

17 November (Monday), 2025

Start	Room 1 Hall B (3F)				
	Opening Ceremony				
	Keynote speech 1	Title Author(s)			
	Keynote speech 2	Title Author(s)			
	Coffee Break				
	Keynote speech 1	Title Author(s)			
	Keynote speech 2	Title Author(s)			
13:00	Lunch 12:00–13:00				
	Room 1 Hall B (3F)	Room 2 301 (3F)	Room 3 302 (3F)	Room 4 401 (4F)	
	Finishing, lapping, polishing and deburring I	CMP and semiconductor wafer processing I	Applications of data science in manufacturing / Machine tools and systems, tooling I	Surface integrity and materials characterization	
	OS10	OS5	OS21/OS15	OS18	
	Research on process parameter optimization of ultrasonic polishing of zirconia ceramics based on Fresnel-structured transducer Mengkuan Zhao, Ming Feng, Xianglei Zhang, Baiyi Chen, Sisi Li	Towards accurate CMP simulations: Bridging experimental data and numerical models for SiC wafers Roberto Iaconi, Riku Tanaka, Kevin Richard G. Operiano, Susumu Maeda, Fumiya Kawate, Saeed Sepasy, Yoshifumi Watanabe	Intelligent and sustainable laser micro/nano additive manufacturing technologies Ming-Tsang Lee	The evolution of gradient microstructure on the thread root of 300M steel during surface rolling process Hongwei Liu, Renke Kang, Xianglong Zhu, Haotian Mu	
	13:20	A novel finishing method of micro holes with high aspect ratio by abrasive flow polishing Nien-Tien Cheng, Hai-Ping Tsui, A-Cheng Wang, Yan-Cherng Lin	Study of technology for fine conditioning of pad surfaces with fiber conditioner in CMP Haruki Hashimoto, Takashi Fujita, Yuki Arai	Performance comparison of single-channel and dual-channel G-sensor data for tool state recognition using deep learning Min-Chieh Chen, Yue-Feng Lin, Ming-Yi Tsai, Ting-Hsueh Chuang	Investigating the drilling mechanisms of thermoplastic CF/PEKK and CF/PPS compared to thermosetting CF/Epoxy composites: a thermal-mechanical interaction analysis Xunxun Zhang, Jielin Chen, Qinglong An, Weiwei Ming, Ming Chen
		13:40	Mechanistic study of friction-induced chemo-mechanical synergistic machining of 4H-SiC using Titanium-based metals Tao Wu, Min Wu, Hui Huang	Application of a Photocatalytic Polishing-Capable Grinding Wheel for Surface Preparation of SiC Wafers Prior to CMP Lian Hong-Hui, Chen Kai-Jung, Wang Yu-Chen, Tsai Ming-Yi	Development of Reinforcement learning Framework for Self-Optimization of Machining Parameters Libo Zhou, Toshihiro Komatsu, Yusuke Morishita, Hirotaka Ojima, Huapan Xiao, Jiaming Zhan, Wei Hang, Jun Zhao, Dekui Mu, Han Huang
	14:00		Research on High-Efficiency Polishing of Gallium Nitride N-Face with Sol-Gel Polishing Films Yikun Hu, Jing Lu	Development of Eco-Friendly Functionalized TiO ₂ Photocatalytic Slurry for Enhanced Performance in Single-Crystal Silicon Carbide Wafer Chemical Mechanical Polishing Kuo-Jen Hsu, Kai-Jung Chen, Min-Gyi Tsai	An identification method of position-independent geometric errors in the rotary axes of five-axis machine tools Huanlao Liu, Li Xiang, Wang Yulin, Dai Xin

14:20	Modeling the Evolution of Edge Rounding in Magnet Workpieces during Centrifugal Barrel Finishing <i>Yohei Hashimoto, Rika Noda, Minoru Ito, Tetsuya Yamada</i>	Effects of Femtosecond Laser Surface Modification on Structural Changes of 4H-SiC Wafers <i>Yi-Han Chen, Kai-Jung Chen, Ming-Yi Tsai, Yen-Liang Yeh</i>	Development of grinding spindle with active control system using hydraulic servo valve <i>Rinta Tanaka, Shumon Wakiya, Dmytro Fedorynenko, Yohichi Nakao, Takumi Kurosu, Yusuke Suzuki</i>	Numerical Analysis of Notch Effects Under Varying Hole Depths on Blanking Machining of Amorphous Alloys <i>Jianjie Yuan, Chieko Kuji, Masayoshi Mizutani</i>
Coffee Break 14:40–15:10				
	Finishing, lapping, polishing and deburring II	CMP and semiconductor wafer processing II / Applications of abrasive technologies / High speed and high-efficiency machining	Machine tools and systems, tooling II	Tribology in manufacturing
	OS10	OS5/OS6/OS13	OS15	OS19
15:10	Molecular dynamics simulation and experimental study of CVD diamond graphitization during laser polishing process <i>Haojie Zhu, Fanghong Sun</i>	Study on Abrasive-Free Buff Polishing of GaN Substrates <i>Muhammad Zaim Iqbal Bin Mohd Faizal, Yuya Watanabe, Junichi Ikeno, Yohei Yamada, Tatsuya Shikano, Takeru Abe, Yasushi Hongo, Toshimasa Mano</i>	Virtual commissioning and machine improvement of optical glass lens centering process based on digital twin technology <i>Chia-Chi Chang, Wei-Han Chen, Yu-Chen Liang, Ke-Er Tang, Yu-Zhen Mao, Chun-Wei Liu</i>	Evaluation of Solid Lubricity of Aluminum Alloy Surfaces Textured by Vibration-assisted Cutting <i>Kaito Kunitan, Jun Shimizu, Takeyuki Yamamoto, Teppei Onuki, Hirotaka Ojima, Libo Zhou</i>
15:30	Model and experiments of spatial profile of material removal in non-contact shear thickening polishing <i>Jun Zhao, Wei Hang, Dekui Mu, Huapan Xiao, Jiaming Zhan, Libo Zhou, Han Huang</i>	Study on the microwave plasma modification-assisted shear-thickening polishing for silicon carbide wafer <i>Wei Hang, Jun Zhao, Dekui Mu, Hua Pan, Xiao, Jia Ming Zhan, Li Bo Zhou, Han Huang</i>	Fundamental study on chip control in turning <i>Ryu Kijima, Masahiko Jin</i>	Investigation of hydration layer strength in molecular dynamics simulation model of silicon CMP <i>Fumito Suga, Jun Shimizu, Kazuki Kaneko, Teppei Onuki, Hirotaka Ojima, Libo Zhou</i>
15:50	Material removal mechanism in Fenton based AlN ceramic substrate polishing process <i>Liang Zhao, Kaiping Feng, Binghai Lyu</i>	Investigation of material removal distribution at the edges during silicon wafer polishing <i>Yuki Tamaki, Yuta Seguchi, Urara Satake, Toshiyuki Enomoto</i>	Performance of a novel Ti-Ni based diamond wheel for Hard and brittle single crystals <i>Dekui Mu, Guihua Yu, Han Huang, Libo Zhou, Jun Zhao, Wei Hang, Huapan Xiao, Jiaming Zhan</i>	Localized Hydrostatic Pressure-assisted Cutting of Aluminum with a Rolling Element <i>Jun Shimizu, Takeyuki Yamamoto, Teppei Onuki, Hirotaka Ojima, Libo Zhou</i>
16:10		Machine Learning in Precision Machining of Hard and Brittle Crystal Solids <i>Guanwei He, Qingqing Huang, Xinhao Li, Huapan Xiao, Jiaming Zhan, Wei Hang, Jun Zhao, Dekui Mu, Libo Zhou, Han Huang</i>	Tool path compensation for tracking error in fast travelling focused on highly efficient and precise freeform surface machining <i>Sho Sakataya, Masahiko Fukuta</i>	Sustainable Tribological Solutions: Ceramic-Coated Shaft Sleeves Optimized through Ultrashort-Pulsed Laser Structuring and Precision Grinding <i>Masih Paknejad, Robert Böisinger, Bahman Azarhoushang, Andreas Kailer, Georg Konrath, Andreas Killinger, Matthias Blum, Tom Pfindel, Esmail Ghadiri Zahrani</i>
16:30		Effect of stress distribution on subsurface damage occurrence directly below indentation at small load in fused silica <i>Ranto Inoue, Ryutarou Kurakami, Naomichi Furushiro, Daisuke Hirooka, Tomomi Yamaguchi, Katutoshi Sumida, Kenichi Tanada</i>	Investigation of monitoring method by spindle motor current during step drilling in multi-spindle drilling machine <i>Atsushi Yamamoto, Makoto Hosaka, Masao Nakagawa, Toshiki Hirogaki</i>	Tribological properties of SiC _f /SiC ceramic matrix composites in grinding with different lubrication methods <i>Ben Wang, Hongdi Chu, Qi Zhang, Honggang Yin, Hao Zhang</i>

18 November (Tuesday), 2025

	Finishing, lapping, polishing and deburring III	Abrasive machining I	In-process measurement, monitoring and metrology I	Grinding wheel and abrasive grain technologies I
	OS10	OS1	OS14	OS12
8:40	Insights into the atomic-scale removal mechanism of SiC irradiated by plasma <i>Yuan Julong, Luo Congyue, Han Yunxiao</i>	Research on Surface Residual Stress in Profile Grinding of Nickel-Based Superalloy K444 <i>Min Li, Xiangyu Huang, Renhao Nan, Ning Qian, Linbo Che, Wenfeng Ding, Jiuhua Xu</i>	Grain size distribution evaluating with micro-Raman image on working surface of fine-granularity grindstone <i>Ryo Taguchi, Ryohei Tazawa, Teppei Onuki, Hirotaka Ojima, Jun Shimizu, Libo Zhou</i>	Study on the properties of textured grinding wheel and grinding duplicating surface based on biomachining <i>Yu Huang, Hui Huang, Weibin Shi, Jingyu Song</i>
9:00	Flow field characteristics and experimental study of quartz glass constrained flow field shear rheological polishing <i>Shuqi Wang, Jinhu Wang</i>	Energy partition analysis in the grinding of Inconel-718 superalloy with heat pipe grinding wheel under MQL condition <i>Chengxiang Li, Ning Qian, Yucan Fu, Fan Jiang, Slawomir Pietrowicz, Xincheng Ma</i>	ML-based Cutting Force Estimation Using Motor Command Signals <i>Taku Hoshiya, Natsuki Meguro, Yasuhiro Kakinuma</i>	Preparation and Performance of Structured Micro Spherical PCD Grinding Tools for Micro-structures Machining <i>Kexin Li, Yinghui Ren</i>
9:20	Anhydros based shear thickening ultra precision polishing of KDP crystal <i>Fangyuan Chen, Linbin Huang, Julong Yuan</i>	Reducing Wafer Bow and Warp through Optimized Diamond Grit Arrangement and Grinding Path Design <i>Wang Yu-Chen, Tsai Ming-Yi, Lian Hong-Hui</i>	An online chatter detection method for milling based on multi-sensor feature fusion and optimized K-means algorithm <i>Yawei Zheng, Zhengcai Zhao, Jiuhua Xu</i>	Mirror-finishing surface grinding technology for SiC substrate using PCD grinding tool with three-dimensional high-density cutting edges <i>Haruto Konishi, Takashi Fujita, Yuki Izutani, Yasuo Izumi, Junji Watanabe, Jun Nishiyama</i>
9:40	Effect of chemical action on shear thickening polishing of YAG <i>Wei Fang, Binghai Lyu</i>	Performance Evaluations of Small Electroplated CBN Wheels in Grinding Nickel Alloys <i>Zhongde Shi, Helmi Attia, Nicola De Palma</i>	Analysis of Spindle Current Variations During the Wafer Grinding Process <i>Tsai Jung Tsai, Chen Kai Jung, Tsai Ming Yi, Chen Chun Yen, Huang Shou Zheng</i>	Nanosecond Laser Ablation Mechanism and Surface Microstructuring of CBN Grinding Wheel <i>Zhipeng Li, Quanli Zhang, Wenfeng Ding, Yucan Fu, Jiuhua Xu</i>
Coffee Break 10:00–10:30				
	Ultrasonic machining I	Abrasive machining II	In-process measurement, monitoring and metrology II	Grinding wheel and abrasive grain technologies II
	OS9	OS1	OS14	OS12
10:30	Micro grinding of glass plate using ultrasonic assisted-coolant <i>Hirofumi Suzuki, Kotaro Kawamura, Tatsuya Furuki, Akinori Yui</i>	Experimental Investigation of Chatter Vibration Mechanism Based on Variation of Acting Wheel Surface in Cylindrical Plunge Grinding <i>Koki Hatachi, Yuki Matsumoto, Hiroyuki Kodama, Kazuhito Ohashi</i>	Grinding Behavior Analysis and Process Monitoring of Cylindrical Grinding in Lens Centering Using Acoustic Emission Signals <i>Tsung-Huan Tsai, Yu-Chen Liang, Shiau-Cheng Shiu, Hung-Tsai Wu, Ta-Hsin Chou, Chun-Wei Liu</i>	Effect of Grinding Wheel Bond Type in Quartz Glass Machining Process <i>Takayuki Hirata, Syogo Shibata, Himeka Okochi, Toshikazu Chida</i>
10:50	Fundamental Study on Precision Ultrasonic Vibration Polishing of SiC Wafers <i>Thanawan Bunpheng, Hakuto Nakano, Peerapong Kasuriya, Sutasn Thipprakmas, Masahiko Jin</i>	Fabrication and polishing performance of CVD diamond-coated SiC abrasives <i>Dongdong Liu, Fanghong Sun</i>	In-situ Areal Surface Texture Measurement on Machined Surfaces using Autofluorescence of Lubricating Oil <i>Saeko Fujii, Shuzo Masui, Masaki Michihata, Satoru Takahashi</i>	Evaluation of the Effects of Machining Conditions on the Plastic Pile-up Performance in Single Abrasive Grain Grinding <i>Gen Uchida, Xun Chen, Juan Ignacio Ahuir-Torres, Alireza Eslami Majd</i>
11:10	Development and Mechanistic Investigation of Ultrasonic Vibration-Assisted Grinding for 6/8-Inch SiC Wafers <i>Shou Zheng Huang, Ming Yi Tsai, Tsai Jung Tsai</i>	Clarifying the improvement of the machining efficiency by ultrasonic vibration through tip-based single asperity nanoscratching <i>Hanqiang Wu, Jiang Zeng, Chen Xiao, Yongbo Wu</i>	Evaluation of the state of abrasive grains on the surface of grinding belts using polarization camera features <i>Seren Omori, Yasutake Haramiishi, Tsuyoshi Shimizu</i>	Study on Performance of High Feed Rate Face Grinding of Cemented Carbide with Cup Type Electroplated Grinding Wheel <i>Takanori Fujiwara, Shimpei Horiguchi, Takashi Onishi, Kazuhito Ohashi</i>
11:30	Evaluation of Ultrasonic Milling Performance for Ti ₂ AlC MAX Phase Ceramics <i>Keisuke Hara, Naoya Yamaguchi, Naofumi Tsuji, Kota Takashima, Hirofumi Kawamura, Yen-Ling Kuo, Makoto Nanko, Hiromi Isobe</i>	A grinding process-microstructure-surface property correlation model for grinding burn mitigation in TPMM35 powder metallurgy high-speed steel <i>Lanyu Shi, Chenguang Wang, Kenan Zhang, Qinglong An, Weiwei Ming, Ming Chen</i>	Turret Vibration Monitor with High-Speed Sampling Wireless Communication and Diagnosis of turning process with integrated servo information <i>Yusuke Nozaki, Takamasa Yamamoto, Ryo Matsuda, Kaito Tanaka, Masao Nakagawa, Toshiki Hirogaki</i>	Thermal effect of cup wheel grinding based on acoustic emission signal <i>Pengcheng Zhao, Bin Lin, Jingguo Zhou, Tianyi Sui</i>

11:50		Superfinishing of Cr ³⁺ HVOF coatings using a new generation of rubber-bonded superabrasive elastic wheels <i>Iñigo Pombo, José A. Sánchez, Leire Godino, Jorge Álvarez, Egoitz Burgo</i>		
Lunch 12:10–13:00				
	Ultrasonic machining II	Advanced cutting technology	Beam processing and related topics / Additive manufacturing and related topics	EDM and non-traditional machining / Micro/nano-machining
	OS9	OS3	OS4/OS16	OS8/OS17
13:00	Propose of a dual-frequency ultrasonic aspirator based on the Langevin transducer <i>Zhicheng Liao, Shibo Zhang, Yanan Zhu, Yongbo Wu</i>	Study on high accuracy machining of vertical wall <i>Kenshiro Tamaki, Tatsumaru Ishiyama, Takekazu Sawa</i>	Feasibility study on planarization by electrodeless photoelectrochemical etching with evanescent light <i>Kaito Miyakoda, Naoto Takahashi, Hirofumi Hidai, Sho Itoh, Souta Matsusaka</i>	Electrical Discharge Assisted Turning of CFRP under Low Voltage Conditions <i>Hidetake Tanaka, Ryuta Kuboshima, Emir Yilmaz</i>
13:20	Investigation on ultrasonic assisted wafer stripping in laser slicing of single crystal SiC ingot <i>Zhuo Chen, Liqi Gong, Linhe Sun, Qiang Wang, Hanqiang Wu, Yongbo Wu</i>	Reducing tool wear in ultra-precision diamond turning using cutting-edge-slipping method with straight-nosed diamond tools <i>Xiangyu Zhou, Minghan Chen, Linhe Sun, Yongbo Wu</i>	Study on the femtosecond laser processing temperature field simulation of single crystal GaN substrate <i>Chuanzhen Huang, Huilai Wei, Zhenyu Shi, Shuiquan Huang, Baosu Guo</i>	Effect on EDM Property by UFB Coolant With Various Gases <i>Taiki Niimura, Manabu Iwai, Satoshi Anzai, Takayuki Hirata, Shinichi Ninomiya</i>
13:40	Skiving performance by ultrasonic vibration-assisted method <i>Shinnosuke Takano, Manabu Iwai, Yoshihiro Take, Takayuki Hirata, Shinsuke Uchida, Shinichi Ninomiya</i>	An investigation of hybrid dual-pulse-width laser-waterjet machining of monocrystalline silicon carbide <i>Dalin Guo, Tianpeng Dun, Jun Wang</i>	Comparative Study on the Torque Performance of SUS 316L Screws Fabricated by Selective Laser Melting and Conventional Turning <i>Shih-Yu Yen, Kai-Jung Chen, Kuo-Tuo Huang, Yue-Feng Lin</i>	Resistance enhancement mechanism and sustainable drug release of surface modification titanium mandibular drug reservoir <i>Zhiwen Xiang, Chengdong Wang</i>
14:00		Gradual Reaming Method for Large-diameter Hole Machining of Multi-layer CFRP/Ti Stacks <i>Pengjie Gao, Tai Ma, Haihang Wang, Yongliang Yan, Xiaoyan Fan, Weiwei Ming, Qinglong An, Ming Chen</i>	Understanding Corrosion Mechanisms in Additive Manufactured 17-4 PH Stainless Steel: The Influence of Post-Processing and Passive Film Regeneration <i>Xiaoxiao Liu, Juan Ignacio Ahuir Torres, Jackson William Chadwick, Tahsin Tecelli Opoz, Xun Chen</i>	Exploring the processing parameters on the machining performance in ultrasonic-assisted nanoscratching of the 4H-SiC <i>Hingwaih Tsang, Siyu Sun, Jiang Zeng, Hanqiang Wu, Yongbo Wu</i>
14:20		Effect of Cryogenic Treatment on 7A09 Aluminum Alloy and Optimization of Process Parameters <i>Xianguo Yan, Yuhang Liu, Zhi Chen</i>	Ultrasonic burnishing with a ball end mill on SUS316L <i>Tsuyoshi Shimizu, Yasutake Haramiishi, Akira Yoneyama, Atsushi Amemiya</i>	Atomistic study of material removal behavior during ultrasonic vibration-assisted nanoscratching of single-crystal AlN <i>Chen Xiao, Jian Guo</i>
14:40		Enhancing Biological Soft Tissue Cutting Processes to Minimize Tissue Damage <i>Ryusei Senda, Urara Satake, Ryutaro Sambe, Toshiyuki Enomoto</i>		
Coffee Break 15:00–15:40				

Poster Session (Room 1)	
15:40–17:00	
P01	Enhanced responsiveness in temperature control of built-in motor spindle <i>Haruki Kawanami, Ryota Ishida, Shumon Wakiya, Yohichi Nakao</i>
P02	A predictive model for static-dynamic characteristics of hydrostatic guideway and experimental validation <i>Dongyu Tian, Feihu Zhang, Qiang Zhang, Longjiang Zhang, Yunqiang Li</i>
P03	A Study on the Magnetic Deburring Method for Hypodermic Needles <i>Yanhua Zou</i>
P04	Study on dimensional accuracy and surface finish of fuel nozzle holes in ultrasonic-assisted single-stroke honing <i>Tianyi Zhang, Changyong Yang, Yingying Yuan, Yucan Fu</i>
P05	Investigation of Machining Process in Micro-Diameter End Milling of PI Resin Laminated Pressed Plate <i>Mitsuyoshi Nomura, Takamitsu Hanawa, Tatsuya Fujii, Tsunehisa Suzuki</i>
P06	Efficiency improvement of finish milling by milling path correction in consideration of surplus sintering on metal additive manufacturing <i>Tatsuya Furuki, Ryo Tanaka, Hiroki Ninomiya</i>
P07	Tribological properties of zinc-transferred surface fabricated with fine particle peening <i>Yutaka Kameyama, Hiroaki Yamanishi, Hideaki Sato, Ryokichi Shimpo</i>
P08	Application of Generative AI for Data Augmentation and Quality Classification in Ultrasonic-Assisted Grinding <i>Chung-Ying Wang, Hui-Jean Kuo, Wen-Tse Hsiao, Chienyao Huang</i>
P09	Refurbishment of Polycrystalline Diamond Tools for Sustainable High-Value Manufacturing <i>Tahsin Tecelli Opoz, Xiaoxiao Liu, Xun Chen, Hiren Kotadia, Helen Elkington, Sundar Marimuthu</i>
P10	Enhanced Precision Control of CNC Machine Tool Using a Two-DOF Multivariable Iterative Learning Approach <i>Yulin Wang, Xuechuan Mei, Huanlao Liu, Can Liu</i>
P11	Understanding the Deformation Mechanisms of Single Crystal Gallium Nitride in Grinding Mimicked by Nanoscratching <i>Yunpeng Wang, Yueqin Wu, Hui Huang, Xipeng Xu</i>
P12	Effect of Fine Titanium Particle Peening on Surface Morphology and Fatigue Properties of SUP12 Spring Steel <i>Ryosuke Yokoyama, Shozo Hirano, Hidekazu Ito, Kazuyoshi Nono, Shoichi Kikuchi</i>
P13	Development of an Intelligent CAM System with On-Machine Automatic Deburring Function Study of Tool Path Generation Algorithm for Automatic Deburring <i>Mikio Fujio, Tsubasa Kikuchi, Kentaro Ootsuka, Keisuke Miwa</i>
P14	Fabrication of simulated peening scars using laser irradiation patterning and their fatigue properties <i>Tatsuki Itakura, Miu Hayashi, Hiroyuki Akebono, Shoichi Kikuchi</i>
P15	Study on prediction of tool breakage by machine learning <i>Nobuhito Yoshihara, Tomoki Katabira, Masahiro Mizuno</i>
P16	3D Characterization of Process-Induced Porosity in SLM-Fabricated Al-Mg-Sc Alloys A Comparison of Serial Sectioning Microscopy and X-ray CT <i>Shinya Morita, Kanta Suzuki, Yuuki Aida, Shoan Mizuno, Shinichi Tomiyama, Norio Yamashita, Hideo Yokota</i>
P17	Research on the Effect of Ultrasonic Vibration-Assisted Laser Percussion Drilling on Micro-hole Morphology <i>Ping Zou, Yaotian Cheng, Yadong Gong, Xuelong Wen</i>
18:00	Banquet