessment employing insulator-based dielectrophoresis Author: Blanca Lapizco-Encinas
12:10	A Parallelized in Flow Electrorotation Platform with Individual Control on the Trapping and Release of Single Cells Author: Kevin Keim

9:15	Miniaturizing 3D Printed Microfluidics: Materials, Tools, and Trends Author: Greg P. Nordin
9:35	Electron Microscopy Sample Preparation Systems Fabricated by 3D Printing Author: Michael Roper
9:55	Realizing the Potential of Polyjet 3D Printing Author: Andre Castiaux
10:15	3D Printed Analytical Tools for Quantitative Studies of Human Health Author: Cody Pinger
10:35	3D Printed Microfluidic Devices for Immunoaffinity Extraction of Preterm Birth Risk Biomarkers Author: Adam Woolley

9:15	Microfluidic Systems for Studying the Gut Microbiome Author: Charles Henry
9:35	Electrophoretic Analysis of Small Molecules Released from Islets of Langerhans Author: Michael Roper
9:55	Integrating Microfluidic-based Cell Culture with Analysis Author: Scott Martin
10:15	Selective Assembly and Analysis of Cell Clusters at an Array of Bipolar Electrodes Author: Robbyn Anand
10:35	3D Printed Integrated Microfluidic Devices for Extraction, Fluorescence Labeling, and Separation of Preterm Birth Biomarkers Author: Anna Nielsen, AES Blue Fingers Awardee

**12:30 - 1:30 pm - Lunch with Leaders. Register online: [www.aesociety.org](http://www.aesociety.org) Limited seats. Location: Santa Rosa**

**11:45 AM- 1:15 PM**  
**Business Meeting - Location: Ventura (Renaissance)**  
**Brownbag lunch available in Exhibit Hall. Visit Exhibition.**

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	<b>MONDAY, October 14</b>		<b>TUESDAY, October 15</b>		<b>WEDNESDAY, October 16</b>		
<b>1:30-3:10 PM</b>	<b>(19AES02) Electrokinetic Applications</b> Location: Mesquite D Chairs: Jeffrey Moran & Anna Nielsen		<b>(19AES08) Biological and Pharmaceutical Applications</b> Location: Mesquite D Chairs: Wenwan Zhong & Mike Beauchamp		<b>(19AES05) Biosensors</b> Location: Mesquite D Chairs: Erin Henslee & Rucha Natu		
	1:30	Breaking the Diagnostic Barrier for Hemoglobinopathies in Low-resource Settings with Electrophoresis Author: Umut Gurkan	1:30	Isolation and concentration of proteins and small complex bioparticles with electric fields Author: Mark Hayes	1:30	High-throughput Deterministic Ratchet Devices for Organelle Separation Author: Mukul Sonker	
	1:50	Self-electrophoretic Microswimmers for Wastewater Treatment and Remediation Author: Jeffrey L. Moran	1:50	Capillary Electrophoresis-mass Spectrometry for Top-down Proteomics Author: Liangliang Sun	1:50	Detecting Single Nucleotide Polymorphism with Giant Magnetoresistive Biosensor Author: Todd Klein	
	2:10	Electrophysiology of Biosorbent: Cupriavidus Necator Author: Anthony Giduthuri	2:10	Silica Fluorination - A Novel Electroosmotic Flow Control Approach Author: Christopher Harrison	2:10	An Integrated Microfluidic Device with Nano-Magnetic Bead Capturing for Cancer-Derived Extracellular Vesicle Characterization Author: Chenguang Zhang	
	2:30	Electrokinetic Determination of Solution Phase Kinetic Properties at Microfluidic Liquid Interfaces Author: Md Nazibul Islam	2:30	Characterization of Molecular and Biomolecular Interactions with Lipid Bilayers Using Nanodisc Affinity Capillary Electrophoresis Author: Christopher Palmer	2:30	Borrowing from Packed Bed Reactors: A flow-through, nano-porous, shear-enhanced electrode for electrochemical spectroscopy - A sensitive and selective Biosensor Author: Sagnik Basuray	
	2:50	Perspectives on Selected Dielectrophoresis Platforms for Particle Separations Author: Rodrigo Martinez-Duarte	2:50	Monitoring Phosphorylation and Methylation of Histone Peptides Using Host-assisted Capillary Electrophoresis Author: Wenwan Zhong	2:50	Dielectrophoresis for electrophysiologic-based biosensors Author: Erin Henslee	
<b>(19MPAES) 3:15 PM - 3:45 PM - AES POSTER SESSION</b> Location: Primrose Lobby Sponsored by <a href="#">Springer and Wiley</a>							
<b>3:50-5:30 PM</b>	<b>(19AES03) ACS ANYL-AES Joint Session: Micro/Nano Scale Analytics Driven by Electric Fields</b> Location: Mesquite D Chairs: Mark Hayes & Lane Baker		<b>(19AES06) AES: Leaders in the Field</b> Location: Mesquite D Chairs: Adam Woolley & Sagnik Basuray		<b>(19AWD09) AES Lifetime Achievement Award Session Honoring Hsueh-Chia Chang</b> Location: Mesquite D Chairs: Satyajyoti Senapati & Gongchen Sun		
	3:50	Analysis of Protein-Protein Interactions by Capillary Electrophoresis Author: Robert Kennedy	3:50	Precision Medicine Is Advanced by Profiling Cellular-to-molecular Diversity Using Electrophoretic Cytometry Author: Amy Herr	3:50	Isolation, Fractionation and Analysis of Exosomes Author: Hsueh-Chia Chang	
	4:10	Multi-detector approaches for improved resolution in capillary electrophoresis Author: Christopher Baker	4:25	3D-printed Tools for Quantitative Bioanalysis Author: Dana Spence	4:30	Therapy, Immune Disease Treatment, and Regenerative Medicine Author: James Lee	
	4:30	DNA Sequence-specific Enrichment Using Isotachophoresis Author: Juan Santiago	5:00	Microfluidic Organic Chemical Analyzers for Detection of Solar System Biosignatures Author: Richard Mathies	5:00	Acoustic-electric Interactions at Micron and Nanometre Scales Author: Leslie Yeo	
	4:50	Single-particle Analysis of Virus Capsid Assembly by Resistive-pulse Sensing Author: Stephen Jacobson					
5:10	Electrokinetic Assessment of Bacteriophage Virus Author: Adriana Coll De Peña						
<b>6:00-7:30 PM</b>	<b>Dinner on your own</b>		<b>6:30-8:00 PM</b>	<b>Dinner on your own with self-assembly at The Renaissance Hotel Lobby at 6:30 PM</b>		<b>6:30-10:00 PM</b>	<b>BANQUET – INCLUDED EVENT</b> <i>A Night at the Oscars and an Oscars After Party</i> <i>Look for AES Member Walk of Fame Stars</i>

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Contact: Matt Hoelter Executive Director 1202 Ann St Madison, WI 53713 Tel: 608-258-1565 Fax: 608-258-1569 [Matt@aesociety.org](mailto:Matt@aesociety.org)