2024 IEEE Symposium on Reliability for Electronics and Photonics Packaging Reliability, Failure Modes and Testing for Integration of Electronics and Photonics (SiPho)
Theme: Reliability for Advanced Semiconductor Packaging

Day 1 - November 7 2024 (Thursday)

Start Time	Duration	End Time	Session Type	Speaker Name	Title	Affiliation
Session 1. Reliability for Thermal, Mechanical and Cooling Systems [Chair: Ranjan, Patrick]						
07:30	00:30	08:00	Breakfast and Coffee			
08:00	00:15	08:15	Welcome	Tiwei Wei, Zhihong Chen	Introduction and welcome	Purdue University
08:15	00:35	08:50	Plenary speaker	Patrick F McCluskey	Reliability and Availability of Novel Data Center Cooling Systems	University of Maryland
08:50	00:30	09:20	Keynote Speaker	Amy Marconnet	Reliability for Thermal interface materials	Purdue
09:20	00:25	09:45	Invited talk	Amr Haggag	TBD/ will be on datacenter cooling	Arm
09:45	00:20	10:05	Coffee Break			
10:05	00:30	10:35	Keynote Speaker	Sreekant Narumanchi	Reliability of Bonded Interface Materials for Power Electronics	NREL
10:35	00:25	11:00	Invited talk	Sriknath Rangarajan	Reliability modeling of liquid cooled data centers	Binghamton
11:00	00:25	11:25	Invited talk	Ryan Enright	Device cryo reliability	Seguente
11:25	00:20	11:45	Technical Presentation	Alexander Hillström	Experiences of Electronics Packaging at Scania: Challenges and Opportunities	Mälardalen University
11:45	01:00	12:45	Lunch Break / Poster Presentations			
Session 2. Reliability for Analog/RF, Quantum, and Power Integrated Circuits [Chair: Hualiang, Srikanth]						
12:45	00:35	13:20	Plenary speaker	Alex Grill	Cryogenic CMOS Technologies for Quantum Computing Systems	IMEC
13:20	00:20	13:40	Technical Presentation	Kaiying Jiang	Pool Boiling Performance and Reliability of Copper and Nickel Inverse Opal Structures	Stanford University
13:40	00:25	14:05	Invited talk	Luigi Balestra	Characterization and Modelling of Epoxy Mold Compounds for High-Voltage Integrated-Circuit Packages	University of Bologna
14:05	00:30	14:35	Keynote Speaker	Reza Ghaffarian	HALT & TC Reliability of QFN Assemblies w/wo Urathane Coating	JPL
14:35	00:20	14:55	Coffee Break			
14:55	00:20	15:15	Technical Presentation	Pranay Nagrani	Accelerated Degradation of Thermal Greases under Mechanical Cycling	Purdue University
15:15	00:20	15:35	Technical Presentation	Joaquin Matres	GDS Factory: Build Better Hardware with Better Software	Google-X / GDSFactory
15:35	00:20	15:55	Technical Presentation	Ritwik Kulkarni	Impact of Non-Flat Coldplate Surface on Degradation of Thermal Greases	Purdue University
15:55	00:25	16:20	Invited talk	Yan Li	Fault Isolation and Failure Analysis Challenges in Microelectronic Devices with Heterogeneous Integration: EDFAS FA Technology Roadmap Overview	Samsung Advanced Packaging
16:20	00:25	16:45	Invited talk	Shubhra Bansal	Electromigration and Thermomigration Behavior of Cu Microbumps in Stacked Die Assembly	Purdue University
16:45	00:50	17:35	**Purdue - Birck Microelectronics Cleanroom (Packaging Facilities) tour**			
17:35	00:25	18:00	**Break and move to the restaurant**			
18:00	Evening		**Host dinners at West Lafayette restaurants**			

2024 IEEE Symposium on Reliability for Electronics and Photonics Packaging Reliability, Failure Modes and Testing for Integration of Electronics and Photonics (SiPho)
Theme: Reliability for Advanced Semiconductor Packaging

Day 2 - November 8 2024 (Friday)

Start Time	Duration	End Time	Session Type	Speaker Name	Title	Affiliation
Session 3. Reliability for Photonics [Chair:Farnood Rezaie, David]						
07:30	00:30	08:00	Breakfast and Coffee			
08:00	00:15	08:15	Welcome	Farnood, Ganesh	Introduction and welcome	Purdue University
08:15	00:35	08:50	Plenary speaker	Surya Bhattacharya	Electronic Photonic Heterogeneous Integration for Compact Optical Transceivers and Co-packaged Optical Engines	A*STAR Institute of Microelectronics (IME), Singapore
08:50	00:30	09:20	Keynote Speaker	Vanessa Smet	Insights into the Reliability of Advanced Glass Packages	Georgia Institute of Technology
09:20	00:20	09:40	Technical Presentation	Yifan Yao	Electromigration failure caused by interdiffusion between Al trace and Cu seed layer in the microbump in 3D IC	City University of Hong Kong
09:40	00:30	10:10	Invited Talk	David Coenen	Thermal Management of Hybrid Integrated Lasers in Si Photonics	IMEC
10:10	00:20	10:30	Coffee Break			
10:30	00:35	11:05	Plenary speaker	Ganesh Subbarayan	Computational Modeling of Crack Initiation and Growth in BEOL Structures	Purdue University
11:05	00:25	11:30	Invited talk	Jason Zhang; Xiaorong Xiong	Embedded Multi-die Interconnect Bridge (EMIB) family and 3D Foveros	Intel
11:30	00:20	11:50	Technical Presentation	Shuhang Lyu	Reliability Investigations for Scaling 3D Interconnects in Advanced Semiconductor Packaging	Purdue University
11:50	00:25	12:15	Invited talk	Oguzhan Orkut Okudur; Mario Gonzalez	Mechanical Integrity of Hybrid Bonding	IMEC
12:15	01:00	13:15	Lunch Break / Poster Presentations			
Session 4. Reliability, Metrology for Advanced Packaging, 3D Interconnects, in AI, HPC [Chair: Vanessa, Abhijit]						
13:15	00:35	13:50	Plenary speaker	Abhijit Dasgupta	Reliability of Microelectronic Interconnections: The Microstructure Matters!	University of Maryland
13:50	00:30	14:20	Keynote Speaker	Bill King	Reliability for cooling, boiling	UIUC
14:20	00:30	14:50	Keynote Speaker	David Huitink	Addressing TIM Degradation in Lifetime Prediction of Data Center CPU/GPUs: Testing Methodology, Failure Definition and Performance of TIMs	University of Arkansas
14:50	00:20	15:10	Technical Presentation	Gabor Harsanyi	Reliability Problems of Optoactive Materials in LED Packaging	Budapest University of Technology and Economics
15:10	00:20	15:30	Coffee Break			
15:30	00:30	16:00	Keynote Speaker	Yoonjin Won	Monitoring the Reliability of Two-Phase Flows Using Machine Learning Strategies	University of California Irvine
16:00	00:20	16:20	Technical Presentation	Michael Blattau	LED Reliability Factors on IMS PCBs	Ansys
16:20	00:20	16:40	Technical Presentation	Jack (Kai-chieh) Chiang	Simulations of reliability issues in microelectronic packages	Purdue University
16:40	00:20	17:00	Technical Presentation	Zhenliang Pan	Study of TSV Microstructure Evolution through Monte Carlo Potts Model with Grain Boundary Energy and Mobility Considerations	Purdue University
17:00	01:00	18:00	**Purdue Lab Tour**			

Parking Instructions

Purdue offers parking spaces for all in-person attendees.

Plenary, keynote, and invited talk speakers can park closer to Birck, free of charge, along Burton Morgan Dr. Please use any open space marked with a sign that says “IEEE Seminar.”

For all guests, daily parking is available for $5 through the Purdue Parking Portal. Go to Get Permits -> Visitor Permits -> Guest Login, and create a guest account. You’ll need to enter your license plate number. A physical printout of permit is not required. You may park on Discovery Parking lot anywhere labeled permit “A,” “B,” or “C” with a valid visitor permit. For more information and additional parking options, please visit Purdue University Parking.