

## First Call for Papers

### First Call For Papers IEEE 66th Electronic Components and Technology Conference www.ectc.net To be held May 31st - June 3rd, 2016 at the Cosmopolitan Hotel of Las Vegas, Las Vegas, Nevada, USA

The Electronic Components and Technology Conference (ECTC) is the premier international electronics symposium that brings together the best in packaging, components and microelectronic systems science, technology and education in an environment of cooperation and technical exchange. ECTC is sponsored by the Components, Packaging and Manufacturing Technology (CPMT) Society of the IEEE. You are invited to submit abstracts that provide non-commercial information on new developments, technology and knowledge in the areas including, but not limited to as given below under each technical program subcommittee name. Authors are encouraged to review the sessions of the previous ECTC programs to determine the committee selection for their abstracts.

#### Advanced Packaging:

2.5 & 3D technologies, embedded, wafer and panel level packaging, flip chip, advanced substrates, interposers, novel assembly technologies, fan-out, internet-of-things, bio-compatible, wearables, TSVs, MEMS and sensors, heterogeneous integration, electronic (power & RF) and optoelectronic packaging.

#### Applied Reliability:

System level reliability testing/modeling, reliability test methods and life models, failure analysis techniques/physics of failure, TSV/3D reliability and packaging challenges, interconnect reliability, solder and materials characterization, drop and dynamic mechanical reliability, probabilistic design for reliability (PDR), automotive reliability requirements.

#### Assembly and Manufacturing Technology:

Advancement of packaging and manufacturing technologies in large OEMs, innovation in enabling high density packages including 3D integration, challenges and solutions of mainstream packaging and manufacturing technologies, challenges and solutions for medical applications.

#### Emerging Technologies:

Internet-of-things components: wearable electronics, flexible & stretchable electronics packaging, compact & autonomous sensor packaging; bioelectronics packaging: microfluidics and MEMS, bio-sensing packaging, new materials for bio packaging; power technologies: small form factor packaging, high power packaging; novel advanced packaging: energy harvesting electronics packaging, photovoltaic packaging, components for wireless packaging, novel approaches to packaging; complex packaging: security, redundancy, repair, directed assembly, built-in test, multifunction integration; emerging packaging concepts and technologies: organic IC & TFT, anti-counterfeiting packaging.

#### High-Speed, Wireless & Components:

Components, modules and novel packaging technology solutions for high-frequency, high-speed digital, power, and wireless applications; embedded/integrated chips & passives; signal and power integrity; sensors, RFID, RF MEMS, low-power RF design, wireless power transfer and energy harvesting; cutting-edge component/module technologies for power, RF, millimeter-wave & THz applications; bio/wearable applications, flexible & printed electronics; meta-materials, magneto-dielectric nano-composites; SiP, heterogeneous integration.

#### Interconnections:

First- and second-level interconnections: designs, structures, processes, performance, reliability (e.g., electromigration), test; technologies including TSV, interposers (Si, glass, organic), interconnections for 3D integration &

SiP, flip chip, solder bumping and Cu pillar, wafer-level packaging, wafer and panel level fan-out, advanced wirebonds, non-traditional interconnections (e.g., electrically conductive adhesives, carbon nano-tubes, graphene, optical), substrates and PCB solutions for next generation systems, system packaging and heterogeneous integration; topics of special interest include new applications in wearables, internet-of-things, cloud, and automotive electronics.

#### Materials & Processing:

Adhesives and adhesion, lead free solder, novel materials and processing; underfills, mold compounds, dielectrics, emerging materials, and processing for 2D and 3D.

#### Modeling & Simulation:

Electrical, thermal and mechanical modeling & simulation, including: component, board and system level modeling for microelectronics including 3D interconnects (TSV, stacked die), 2.5D packaging (Si interposers), wafer-level package (WLP), ball grid array (BGA), embedded packages with active and passive components, system-in-package (SiP), power electronic modules, LED packaging, MEMS; novel high-speed interconnects and power delivery architectures; fab/thin wafer handling, wire bonding and assembly manufacture process; reliability modeling related fracture mechanics, fatigue, electromigration, warpage, delamination/moisture, drop test, material constitutive relations; novel modeling including multi-scale and multi-physics techniques and solutions; measurement methodologies and correlations.

#### Optoelectronics:

Fiber optical interconnects, single mode or multicore connectors, parallel optical transceivers, silicon and III-V photonics packaging, optical chip-scale and heterogeneous integration, micro-optical system integration and photonic system-in-package, 3D photonics integration, optoelectronic assembly and reliability, materials and manufacturing technology, high-efficiency LEDs and high power lasers, integrated optical sensors.

#### Interactive Presentations:

Abstracts may be submitted related to any of the nine major program committee topics listed above. Interactive presentations of technical papers are highly encouraged at ECTC as it allows significant interaction between the presenter and attendees. It is especially suited for material that benefits from more explanation than is practical in oral presentations. Interactive presentation session papers are published and archived in equal merit with the other ECTC conference papers.

You are invited to submit an abstract of no more than 750 words that describes the scope, content, and key points of your proposed paper via the website at [www.ectc.net](http://www.ectc.net).

If you have any questions, contact:  
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Abstracts must be received by October 12, 2015. All abstracts must be submitted electronically at [www.ectc.net](http://www.ectc.net). You must include the mailing address, business telephone number, and email address of presenting author(s) and affiliations of all authors with your submission.

#### Professional Development Courses

In addition to abstracts for papers, proposals are solicited from individuals interested in teaching educational professional development courses (4 hours) on topics described in the Call for Papers. Using the format "Course Objectives/Course Outline/Who Should Attend," 200-word proposals must be submitted via the website at [www.ectc.net](http://www.ectc.net) by October 12, 2015.

If you have any questions, contact:  
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