

**NCCAVS Joint Users Group Technical Symposium**  
“Process, Materials, and Technology Innovation for Smart Devices, Displays, and  
Internet of Things”  
Hosted by: CMPUG, JTG, PAG and TFUG

*Held in conjunction with the NCCAVS 39th Annual Equipment Exhibition  
and 7<sup>th</sup> Annual Student Poster Session*

Holiday Inn San Jose-Silicon Valley  
1350 N. First Street  
San Jose, CA  
Thursday, February 22, 2018  
10:00 a.m. – 7:00 p.m.

**\*\*\*FREE TO ATTEND; Parking Validation\*\*\***  
**[REGISTER NOW!](#)**  
*(includes exhibit attendance)*

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**COMMITTEE:**

**Chair:** Susan Felch, [sfelch@sbcglobal.net](mailto:sfelch@sbcglobal.net)

**Exhibit Chair:** Chris Malocsay, [chris\\_malocsay@avs.org](mailto:chris_malocsay@avs.org)

**Poster Session Chair:** Renee Sully, [hsully@ucsc.edu](mailto:hsully@ucsc.edu)

**CMPUG:** Gautam Banerjee

**JTG:** Michael Current

**PAG:** Lucia Feng, Kamatchi Subramanian

**TFUG:** Cesar Clavero, Zoran Misetich, Michael Oye, Sean Seefeld, Sing-Pin Tay, Paul Werbaneth

**FINAL AGENDA:**

10:00-10:05am Introduction and Welcome, Susan Felch

**Session Chairs: Cesar Clavero, Michael Oye**

10:05-10:45am **Plenary Speaker, Milena Vujosevic**, “Reliability for the 21<sup>st</sup> Century: Meeting Challenges of New Technologies and New Markets”

10:45-11:15am **Patricia Beck, Thin Film Electronics**, “Development and R2R Scale up of a Hybrid Printed CMOS Silicon TFT Process”

11:15am-11:45pm **Duane Bingaman, Kurt J. Lesker Company**, "Tool Design Considerations for Advanced Atomic Layer Deposition"

**11:45-1:30pm FREE LUNCH In Exhibit Hall – Visit Equipment Exhibition**

**Session Chairs: Sing-Pin Tay, Michael Current**

1:30-2:00pm **Andre Anders, Lawrence Berkeley National Laboratory, Leibniz Institute of Surface Engineering**, "Electron Heating in Sputtering Magnetrons"

2:00-2:30pm **George Guo, Ascentool Inc.**, "Plasma-based Thin Film Depositions: Applications, Limitations, Our Improvements, and Case Studies in Battery, Photovoltaic, Non-volatile Memory, and Medical Devices Applications"

2:30-3:00pm **Guowen Ding, Labforinvention Corp.**, "A New Materials Innovation Methodology in Thin Film Optical Coating Applications"

**3:00-3:20pm BREAK**

**Session Chairs: Paul Werbaneth, Susan Felch**

3:20-3:50pm **Frank Papa, Gencoa**, "A Quantitative Approach to Optical Emission Spectroscopy"

3:50-4:20 **Ernest Demaray, Demaray LLC**, "Thin Film Roadmap for Solid State Li Metal Batteries"

4:20-4:35pm **Robert Cormia, Foothill College**, "Foothill College Electron Microscopy Training and Nanoscience Program"

**4:35-4:45 Closing Remarks**

**4:45-6:15pm STUDENT POSTER SESSION**

**Poster Session Chair – Renee Sully**

**Judges: Michael Current, Susan Felch, Yanika Snider, and Wenonah Vercoutere**

**Michael Roders, UCSC**, "Characterization of Charge Transport Networks in Non-fullerene Bulk Heterojunction Thin Films"

**Ryan Robinson, San Jose State University**, "Thin Filmed PbSe Colloidal Quantum Dot Semiconductors with Passivated Oleic Ligands for High Efficiency Photovoltaics"

**Michael Pham, Oak Grove High School**, "The Development of a Solid State Fixed Wing Aircraft Powered by an Electro-Aerodynamic Thruster"

**Martina Morelli and Andrea Cruz, UCSC**, "Pseudocapacitive Materials for Low Temperature Supercapacitance"

**David Fryauf, UCSC**, "Scaling Atomic Layer Deposition to Astronomical Sizes: Low Temperature Aluminum Oxide Deposition in a 0.9 Meter Chamber"

**Renee Sully, UCSC**, "X-ray Absorption Studies of Doped Semiconductor Quantum Dots"

**Brian Giraldo, UCSC**, "Atomic Layer Deposition of Non-conformal Low Dimensional ZnO Thin Films"

**John Davenport, UCSC**, "Directly Probing Quantum Hall Physics in Graphene with Tunneling Transistors"

**Faiza Anjum, UCSC**, "Study of off-stoichiometric aluminum nitride thin films: A simple method of fabricating Distributed Bragg Reflector for ultraviolet A by RF magnetron sputtering"

**Sponsorship**

*To sponsor this Joint User Group meeting please select the Silver level sponsorship only. Please refer to the [NCCAVS User Group Sponsorship form](#) for details.*