



Thank you for attending the 2024 IEEE 74th Electronic Components and Technology Conference, sponsored by the IEEE Electronics Packaging Society (EPS)!

On behalf of the ECTC executive committee we are pleased to inform you that this year's conference has been a resounding success. We want to thank all our authors, speakers, keynote speaker, invited panelists, plenary speakers, program committee members, exhibitors, sponsors, volunteers, PDC instructors and proctors, attendees, and IEEE EPS sponsoring organization who contributed and helped us achieve this success!

Here are some conference statistics that we would like to share with you:

- 2,007 attendance represents the highest attended ECTC in its 74 years
- Highest number of abstracts submitted ever (704), 389 technical papers, presented in 36 oral and 5 interactive presentation sessions, including one dedicated to students
- Morning plenary special sessions with very high attendance
- Record 600+ attendees during technical session paper presentation
- 40 paper presentations with more than 200 attendees
- 7 Special Sessions, with a wide range of very interesting topics and international participation of experts from industry, governmental agencies, and academia
- 16 professional development courses attended by 478 participants
- Strong international representation of our technical program with speakers from 22 different countries all around the world
- Record level of industry support with 47 corporate sponsors and 51 sponsorships
- 128 exhibit booths – most exhibitors contacted so far have already committed to return next year!
- Several receptions & networking opportunities that we hope you enjoyed

We have made several changes to the format of ECTC. We continued to organize ECTC as a four-day conference after our attendees have been invited for a full special sessions program on Tuesday for the past two

ECTCs. All Tuesday sessions at ECTC 2024 again were accepted very well by our attendees. Lunch on Tuesday has been served to 1,100 registered participants, indicating an extremely strong participation on day 1. We officially opened the conference on Wednesday, the 29th of May, with our keynote speaker Prof. Keren Bergman from Columbia University with much more than 600 colleagues in attendance. This conference-wide main stage event was followed by special plenary and panel sessions the morning on Thursday and Friday again with great attendance.

The following special sessions brought different perspectives on technology trends, applications, business trends, transformational strategies, career, diversity, and workforce development topics:

- **2024 IEEE EPS President's Panel Session on Workforce**
was co-chaired by IEEE EPS president Patrick Thompson, Texas Instruments, Mark Poliks, Binghamton University, Jeff Suhling, Auburn University, and Kitty Pearsall, Boss Precision Inc. with the speakers John Oakley, Semiconductor Research Corporation, Toni Mattila, Business Finland, Robert Geer, SUNY Polytechnic University, Wenhui Zhu, Central South University (pre-recorded), and Jim Wieser, Texas Instruments. The special session focused on "Challenges in Education and Workforce Development in the New Chips Economy".
- **2024 ECTC Special Session on Industry-Government Co-Investments**
was co-chaired by Przemyslaw Gromala, Robert Bosch GmbH, and Erik Jung, Fraunhofer IZM (excused), with the speakers Elisabeth Steimetz, EPoSS, Europe, Rao Tummala, Advisor to the Government of India, Eric Lin, CHIPS R&D, USA, David Lynch, CMC Microsystems, Canada, and Kwang-Seong Choi, Electronics and Telecommunications Research Institute, Korea. The special session focused on "Exploring the Impact of Industry-Government Co-Investments for the Advanced Electronics Sector in North America, Asia and Europe".
- **2024 ECTC Special Session on Metrology**
was co-chaired by Ran Tao, NIST, and Benson Chan, Binghamton University and moderated by Jan Vardaman, TechSearch International with the speakers Paul Hale, NIST, Gaurang Choksi, Intel Corporation, Zhihua Zou, TSMC, CP Hung, ASE, and Chet Lenox, KLA Corporation, and explored "Challenges and Opportunities in Advancing Metrology for Next-Generation Microelectronics".
- **2024 ECTC Special Session on Thermal Management for AI**
was co-chaired by Zhi Yang, Groq, and Sevket Yuruker, Tesla, with the speakers Ki Wook Jung, Samsung, Igor Arsovski, Groq, Mudasir Ahmad, Google, Tiwei Wei, Purdue University, and Christopher Ortiz, Ansys, and focused on "Efficient and Innovative Thermal Management for Power Hungry AI/ML Applications: Challenges and Opportunities".
- **2024 ECTC Special Session on RF Packaging for above 100 GHz**
was co-chaired by Maciej Wojnowski, Infineon Technologies AG, and Ivan Ndip, Fraunhofer IZM/Brandenburg University of Technology with the speakers Swaminathan Sankaran, Texas Instruments, Martin Letz,

Schott AG, Madhavan Swaminathan, Penn State University, and Uwe Maass, Fraunhofer IZM. The special session explored the topic of "RF Packaging for Communication and Sensing Applications above 100 GHz – Technologies, Design Challenges and Emerging Solutions".

- **2024 ECTC Young Professionals Networking Event**
was co-chaired by Aakrati Jain, IBM, Rui Chen Eastern Michigan University, and Zhangming Zhou, Auburn University. The special session and reception was tailored specifically for young professionals, including current graduate students, and was crafted with their needs in mind. Interactions with senior EPS members and professionals was motivated through a series of active and engaging activities.
- **2024 IEEE EPS Seminar on Substrates for Chiplets**
was co-chaired by Takashi Hisada, Rapidus Corporation, Yasumitsu Orii, Rapidus Corporation (excused), and co-moderated by Rich Graff, Marvell Inc., with the speakers Gang Duan, Intel, Kinya Ichikawa, TSMC, Kenneth Larsen, Synopsys, Masahisa Ose, Resonac, Harish Penmenthsa, AMAT, Yu-Po Wang, SPIL, and Rozalia Beica, LQDX. This special session explored "Substrate-Scaling Challenges in Chiplet Integration".
- **2024 ECTC/iTherm Diversity and Career Growth Panel and Reception**
This special event was co-chaired by Cristina Amon, University of Toronto, for iTherm, and Vidya Jarayam, Intel, for ECTC, with the speakers Ramona Prioleau, CHIPS, Allyson Stewart, Marvell Inc., Al Ortega, Villanova University, Tina Herrera, NREL, and Ravi Mahajan, Intel, and focused on "Effective Practices to Attract, Promote and Retain a Diverse Workforce".
- **2024 ECTC Plenary Session on Future of Semiconductor Industry**
This plenary was co-chaired by Rozalia Beica, LQDX, and Farhang Yazdani, BroadPak, and the Chair of Jury Panel, Jeffrey Perkins, Yole Group, and featured presentations from the start-up speakers Victor Chiriac, Global Cooling Technology Group, Wayne Rickard, Terecircuits, and Luc Beauvillier, Thintronics.
In this event frame for the first time an ECTC start-up competition took place in the topical background of the Future of Semiconductor Industry, Emerging Start-ups and Material Innovations in Advanced Packaging. The winner was Terecircuits. Awards were contributed by Yole Group and Kiterocket.

The Heterogeneous Integration Roadmap (HIR) Workshop, sponsored by the IEEE EPS and co-chaired by Bill Chen, ASE and Ravi Mahajan, Intel took place again as a full day workshop at our conference with another packed audience this year. Special thanks to the HIR committee for bringing another excellent workshop to ECTC.

Special thanks to our ECTC Keynote speaker Prof. Keren Bergman, the Charles Batchelor Professor of Electrical Engineering at Columbia University in the City of New York, where she also serves as the Faculty Director of the Columbia Nano Initiative.

She presented an excellent keynote talk with the title: **Petascale Photonic Chip Connectivity for Energy Efficient AI Computing**. Prof. Bergman covered the multi-chip packaging challenges as well as approaches for leveraging dense wavelength-division multiplexing photonic IO that can scale to realize Petabit/s chip escape bandwidths with sub-picojoule/bit energy consumption. She focused on the immediate tasks and challenges that the packaging community can now tackle to make this revolutionary technology a reality. Following the keynote speech, a substantial Q&A session was held. Prof. Bergman's talk was captivating, inspirational, and intellectually stimulating.

We would like to thank our Corporate and Media Sponsors:

- Platinum Sponsors: Amkor Technology, ASE, and IBM
- Gold Sponsors: Adeia, Asahi Kasei, MKS Atotech, Brewer Science, Cadence, Deca Technologies, DuPont, EVG, Evatec, Henkel, Intek-Plus, Intel Foundry, KLA, LB Semicon, Marvell, Micross, NAMICS, Nepes, PacTech, Samsung, SPIL, Suss Microtec, TSMC, YES, and Zeiss
- Silver Sponsors: AJINOMOTO, onto innovation, UYEMURA, SCREEN, Disco, Sumitomo, Lam Research, Umicore
- Special Item sponsors: AT&S, AGC, Binghamton University, DISCO, Fuji Film, HD MicroSystems, Intel, KLA, KOH Young Technology, TEL, Texas Instruments, TOK, and Zymet
- Media Sponsors: Chip Scale Review, 3D InCites, Circuits Assembly, IEEE EPTC2024, Informa Markets, Magnetics Business and Technology, MEPTEC, PCB Directory, PCEA, Semiconductor Packaging News, Semiconductor Review, and Yole Group.

A big thank you to our volunteers, including over 240 industry experts and academics serving as Technical Program Committee members, Session Chairs, and Executive Committee members.

Photos taken at the conference are now available on Flickr and can be accessed [here](#).

Finally, after a successful ECTC 2024, we would like to hear back from you so we can learn and plan the best event for next year. What worked well, what needs improvement, and what did you miss? Please take our [74th ECTC Attendee Survey](#).

Next year's conference will be held 27-30 May 2025, at the Gaylord Texan Resort and Convention Center, Dallas, Texas, USA. We look forward to your support to help make the 75th Anniversary ECTC in 2025 a huge success.

On behalf of the entire Executive Committee, we thank you for participating at the 74th ECTC and look forward to seeing you in Dallas next year!

Sincerely,



Karlheinz Bock
General Chair
2024 IEEE 74th Electronic Components and
Technology Conference
Professor for Electronics Packaging, TU Dresden,
Dresden, Germany.



Michael Mayer
Program Chair
2024 IEEE 74th Electronic Components
and Technology Conference
Associate Professor, University of
Waterloo, Waterloo, Canada.

For more information on ECTC visit www.ectc.net.

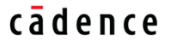
Also, see some of the 2024 ECTC [highlights](#) – soon we will be posting the special sessions presentations
Become an [ECTC Sponsor](#): Don't miss this great opportunity!

See ECTC pictures via [Flickr](#) and be sure to join the ECTC via [LinkedIn](#).

Platinum Sponsors



Gold Sponsors



Silver and Special items sponsors

SILVER









GALA RECEPTION



REGISTRATION SPONSOR



STUDENT BEST PAPER



STUDENT RECEPTION



LANYARD

2024 Special Item Sponsors

PANEL SPONSORS



COFFEE CUP SPONSOR

INTERNET SPONSOR



REFRESH-MENTS



CONFERENCE APP



Official Media Sponsors

Official Media Sponsor



Additional Media Sponsors

