

Advance Program – Second Annual REPP

Symposium on Reliability for Electronics and Photonics Packaging

Reliability, Failure Modes and Testing for Integration of Electronics and Photonics (SiPho)

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11-12 November 2021 Silicon Valley, CA USA

REPP'21 is planned to be a *hybrid event*, with both *in-person* and *WebEx* participation

This symposium will focus on quantified reliability, accelerated testing and probabilistic assessments of the useful lifetime of electronic, photonic, MEMS and MOEMS materials, assemblies, packages and systems in electronics and photonics packaging. This includes failure modes, mechanisms, testing schemes, accelerated testing, stress levels, and environmental stresses.

The intent is to bring together electrical, reliability, materials, mechanical, and computer engineers and applied scientists to address the state-of-the-art in all the interconnected fields of electronic and photonic packaging, with an emphasis on various reliability-related aspects: design-for-reliability, manufacturing, reliability modeling and accelerated testing.

Everyone can attend virtually (via WebEx). In addition, we plan to allow about 50 registrants to attend in person at SEMI Hdqtrs, Milpitas. **Register today!**

Plenary Talks

“Random Failure Reduction: Strategy for Advanced Semiconductor Device Production”, Dr. Antai Xu, Xilinx



“Do You Know What’s Hiding in Your Supply Chain?”, Dr. Kitty Pearsall, EPS President-Elect

“Making Digital Twins Work”, Prof. Kouchi Zhang, University of Delft



“Silicon Photonics: Integration, Reliability Challenges and Future Requirements”, Nan Wang, Cisco Systems

Tutorial: “Solder-Based Interconnect Reliability”

Workshop: “Reliability for Heterogeneous Integration”

INVITED TALKS:

Prof. Albert Wang (UC Riverside) – ESD Protection Designs

Prof. C. M. Tan (Chang Gung U.) – Degradation of High-power LED Packaging

Michael Liu (JCET) – Testing HI & Supply Chain Implications

Dr. Fen Chen (GM Cruise) – In-vehicle Display Technology Dev’t

Dr. Artimisia Tsiara (IMEC) – Overview and Challenges of Silicon Photonics Device Reliability

Prof. Hong Bin Yu (ASU) – Strain Measurement Technique

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Selected Listing of Presentations:

HPE – Co-Design Methodology for Reliable 3D-Integrated DWDM Silicon Photonics

Silicon Photonics

PSU – Analytical modeling for microelectronics and photonics reliability engineering

reliability engineering

Intel – Advanced Package Technologies and Reliability Challenges

Fraunhofer – Flip-Chip BGA for High-Performance Vehicle Computers

... and more!

Plan to join us in Silicon Valley (or via WebEx) for this Symposium!

Registration: \$35 for IEEE Members, \$45 for General Admission (\$10 more after October 31st)

Special rates for unemployed and students.

View the latest information about this year’s REPP: attend.ieee.org/repp

View videos of 11 talks from the 2020 REPP: [View Videos of 2020 Talks](#)

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