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The Leading International Components, Packaging and Manufacturing Technology Symposium

November 12-14, 2025

Ritsumeikan University's Suzaku Campus, Kyoto, Japan



Advance Program (Last update: August 30, 2025)

November 12, 2025 (Wednesday)

4F/5F Main Hall I		1F Room I	1F Room II
9:00		Registration	
10:10	Opening Remark (General Chair, Hideyuki Nawata)		
10:25	Greeting speech (IEEE EPS Jr. President, Kitty Pearsall)		
10:35	Award Ceremony		
10:50-12:30	Plenary Speech I & II Hall I Hideyuki Nasu (Furukawa Electric Co., Ltd) and Takaaki Ishigure (Keio University)		
10:50	Plenary Speech I: TBD Sir David Neil Payne (University of Southampton)		P-01
11:40	Plenary Speech II: Paradigm Shifts in Silicon Photonics Roel Baets (Ghent University - imec)		P-02
12:40-12:55		Platinum Sponsors' Seminar 1 (with a light meal) @Meeting Room 1 TBD	
12:55-13:10		Platinum Sponsors' Seminar 2 (with a light meal) @Meeting Room 1 TBD	
13:30-15:25	Session 1: Photonics I (Photonics Packaging / Si Photonics) Chairperson Hidetoshi Numata (IBM Research - Tokyo) Hideyuki Nasu (Furukawa Electric Co., Ltd.)	Session 2: Process and Material Technologies for Hybrid Bonding Chairperson Shinya Takyu (LINTEC Corporation) Mashahisa Fujino (Institute of Microelectronics)	Session 3: High-Speed Package and System (Signal and Power Integrity) Chairperson Kazuyuki Nakagawa (Renesas Electronics Corporation) Yutaka Uematsu (Hitachi, Ltd.)
13:30	(Invited) Efficient AI System Scale-Up with Co-Packaged Optics: Opportunities & Challenges Sunil Priyadarshi Intel	01-01 (Invited) "Solution Proposal and Discussion on C2W-HB Toward to Practical Use"~Introduction of Polymer Dielectric and Mounting Technology~ Takenori Fujiwara Toray Industries, Inc.	02-01 (Invited) Inductors in Power over Data Line (PoDL) for In-Vehicle Networks Thomas Schamberger TDK Electronics AG
13:55	Underfill with High Thermal Conductivity in Silicon Photonic Chiplets for Co-Packaged Optics (CPO) Devices Dai-Fei Li, Wen-Yu Teng, Liang-Yih Hung, Andrew Kang, Yu-Po Wang, Don-Son Jiang Siliconware Precision Industries Co., Ltd.	02-02 (Invited) Direct Transfer Bonding Overcoming the Challenges of Integrating delicate and Ultra-Thin Chips with 50-nm Scale Accuracy Ichiro Sano TAZMO CO., LTD.	03-02 Ultra-Small 145 GHz Coaxial Connector: Edge-Mount PCB Integration and Performance Hitoshi Onoduka, Yu-Cen Sun, Yushi Kirii Yuetsu Seiki Co., Ltd.
14:20	Development of Simultaneous Electrical and Optical Mounting for Co-Packaged Optics Modules Hisaki Nishimura, Mizuki Tonomura, Misa Takahashi, Megumi Oishi, Fumiaki Haraguchi, Tokuro Ozawa, Takeshi Yokoyama, Tomoyuki Akahoshi KYOCERA Corporation	03-01 (Invited) Design and Development of Carrier Tapes for Direct Transfer Bonding Process Tomoka Kiriata LINTEC Corporation	03-03 Effect of Thermal Distribution on Signal and Power Integrity Analysis of Large Complex 3D-IC System Anushruti Jaiswal, Yu Tomonaga Ansys
14:45	(Invited) TBD Christopher Striemer AIM Photonics	04-01 Chemical resistant dicing tape for hybrid bonding process Ryoh Takahashi, Koki Maruno, Kazutoshi Furuzono, Naoki Takahara, Seiji Kai Resonac Corporation	04-02 Interview with the Authors (Discussion after the session) + Sponsor's Exhibition
15:10	Interview with the Authors (Discussion after the session) + Sponsor's Exhibition		
15:25	Coffee break + Sponsor's Exhibition		
15:40-17:35	Session 4: Photonics II (Laser) Chairperson Nobuo Ohata (Mitsubishi Electric Corporation) Junichi Inoue (Kyoto Institute of Technology)	Session 5: Next Generation Packaging Technologies I Chairperson Eiji Higurashi (Tohoku University) Naoko Araki (Daicel Corporation)	Session 6: High-Speed / RF Package and System Chairperson Yoichiro Kurita (Tokyo Institute of Technology) Wataru Shiroi (Renesas Electronics Corporation)
15:40	(Invited) Optical Signal Processing (OSP) for pluggable transceivers and co-packaged optics (CPO) Yosef Ben Ezra Newphotonics, CTO & Founder	04-01 New Optical Adhesive Design for CPO Packaging Solutions Fumiya Suzuki, Masashi Kajiwara, Takashi Yamaguchi, Masayoshi Otomo, Noriyuki Sakai Namics Corporation	05-01 Radiation-Induced Destructive Effects on COTS FPGA in GEO Satellite Environments Yuzo Yajima ¹ , Eisuke Haraguchi ¹ , Shigenori Tani ¹ , Hiroshi Kinoda ¹ , Hiroaki Miyake ² 1) Mitsubishi Electric Corporation 2) Tokyo City University
16:05	Ultrathin Chips of III-V Bonding Process Using Laser Peel Transfer Technology for Co-Packaged Optics Haruka Fujishige ¹ , Takumi Ikehara ¹ , Tatsuya Okada ¹ , Yoshiaki Arai ¹ , Junpei Oniki ² , Yukari Jo ² , Daichi Miyazaki ² , Takenori Fujiwara ² 1) Toray Engineering 2) Toray Industries, Inc.	04-02 High I/O Density Solution on Flip Chip Substrate for Advanced Package Yuan Chang Ni ¹ , Hung Kun Chen ¹ , Yu Cheng Pai ¹ , Cheng Yu Kang ¹ , Jen Shang Chen ² , Wei Ching Chu ² , Yu-Po Wang ¹ , Don-Son Jiang ¹ 1) Siliconware Precision Industries Co., Ltd. 2) Kinsus Interconnect Technology Corp	05-02 Efficient Integral-Equation Methodology for Signal Integrity Analysis of Large-Scale IC Packages Hans Schreckenbach, Lucas Banting, Andre Fecteau, Troy Lowry, Nima Chamanara, Santosh Janaki Raman, David Abraham, Max Hughson, Nick Gedder, Jonatan Aronsson CEMWorks Inc.
16:30	An 8-Channel MM VCSEL-based Linear-Drive CPO Transceiver for Compute and Backend Interconnects in AI/ML systems Sho Yoneyama, Wataru Yoshida, Kazuya Nagashima, Kensho Nishizaki, Hideyuki Nasu Furukawa Electric Co., Ltd.	04-03 Development of heat-resistant UV curable dicing tape Reo Ozeki, Sayaka Tsuchiyama, Akio Fukumoto LINTEC corporation	05-03 An Adjustable Energy-Recovering Electrical-Balance Duplexer for In-Band Full-Duplex Transceivers in the 6G FR3 Band Hsin-Chieh Lin ¹ , Chih-Hao Chuang ² , Yan-Qi Weng ² , Da-Chiang Chang ¹ , Hwann-Kaeo Chiou ² 1) National Institutes of Applied Research 2) National Central University
16:55	(Invited) Integrated Comb Lasers for Co-Packaged Optics Frank Smyth Pilot Photonics	04-04 A Study of Moisture Effects on Fan-out Package Chau-Wen Cheng, Chung-Hung Lai, Yao-Hsin Chou, Chin-Li Kao Advanced Semiconductor Engineering, Inc.	05-04 (Invited) TBD
17:20	Interview with the Authors (Discussion after the session) + Sponsor's Exhibition		
17:35-18:15	Special Speech I Hall I Chairperson Shinya Takyu (LINTEC Corporation) and Hideyuki Nawata (Nissan Chemical Corporation)		
17:35	Artifact Metrics and Individual Management of Semiconductor Packages Tsutomu Matsumoto (AIST)		S-03
19:15	Welcome Reception		
21:15	Close		

November 13, 2025 (Thursday)

	4F/5F Main Hall I	1F Room I	1F Room II
9:00		Registration	
9:20	Guest speech (President of Ritsumeikan University, Yoshio Nakatani)		
9:30-10:20	Plenary Speech III Hall I Chairperson Shoji Uegaki (Crane Research) and Taiji Sakai (TSMC Japan 3DIC R&D Center, Inc.)		
9:30	Plenary Speech III : TBD Shimpei Yamaguchi (TSMC Japan 3DIC R&D Center)		P-03
10:20	Coffee break + Sponsor's Exhibition		
	Session 7: Advanced PKG I	Session 8: Next Generation Packaging Technologies II	
10:30-12:00	Chairperson Taiji Sakai (TSMC Japan 3DIC R&D Center, Inc.) Chinami Marushima (IBM Japan, Ltd.)	Chairperson Jun Maeda (LINTEC Corporation) Satomi Kawamoto (Namics Corporation)	
10:30	Generation of the thermal digital twin model for an IC chip. Shuainan Lin ¹⁾ , Yanbo Tang ¹⁾ , Jiajia Su ²⁾ , Junan Ji ²⁾ , Boping Wu ¹⁾ , Cheng Yang ¹⁾ 1) JCET Group Co., Ltd. 2) Shanghai Southchip Semiconductor Technology Co., LTD.	07-01 Extraction Techniques of Dielectric Characterization of Materials up to E-band Frequency Chia Chu Lai, Ho chuan Lin, Vito Lin, Andrew Kang, Yu Po Wang, Don Son Jiang Siliconware Precision Industries Co., Ltd.	08-01
10:55	Study of Structural Evaluation in Fan-Out Large Body Size Packaging Bradley Liu, Teny Shih, Vito Lin, Sam Lin, Yu-Po Wang Siliconware Precision Industries Co., Ltd.	07-02 Measurement and Analysis of Substrate Integrated Waveguide Using Low Temperature Co-fired Ceramics at 250 GHz Nobuki Hiramatsu ¹⁾ , Hiroshi Uchimura ¹⁾ , Tuchjuta Ruckkwaen ¹⁾ , Masahiro Tomisako ¹⁾ , Kouhei Hirose ¹⁾ , Naoki Hirayama ¹⁾ , Issei Watanabe ²⁾ , Kunio Sakakibara ³⁾ 1) Kyocera Corporation, 2) National Institute of Information and Communications Technology 3) Nagoya Institute of Technology	08-02
11:20	Induction-bonded silver sinter layers for multi-die applications: characterization and evaluation Patrick Rochala ¹⁾ , Martin Kroll ¹⁾ , Christian Hofmann ²⁾ , Tom Petzold ²⁾ , Till Clausmeyer ¹⁾ 1) Chemnitz University of Technology 2) Fraunhofer Institute for Electronic Nano Systems ENAS	07-03 Die Attach Solder Fatigue Study in Clipbond Power Package Vegneswary Ramalingam, Haima Santican, Hazrul Alang Abd Hamid, Nazirul Izzat Mohd Arifen Nexperia Malaysia Sdn Bhd	08-03
11:45	Interview with the Authors (Discussion after the session) + Sponsor's Exhibition		
12:00-12:15		Platinum Sponsors' Seminar 3 (with a light meal) @Meeting Room 1 SENKO Advance Co., Ltd.	
12:15-12:30		Platinum Sponsors' Seminar 4 (with a light meal) @Meeting Room 1 SURUGA SEIKI CO., LTD.	
	Session 9: Advanced PKG II	Session 10: Photonics III (Optical Waveguide)	Session 11: Bio electronics
13:00-14:55	Chairperson Takafumi Fukushima (Tohoku University) Kenji Takahashi (AIST)	Chairperson Hideyuki Nawata (Nissan Chemical Corporation) Motohito Takezaki (Hakusan Inc.)	Chairperson Beomjoon Kim (University of Tokyo) Shigenori Aoki (LINTEC Corporation)
13:00	A Novel Negative-Tone Chemically Amplified Photoresist of High Resolution and Chemical Resistance for Fine Copper Wirings Yuanfei Liu, Masahiko Ebihara, Irwansyah, Masahiro Miyasaka Resonac Corporation	09-01 Extremely low bending loss (<0.5 dB at 1-mm bending radius) GI core polymer optical waveguide Masahiro Karakawa ¹⁾ , Takaaki Ishigure ²⁾ 1) Ajinomoto Co., INC. 2) Keio University	10-01 (Invited) Development of a Rumen Bacteria Microbial Fuel Cell for Cattle Health and Methane Emission Monitoring Devices Michitaka Yamamoto The University of Tokyo
13:25	Development of 1.6 μm Fine-Pitch RDL Damascene Process using Low-NA i-Line Stepper and a New Negative-tone Photosensitive Dielectric Material Lili Wang ¹⁾ , Murat Pak ¹⁾ , Go Inoue ²⁾ , Kaho Shibasaki ²⁾ , Ayano Okuda ²⁾ , Kenyu Sugita ²⁾ , Nobuhiro Ishikawa ²⁾ , Toshiyuki Ogata ²⁾ , Andy Miller ¹⁾ , Eric Beyne ¹⁾ 1) imec 2) TAIYO HOLDINGS CO., LTD	09-02 Application of graphene-doped polymer optical waveguides to wavelength convertor Ken Kuboyama, Takaaki Ishigure, Naoki Yamaguchi, Shinji Yamashita, Sze Set Keio University	10-02 X-rays detection module, with Indium bumps interconnections, manufactured on a die level packaging line Abdenacer AIT MANI, Patrick PERAY, Nadia MILOUD-ALI, Andrea BRAMBILLA, Arnaud PEIZERAT, Kim ABDOUL-CARIME, Loick VERGER CEA-LETI
13:50	Thermal Conductivity-Aware Design Approach of Non-Conductive Film Layers for Enhanced Vertical Heat Dissipation in 3D HBM Packages Yuna Lee, Sang Won Yoon Seoul National University	09-03 Low Wavelength Dependent Polymer Waveguide type Multiplexer for MDM Link Takumi Kanai, Takaaki Ishigure Keio University	10-03 Fabrication of Flexible Embedded Electrochemical Sensor for Interstitial Fluid Biomarker Monitoring using Pattern Transfer Method Boyu Qin, Jongho Park, Beomjoon Kim The University of Tokyo
14:15	Non-Invasive Corrosion Quantification in Electronic Packages Using Smith Charts Tae Yeob Kang, Minkyu Kang, Namgyeong Kim The University of Suwon	09-04 Miniaturization of 1x2 and 1x4 branched multimode polymer optical waveguide for MUX device in SWDM links Koki Atsumi, Takaaki Ishigure Keio University	10-04 Multi-Sensor Integrated Urethane Foam Package for Wearable Vital Sensing in Everyday Setting Suguru Sato, Naoto Tomita, Jarred Fastier-Wooler, Shun Muramatsu, Michitaka Yamamoto, Toshihiro Itoh The University of Tokyo
14:40	Interview with the Authors (Discussion after the session) + Sponsor's Exhibition		
14:55	Coffee break + Sponsor's Exhibition		
	IEEE EPS Special Speech I Hall I Chairperson Shinya Takyu (LINTEC Corporation) and Eiji Higurashi (Tohoku University)		
15:10	IEEE EPS Special Speech I: Co-Packaged Optics – 3D Heterogeneous Integration of Photonic IC and Electronic IC John H Lau (Unimicron Technology Corporation)		S-01
15:50-16:30	IEEE EPS Special Speech II Hall I Chairperson Shinya Takyu (LINTEC Corporation) and Eiji Higurashi (Tohoku University)		
15:50	IEEE EPS Special Speech II: Aging of Lead-Free Solders Jeffrey Suhling (Auburn University)		S-02

16:40-17:40	Early Career Researcher's (ECR) Session (Open Forum with Beer) @ 1F Cafeteria					
	Chairperson Takaaki Ishigure (Keio University)					
	Poster presentation					
	Packaging Technology for Ion Trap Quantum Processor Chips Nila Krishnakumar ¹⁾ , Friederike Giebel ¹⁾ , Eike Iseke ¹⁾ , Konstantin Thronberens ¹⁾ , Jacob Stupp ²⁾ , Nora D. Stahr ²⁾ , Christian Ospelkaus ^{1),2)} 1) Physikalisch-Technische Bundesanstalt 2) Gottfried Wilhelm Leibniz University Hannover	ECR-01	System accuracy of an automated 5-axis system for mosquito dispensed waveguides Laura Fuetterer, Andreas Evertz, Ludger Overmeyer Leibniz University Hannover	ECR-02	Investigations into the use of synthetic image data for the automated active alignment of micro-optics Anna-Lena Fritze, Ludger Overmeyer Leibniz University Hannover	ECR-03
	Direct Thermal Imaging of Localized Heating in Thinned InP Laser Diodes Kiyoto Taniguchi ^{1),2)} , Taro Itatani ²⁾ , Joji Maeda ¹⁾ , Akihiro Noriki ²⁾ , Takeru Amano ²⁾ 1) Tokyo University of Science 2) AIST	ECR-04	Deep Learning with de-embedded S-parameters for Assessing Crack Propagation in Solder Joints Namgyeong Kim, Minkyu Kang, Hyunwoo Nam, Tae Yeob Kang The University of Suwon	ECR-05	Investigation of Polarization Performance in Polymer Optical Splitters for Co-Packaged Optics Yudai Nagano ^{1),2)} , Taro Itatani ²⁾ , Fumi Nakamura ²⁾ , Akihiro Noriki ²⁾ , Takeru Amano ²⁾ , Joji Maeda ¹⁾ , Satoshi Suda ²⁾ 1) Tokyo University of Science 2) AIST	ECR-06
	3-D Optical Interconnection of Bent Waveguide and Micro-Mirror by Planar Semiconductor Process Keito Kikuchi ^{1),2)} , Taro Itatani ²⁾ , Yoshinobu Okano ¹⁾ , Akihiro Noriki ²⁾ , Takeru Amano ^{1),2)} 1) Tokyo City University 2) AIST	ECR-07	Non-destructive Diagnosis of Cracks in SMD Capacitors Using Deep Learning on Impedance Spectra Minkyu Kang, Namgyeong Kim, Hyunwoo Nam, Tae Yeob Kang The University of Suwon	ECR-08	Quantum dot doped polymer optical waveguide amplifier Hayato Kitta, Takaaki Ishigure Keio University	ECR-09
	Core Position Accuracy Improvement of Polymer Optical Waveguide fabricated using the Mosquito-Method Airi Nakao, Takaaki Ishigure Keio University	ECR-10	Steeply bent core single-mode polymer waveguide with low bending loss fabricated using the Mosquito method Ayu Tanimoto, Takaaki Ishigure Keio University	ECR-11	Investigation of surface activation conditions using VUV light to enable room-temperature Au-Au bonding Mika Ogino, Kai Takeuchi, Eiji Higurashi Tohoku University	ECR-12
	Close					
	Close					
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November 14, 2025 (Friday)

	4F/5F Main Hall I		1F Room I		1F Room II	
9:00	Registration					
9:20	ECR Award Ceremony					
9:30-10:10	Special Speech II Hall I Chairperson Taiji Sakai (TSMC Japan 3DIC R&D Center, Inc.) and Kenji Takahashi (AIST)					
9:30	Special Speech II: TBD Mr. Noriaki Matsunaga (Applied Materials Inc.)					S-04
10:10	Coffee break + Sponsor's Exhibition					
10:25-12:20	Session 12: IEEE EPS Technical session Glass Substrate Chairperson Shigenori Aoki (LINTEC Corporation) Takashi Hisada (Rapidus)		Session 13: Advanced PKG IIII Chairperson TBD TBD		Session 14: Power Electronics I Chairperson Kentaro Kaneko (Ritsumeikan University) Masafumi Yokoyama (SUMITOMO CHEMICAL COMPANY, LIMITED)	
	(Invited) TBD		(Invited) TBD		(Invited) Wafer Bonding of Diamond for Improving Heat Dissipation of Properties of Nitride Devices Naoteru Shigekawa, Jianbo Liang, Yutaka Ohno Osaka Metropolitan University	
10:50	(Invited) TBD		Digital-Twin-Driven Machine Learning for Thermal Optimization of Flip-Chip Packages Mohammad Rafiee, Vysak Nair University of Ottawa		Material and Process Characterization to Enable Heavy Copper Wire Bonding on Power Modules Randolph Estal Flauta, Jing Chen, Howie Ding, Rito Wang, Shixing Zhu, Tino Minotti, King Man Tai, Joe Zhou, Haibin Chen Nexperia Hong Kong	
11:15	(Invited) TBD		Laser-Induced Forward Transfer of Thin Micro-Chiplets in quasi-contact mode Harindra Kumar Kannoja Harindra Kumar Kannoja, Geert Van Steenberge IMEC		Study of Factor Effect on Surge Current Test Performance for Clip-Bonded Semiconductor Devices by Simulation Nick Chenchao ZHONG, Thomas IGEL-HOLTZENDORFF, Haibo FAN, Tim BOETTCHER, Owen Yi Kei LAW Nexperia Hong Kong	
11:40	(Invited) TBD					
12:05	Interview with the Authors (Discussion after the session) + Sponsor's Exhibition					
12:20-13:20	Lunch (free time)					
13:20-15:15	Session 15: Photonics IV (Optical connection) Chairperson Nobuo Ohata (Mitsubishi Electric Corporatoin) Takaaki Ishigure (Keio University)		Session 16: Power Electronics II Chairperson Kentaro Kaneko (Ritsumeikan University) Hiroki Imabayashi (University of Fukui)			
	(Invited) Silicon Photonics and Advanced Packaging at the Heart of HPC Sandeep Sane Lightmatter		(Invited) Development of Planar-Gate Vertical GaN MOSFETs Ryo Tanaka, Tsurugi Kondo, Nao Suganuma, Katunori Ueno, Shinya Takashima Fuji Electric Co.,Ltd.			
13:45	40-channel Detachable Optical Connector Enabling Ultra-high Density Connectivity in Co-packaged Optics Yuki Fujimaki, Shosuke Ikeda, Kengo Watanabe, Tsunetoshi Saito, Masaki Kotoku Furukawa Electric Co., Ltd.		EMI Mitigation and Inductance Reduction in SiC-Based Power Modules through Layout-Aware Redesign Raymond Borres ¹⁾ , Thiyyu Warnakulasooriya ¹⁾ , Sihoon Choi ¹⁾ , Koichi Shigematsu ¹⁾ , Masayoshi Yamamoto ¹⁾ , Ang-Ying Lin ²⁾ , Yan Bo Fang ²⁾ , Chien Wei Chang ²⁾ , Po-Kai Chiu ²⁾ , Yan-Cheng Liu ²⁾ 1) Nagoya University 2) Industrial Technology Research Institute (ITRI)			
14:10	Single Mode Multifiber Expanded Beam Connector for Immersion Cooling System Using GRIN Lens Alexander William Setiawan Putra ¹⁾ , Yusuke Ishibashi ¹⁾ , Motohito Takezaki ¹⁾ , Kazutaka Aboshi ²⁾ 1) Hakusan Inc. 2) Nippon Sheet Glass Co., LTD.		Research on low thermal resistance/high reliability technology for ultra-compact double-sided cooled SiC power modules Akira Kitamura, Yoshihiro Tateishi, Shoichiro Otani, Satoharu Tanai, Keita Suzuki, Tetsuo Endoh, Yoshikazu Takahashi Tohoku University			
14:35	Evaluation of fabricating polymer waveguides for die-to-die optical connections Honoka Shima, Masaharu Kato, Kazunao Yamamoto, Masaki Matsumoto, Yuji Furuta, Hisashi Kaneda Shinko Electric Industries Co., Ltd.		Additive fan-out packaging for discrete components Edsger C.P. Smits, Arjun Wadhwa, Milan Saalmink, Marieke Burghoorn, Iris Kerkhof, Ruben Pranger, Francesca Chiappini, Jeroen van den Brand CITC / TNO			
15:00	Interview with the Authors (Discussion after the session) + Sponsor's Exhibition					
15:15	Close					