ABOUT EPTC

The 24th IEEE Electronics Packaging Technology Conference (EPTC2022) is an international event organized by the IEEE RS/EPS/EDS Singapore Chapters and co-sponsored by the IEEE Electronics Packaging Society (EPS). Since its inauguration in 1997, EPTC has been established as a highly reputed international electronics packaging conference and is the EPS flagship conference in the Asia-Pacific Region. It aims to cover the complete spectrum of electronics packaging technology. Topics include modules, components, materials, equipment technology, assembly, reliability, interconnect design, device and systems packaging, heterogeneous integration, wafer-level packaging, flexible electronics, LED, IoT, 5G, emerging technologies, 2.5D/3D integration technology, smart manufacturing, automation and AI. EPTC2022 conference will feature keynote talks, technical sessions, technology talks, an exhibition and networking activities.

The EPTC technical program committee, with more than 100 experts from diverse technology areas in semiconductor packaging, is committed to creating an engaging technical program for the international packaging community. Technology Corner Exhibits will supplement the technical program, which will allow leading companies to exhibit their latest technologies and products. Last year, the 23rd EPTC was conducted on a virtual platform due to the pandemic. More than 496 attended from more than 30 countries worldwide, with 150 video presentations across 26 technical sessions. This year the conference will be in-person. Currently, fully-vaccinated persons need not be tested to enter Singapore, and no quarantine period is necessary.

CONFERENCE TOPICS

You are invited to submit abstract(s) on new research findings and developments in the following packaging categories:

**Advanced Packaging**: Flip-chip, 2.5D & 3D, embedded passives & actives on substrates, chiplets, System in Packaging, embedded chip packaging technologies, panel-level packaging, RF, microwave & millimeter-wave, Power and Rugged Electronics Packaging, advanced packaging solutions for 5G, IoT, cloud computing, autonomous vehicles, antennas, sensors, power transfer, EM shielding, RF to THz communications.

**TSV/Wafer Level Packaging**: Wafer-level packaging, embedded chip packaging, 2.5D/3D integration, Silicon, SiC & Glass interposer, CoWoS, FoCoS, InFo, eWLB, Embedded Multi-die Interconnect Bridge (EMIB), bumping technologies.

**Interconnection Technologies**: Au/Ag/Cu/Al wire-bond / wedge bond technology, Flip-Chip & Cu pillar, solder alternatives, Cu to Cu, wafer-level bonding & die attachment (Pb-free), Fan-out, panel-level, chiplets, SiP, micro-bump, high I/O thermocompression/hybrid bonding, fine-pitch/multi-layer RDL, printable interconnects, conductive/ non-conductive adhesives, low-temperature solder, interconnects design and technology for emerging applications.

**Emerging Technologies**: Novel and unique packaging and material technologies for soft and intelligent packaging, flexible hybrid electronics, implantable biosensors and bioelectronics, packaging for extreme harsh environments, green/bio-resorbable packaging, packaging of MEMS & NEMS, packaging for wide bandgap devices, quantum computing, electro-optical integration, AI, ML, packaging sensing and communication.

**Materials and Processing**: Photoresist, polymer dielectrics, solder, die-attach, underfill, substrates, lead-frames, materials for wafer & panel-level packaging; harsh environments, wafer bonding/debond materials, emerging electronic materials & processes, novel solder metallurgies, molding compounds, thermal interface materials, advanced wire-bonding, conductive adhesives, PCB for advanced packaging, assembly processes using newer materials. Advances in process technology for large/ultra-large packages (SiP, SIM, MCP), high power, high frequency 5G/RF packaging, TSV and 3D stacking – chip to wafer, wafer to wafer bonding, collective die to the wafer.

**Assembly and Manufacturing Technology**: Embedded/hybrid package manufacturing processes, waarpload control and management in board-level assembly, thin die/package handling and assembly advance in flexible and printed electronics, large/ultra-large package (SiP, SIM, MCP) integration and processing, thermally enhanced packaging and assembly challenges. advances in additive manufacturing for packaging substrates, equipment parts, chiplets – assembly challenges, materials and integration.

**Electrical Simulation & Characterization**: Power plane modelling, signal integrity analysis by simulations and characterization, 2D/2.5D/3D package level high-speed signal design, characterization, and test methodologies.

**Mechanical Simulation & Characterization**: Thermal-mechanical interaction study, moisture, fracture, fatigue, dynamic impact modelling and characterization, process modelling.

**Thermal Characterization & Management**: Thermal characterization and simulation, component, system and product level thermal management and characterization.

**Quality, Reliability & Failure Analysis**: Silicon, component, board and system-level reliability assessment, interfacial adhesion, accelerated testing, failure characterization.

**Advanced Optoelectronics and Displays**: Design, simulation, interconnection, packaging, integration and materials for optoelectronics and novel displays - micro/multi/nano LED, foldable and flexible displays, Augmented Reality and Virtual Reality and wearable displays, Si and III-V photonics, optical sensors, interconnects, interposers, quantum device packaging, photonics SiP, free-space optical communications, waveguide, automotive photonics, 3D sensing, optoelectronic fiber coupling assembly, materials and reliability, fiber optic transceivers.
IMPORTANT DATES

- Online abstract submission start: April 20, 2022
- Closing of abstract submission: July 15, 2022
- Notification of acceptance: August 1, 2022

Please check [http://www.eptc-ieee.net](http://www.eptc-ieee.net) for the latest updates.

**ABSTRACT AND PAPER SUBMISSION**

You are invited to submit an abstract between 500–750 words long and clearly state the purpose, methodology, results (including data, drawings, graphs and photographs) and conclusions of the work. Additional details on abstract submission can be found on the EPTC website. Abstracts must be received by July 15, 2022. Your submission must be cleared by your management and co-authors and include the authors' affiliations and email addresses. All submissions should be made in English, either in pdf or MS Words format. Please select the appropriate technical committee per your abstract content from the drop-down list so that the right technical committee can evaluate your submission for acceptance. Accepted abstracts will be notified for the full paper submission with instructions for publication by August 1, 2022. At the discretion of the technical committee, submitted abstracts may be considered for interactive presentation. The final manuscript for publication in the conference proceedings is due on September 10, 2022. The conference proceeding is an official IEEE publication, and the accepted papers that are registered and presented (oral & interactive) will be available in IEEE Xplore.

**BEST PAPER AWARDS**

Awards in the form of cash and certificates will be given to the best oral papers from Academia, Industry and Students. More details are available on the EPTC website.

**CALL FOR TECHNOLOGY TALKS**

We invite industry and academic experts in packaging R&D and manufacturing supplier industries (materials, equipment and services) on technology innovation, challenges, potential gaps, and product and services road map. More details are updated on the conference website, and technological talk proposals can be submitted at technicalchair@eptc-ieee.net.

**CALL FOR PROFESSIONAL DEVELOPMENT COURSES**

More details of conference, please visit [EPTC2022 Website](http://www.eptc-ieee.net)

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**Smarter Manufacturing and Packaging Equipment Technology:** Smart Manufacturing in packaging, cycle time, data analytics, advanced metrology, Machine Learning, AI, and advanced equipment for assembly, packaging and handling.

EPTC2022 would like to offer PDCs from the industry and academic experts in electronics packaging. More details are updated on the conference website, and proposals for PDC can be submitted at pdchair@eptc-ieee.net.

**CALL FOR EXHIBITION / SPONSORSHIPS**

Detailed exhibition and sponsorship opportunities are available on the conference website. For enquiries, please email exhibition@eptc-ieee.net or sponsorship@eptc-ieee.net.

**STUDENT TRAVEL GRANTS FOR EPTC**

To widen the representation of female students and students from underrepresented countries in the electronic packaging field and to encourage these students to become members of the IEEE Electronic Packaging Society (EPS) and actively participate in the flagship conferences of the society, up to 6 Student Travel Grants will be offered for EPTC annually with at least two for female student authors and one for a student from a country historically underrepresented at EPTC.

**Financial:** Each intracontinental student would have expenses related to travel to the conference reimbursed up to US$1500, and each intercontinental student would have expenses related to travel to the conference reimbursed up to US$2100. Economy air travel would be an allowable expense, as would hotel lodging and the conference student registration fee, although the student registration fee would not be waived. Students who are not members would be required to join, but the society would reimburse their first year's dues as a travel expense.

**Judging:** Abstracts submitted with a student as the first and presenting author would be evaluated and ranked by the respective conference's technical program committee, and the top 15 abstracts for EPTC would be invited to submit an extended abstract or full paper. The awards committee would then review and rank order the submitted extended abstracts or full papers and notify the winners of their selection for the award.

**Recognition:** Winning students would be recognized in the advance program and at the awards luncheon ceremony.

**Affiliate Membership Subsidy Program at EPTC**

With the Affiliate Membership Subsidy Program (AMSP), non-member conference registrations will be offered an EPS affiliate membership for the following year at no cost. Any non-IEEE member registrant who wishes to take advantage of this will be required to submit a membership application to IEEE in the normal way, and EPS will cover the cost of the affiliate membership once the application is approved, at the cost of US$76.50 (EPS will waive its US$15 membership fee that would normally be included in the $91.50 total affiliate membership price). For more details please visit the EPTC website.