2026 CIRP Annals' papers

Life-Cycle Engineering and Assembly (A)

A1 - A Semi-Markov Process approach to quantify material content over multiple product lifecycles with application to a hard disk drive
Nehika Mathur (3), Yong Han Kim, Ritbik Kumar, John W. Sutherland (1)

A2 - Simulation-based design methodology for sustainable circular battery value chains: A comparative study of Germany and Japan
Yusuke Kishita, Ryoji Kawamoto, Marius Hermsen, Christian Scheller, Moritz Proff, Mark Mennenga, Kerstin Schmidt, Christoph Herrmann (1), Yasushi Umeda (1)

A3 - Stakeholder-weighted causal modelling for scenario-based circularity assessment in product value chains: A case of electrical/electronic equipment
José Hidalgo-Crespo, Andreas Riel (2), Tomohiko Sakao (1)

A4 - AI-based worker guidance in assembly and disassembly operations using multimodal ego/exo-centric data capture and structured task knowledge
Vivek Chavan, Jörg Krüger (1)

A5 - Tool-based disassembly of PEM fuel cell stacks: Parameter dependent design guideline
Dominik Goes, Sebastian Henschel, Jürgen Fleischer (1)

A6 - ML-supported, flexible screw disassembly framework for the remanufacturing process of complex capital goods
Christoforos Aristeidou, Nikos Dimitropoulos, George Michalos (2)

A7 - A vision-based approach combining event and RGB sensors towards human-robot collaborative assembly
Qiang Qin, Sebastian Thiede (2), Ruirui Zhong, Xi Vincent Wang (2)

A8 - Foundation model-based end-to-end policy for robotic assembly
Sichao Liu, Ethan Regal, Hanzhi Zhang, Chongnan Wang, Lihui Wang (1), Robert X. Gao (1)

A9 - Towards data-driven quality monitoring of human-centric assembly operations
Apostolis Papavasileiou, Konstantinos Gkouvas, Dimitris Boulbasakos, Sotiris Makris (2)

A10 - A vision-language conditioned physics-aware imitation learning approach for bimanual robotic dexterous assembly
Tian Wang, Benhua Gao, Haofei Ma, Guoquan Zhang, Duidi Wu, Pai Zheng (2)

A11 - Label-free monitoring of screw driving using anomaly detection and fault clustering
Nikolai West, Jochen Deuse, Sami Kara (1)

A12 - Process-adapted electrostatic handling for future metallic battery electrodes
Jonas Schwieger, Do Minh Nguyen, Christian Wacker, Klaus Dröder (2)

Cutting (C)

C1 - Effect of process-induced anisotropy on flow stress characterization and chip formation in the machining of extrusion-based additively manufactured stainless steels
Ali Hosseini, Mohammad Valiyan, Muhammad Asim Ghaffar, Jannis Saelzer, Sebastian Berger, Ahmad Barari, Hossam A. Kishawy (2), Dirk Biermann (1)

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C2 - Engineering consistent machining forces in functionally graded materials
Xiaoliang Jin, Farshad Kazemi, Zhenghui Lu, Adam T. Clare (1), Rachid M'Saoubi (1)

C3 - Assessment of local microscale residual stresses induced by variable uncut chip thickness in turning using large-field FIB-DIC
Gorka Ortiz-de-Zarate (3), Andrey Chuvilin, François Ducobu (2) , Aitor Madariaga, Mikel Etxebeste, Pedro J. Arrazola (1)

C4 - A Microstructure-based dynamic recrystallization model for dry machining of AISI 4140 with in-situ kinematic and thermal calibration and validation
Julius Schoop, German Gonzales, Avery Hartley, Volker Schulze (1), I.S. Jawahir (1)

C5 - Machining-inducted residual lattice strain and ductile-brittle transition in sapphire revealed by X-ray nanoprobe diffraction microscopy
Rui Liang, Tao Zhou, Rui Liu, Sangkee Min (2)

C6 - Milling CFRP using custom-fabricated single-crystal diamond tools
Eren Tuncer, Mahmoud Alipour Sougavabar, Adnan Kurt, Ismail Lazoglu (1)

C7 - Enhancement of deep-hole boring accuracy via on-machine measurement and compensation
Pengfei Zhang, Ang Li, Wei Yang, Hanxiao Zhao, Liming Shu, Naohiko Sugita (1), Bi Zhang (1)

C8 - "Chip-guide drilling" – a new high-efficiency non-stop drilling method
Takehiro Hayasaka (2), Hikaru Akari, Katsuhisa Saito, Naoki Sumiya, Kyungki Lee, Eiji Shamoto (1)

C9 - Measurement of thermal tool loads in machining with cutting fluids
Berend Denkena (1), Benjamin Bergmann (2), Malte Kraeft, Jan Schenzel

C10 - Cutting of highly deformable soft materials: Role of material deformability and tool geometry
Urara Satake (2), Tatsuya Suzuki, Toshiyuki Enomoto (1)

C11 - Physics-informed machine learning towards predictive modelling and physical mechanisms decoupling of crater formation in Ti6Al4V machining
Hongguang Liu, Shijia Shi, Xin Liu, Jun Zhang, Wanhua Zhao, Tian Huang (1), Gérard Poulachon (1)

C12 - Grey-box model–integrating tribology descriptor for tool wear prediction in milling
Amirmohammad Jamali, Amod Kashyap, Finn Rümenapf, Nelson Filipe Lopes Dias, Wolfgang Tillmann, Johannes Schneider, Michael Stüber, Volker Schulze (1)

C13 - Tchebychev-based modal-domain coupling (TMDC) for prediction of microtool-tip dynamics
O. Burak Ozdoganlar, Shivang Shekhar, Alec Vucsko, Kadir Kiran, Bekir Bediz / A. Donmez (1)

Design (Dn)

Dn1 - Method-enforcing AI for product-service system design: Conformance gains and acceptance tradeoffs in an expert evaluation
Tatsunori Hara (2), Wuyi Chen, Jun Ota

Dn2 - Nonlinear tolerancing through high fidelity variation simulation of deformable parts under frictional contact.
Roham Sadeghi Tabar, Kristina Wärmefjord, Lars Lindkvist, Rikard Söderberg (1)

Dn3 - From natural language to RL formulation: a digital twin–centered optimization framework for manufacturing systems.
Haolin Fan, Bingbing Li, Jiajun Ma, Edward Chow, Jery Ying Hsi Fuh, Hong-Chao Zhang (1)

Dn4 - Grayscale digital light processing enabled generative design of material-graded disordered structures
Ke Xu, Yubin Gao, Junjie Cao, Canhui Lin, Paul Maropoulos (1), Yingguang Li (2)

Dn5 - Generative AI-based risk assessment and hazard identification towards safety compliant workplace design
Konstantinos Katsampiris-Salgado, Nikos Dimitropoulos, George Michalos (2)

Dn6 - Design for additive manufacturing of irregular architected structures using wave function collapse
Nanya Li, Changkun Sun, Qiang Cheng, Yi Xiong, Stephen Chih-Yang Lu (1)

Dn7 - Metrics-driven optimization for circular product design
Fazleena Badurdeen, Junwon Ko, I.S. Jawahir (1)

Dn8 - Modeling correlated non-normal contributors in geometric stack-up analysis
Mattia Maltauro, Edward Morse (2), Roberto Meneghello, Gianmaria Concheri

Dn9 - Generative adaptable design enabled by predictive change propagation
Zhilin Sun, Dengzheng Chi, Kaifeng Wang, Lei Wang, Peihua Gu (1)

Electro-Physical, Chemical, Laser, and related Additive Manufacturing Processes (E)

E1 - Heat input control and deep learning-based indirect measure of process and deposition stability in Wire Arc Additive Manufacturing
Alessandra Caggiano (2), Giulio Mattera, YuMing Zhang, Roberto Teti (1)

E2 - Electrode wear pattern and compensation of fast electrical discharge flank milling
Juncheng Lu, Yifan Lu, Bin Li, Xuecheng Xi, Yaou Zhang, Wansheng Zhao (2)

E3 - Jet-electrochemical discharge turning of glass.
Genglin Zhu, Yonghua Zhao, Chunjiang Wu, Masanori Kunieda (1)

E4 - Towards adaptive electrochemical machining via signal-based data-driven modelling
Elio Tchoupe Sambou, Andreas Klink (2), Tim Herrig

E5 - Digital modeling of small-hole electrical discharge machining using a local discharge frequency model incorporating discharge delay time
Tomohiro Koyano (2)

E6 - Atomic and close-to-atomic-scale finishing of sapphire via laser-enhanced plasma vaporization machining
Peng Lyu, Jiyu Pan, Ze Liu, Yuexiang Wang, Fengzhou Fang (1)

E7 - Generation of diamond structure by ion implantation and self-limited laser-induced atom desorption
Jinshi Wang (2), Shan Wu, Yuetong Zhang, Yifan Tian

E8 - Precision laser microdrilling of sapphire via reducing transient pressure
Guoqi Ren, Yusuke Ito, Masayuki Nakao (1)

E9 - Closed-loop laser planarization of diamond guided by white-light interferometry
Reina Yoshizaki, Yuta Teshima, Yangjin Kim, Kenichi Hibino, Yanming Zhang, Doo-Man Chun (1), Masayuki Nakao (1)

E10 - Water-jet guided laser drilling of crack-free SiC through-holes
Shuzo Masui, Shoichi Ui, Satoru Takahashi (1)

E11 - A Print-Form-Sinter process for manufacturing 3D electronics on complex surfaces
Rajiv Malhotra, Md Naim Jahangir, Hongyi Xu / B. Mullany (1)

E12 - Making 3D copper shapes by spark plasma sintering with masked stereolithography salt moulds
Markus Bambach (2), Konrad Papis, Manon Prairie

E13 - Powder stream characteristics in laser directed energy deposition of PEEK and PA12
Daniel Nettelbeck, Sebastian-Paul Kopp, Michael Schmidt (1)

E14 - A pressure assisted curing process for carbon fiber reinforced composites via double-sided plasma induced Joule heating
Shuting Liu, Hongrui Yan, James Gao, Yingguang Li (2)

E15 - Additively manufactured multi-material piezopolymer structures for actuation and sensing
Vasileios Stratiotou-Efstratiadis, Apostolos Argyros, Giorgos Sarmas, Giannis Oikonomou, Dimitris K. Dimitriou, Ioannis Schoinas, Nikolaos A. Chrysochoidis, Dimitris A. Saravanos, Georgios Maliaris, Nikolaos Michailidis (1)

E16 - Measuring natural frequencies via vibroacoustic monitoring in laser powder bed fusion
Shivam Shukla, Rik Vaerenberg, Konstantinos Rousou, Gitte Lathouders, Elke Deckers, Konstantinos Gryllias, Bey Vrancken / J.P. Kruth (1)

E17 - In-situ temperature and emissivity monitoring of blue laser powder-blown directed energy deposition of copper
Jihoon Jeong, Dong Hee Kang / D.Y. Yang (1)

E18 - High-speed schlieren imaging of non-gaussian beam shapes in laser directed energy deposition
Samantha Webster / F.E. Pfefferkorn (1)

E19 - Identification of coexisting dynamic coupling regimes in high-speed directed energy deposition
Patrick Gajek, Helena Wexel, Frederik Zanger (2)

E20 - Solid-state transformations during laser directed energy deposition of Ti-6Al-4V powder hydride-dehydrided from scrap metals.
Sarah J. Wolff, Marwan Haddad, Rama Diop, Andrew C. Chuang / L. Fratini (1)

E21 - Multi-material laser powder bed fusion of high-strength, high-ductility SiC-reinforced 316L stainless steel metal matrix composites
Yuan-Hui Chueh, Yi-Cheng Lee, Guo-Chi Li, Chao-Chieh Hsu, Albert J. Shih (1)

E22 - Using single pulses in powder-blown directed energy deposition to fabricate high-aspect-ratio metal pins
Wessel W. Wits (2), Shenliang Yang, Jos Vroon, Scholte J.L. Bremer

E23 - Methodology for in-track grading in DED-LB by time-dependent powder feeder control
Lars Bachert, Jacques Platz, Jan C. Aurich (1)

Forming (F)

F1 - Towards constant wall thickness in hybrid single point incremental forming
Carlos M.A. Silva, Rui F.V. Sampaio, João M.A. Viegas, João P.M. Pragana, Ivo M.F. Bragança, Paulo A.F. Martins (1)

F2 - Improving geometric accuracy of double-sided incremental forming using machine learning
Shayan Darzi, Abrar S. Ebrahim, Brad L. Kinsey (1), Jinjin Ha

F3 - Incremental profile forming with axial stress superposition
Yannis P. Korkolis, Markus Stennei, A. Erman Tekkaya (1)

F4 - Modelling of instability defects in thermo-bending of polymer-based tubes
Enrico Simonetto, Stefania Bruschi (1), Takashi Kuboki (1), Andrea Ghiotti (1)

F5 - Increasing material utilization in cup forming by folding-shearing
Rishabh Arora, Omer Music, Julian M. Allwood (1)

F6 - Adaptive tooling system for enhanced process stability and punch longevity in ironing
Kaarel Siimut, Kasper M. Madsen, Ermanno Ceron (3), Chris V. Nielsen (2)

F7 - Influence of distortion on the formability of tailored blanks produced by directed energy deposition
Raphaela März, Marion Merklein (1)

F8 - Design of spatially and temporally variable blank holding forces based on Bayesian optimization for aluminum pouch forming
Taegyun Ahn, Taek Jin Jang, Cheol Sagong, Jeong Whan Yoon (2)

F9 - Local formability of advanced high-strength steels: Role of damage tolerance and microstructural heterogeneity
Yuling Chang, Rongfei Juan, Zinan Li, Wolfgang Bleck, Junhe Lian / G. Hirt (1)

F10 - JAX-FORGE: GPU-accelerated high-fidelity simulation for incremental open-die forging
Colton Wright, Fanglei Hu, Joshua Groves, Deepak Sharma, Brian Thurston, Glenn Daehn, Michael Groeber, Jian Cao (1)

F11 - In-process micro-forging enhanced additive manufacturing of Inconel 718 with significant grain refinement
Sulin Chen, Zekai Liu, Zeshen Zhuang, Bin Shen, Wansheng Zhao (2), Lin Li (1)

Abrasive Process (G)

G1 - A novel bonnet polishing approach with a vision-based sensor for in-situ characterization of contact force distribution and pose misalignment
Feiyu Zhang, Jieji Ren, Langlang Yuan, Mengqi Rao, Yuehong Yin (1)

G2 - Morphologies, formation mechanisms, and mitigation strategies of groove-type scratches and ridge-type traces in slurry-less ECMP of 4H-SiC
Rongyan Sun, Aoi Kaneko, Yuji Ohkubo, Kazuya Yamamura (2)

G3 - One-step hybrid adaptive polishing using shear-thickening fluid for nanometric surface finish on additively manufactured metallic surfaces
Chunjin Wang (3), Zhen Ma, Chi Fai Cheung (1), Alborz Shokrani (2), Song Yuan

G4 - New graphene-enhanced shear-thickening polishing slurry
Min Li, Bernhard Karpuschewski (1), Oltmann Riemer, Yunlong Li, Ting Dong

G5 - Effect of dressing on the process mechanics and material separation mechanisms in finishing of cemented carbides with fine diamond grinding wheels
Monika Kipp, Philipp Hoier, Peter Krajnik (1), Dirk Biermann (1)

G6 - Continuous variable-speed grinding for no-lead surface generation
Maria Garcia-Moreno (3), Jorge Alvarez, David Barrenetxea (1), Monica Gil-Inchaurza, Iñigo Pombo

G7 - Analytical and experimental investigation of subsurface characteristics and their depth-dependent modifications in grinding of case-hardened steel
Gerrit Kuhlmann, Lars Langenhorst, Martin Hunkel, Tobias Hüsemann, Carsten Heinzel (2)

G8 - Smoothed particle Galerkin (SPG) modeling of microcrack formation in diamond grinding silicon carbide fiber-reinforced silicon carbide (SiCf/SiC)
Chunlei K. Song, Sebastian Prinz, Raj Kachhadiya, Thomas Bergs (2), Albert J. Shih (1)

G9 - Mechanistic linkage between media–workpiece interaction and surface topography in gyro finishing with spherical alumina media
Yohei Hashimoto, Kenta Miyake, Tetsuya Yamada, Minoru Ito / Y. Takeuchi (1)

Machines (M)

M1 - A physics-guided data driven method for sensorless measurement of cutting forces using CNC servo drive signals
Chung-Yu Tai, Yusuf Altintas (1)

M2 - Precision force control with observer-based vibration compensation for conformal vibration polishing
Jixiang Yang, Xu Tang, Wenhao Li, Han Ding, Zhigang Wang (2), Yuehong Yin (1)

M3 - Surrogate modelling in axles rolling processes
Zoltan Dombovari, Attila Szlancsik, Kristof Bobor, Gabor Henap, Lander Galdos, Ruben Merino, Gabor Stepan (1)

M4 - On-machine tool wear monitoring system using strain-gauge signals and edge force coefficients with physics-informed machine learning
Mahdi Mohamadyari Heydarlou, Arash Ebrahimi Araghizad, Yuki Yamada, Haythem Boujnah, Naruhiro Irino (2), Erhan Budak (1)

M5 - Simultaneous identification of milling and structural dynamics parameters under stable cutting using table-side disturbance forces
Koki Matsubara, Hideyuki Fujii, Yasuhiro Imabeppu, Naruhiro Irino (2), Norikazu Suzuki (2)

M6 - On the effect of process stiffening and process damping on milling dynamics
Florian Wöste, Jonas Baumann, Timo Platt, Felix Niggemeyer, Petra Wiederkehr (2)

M7 - Stability prediction of 5-axis milling of thin walls by means of semidiscretization
Markel Sanz-Calle, Leire Arrieta-Lizarazu, Alexander Iglesias, Mikel Zatarain (1)

M8 - Physics-driven real-time, intelligent digital twin for adaptive milling chatter control
Yi Huang, Jingang Yi, Yuebin Guo (1)

M9 - Influence of bearing and coupling characteristics on stability of a feed drive system
Ryuta Sato / T. Moriwaki (1)

M10 - Model-based laser preheating control for high-speed Directed Energy Deposition (DED) pipe coating
Kezi Li, Shiho Takemura, Burak Sencer (2), Ryozo Nagamune, Yasuhiro Kakinuma (1)

M11 - On-machine measurement of thermal displacement using a robot-assisted dual-comb ranging system
Shun Tanaka, Yuta Teshima, Naohiko Sugita (1)

M12 - Pre-compensation of machining part programs for high-accuracy trajectory generation
Shih-Hsuan Chien, Shingo Tajima, David Wilkinson, Burak Sencer (2)

M13 - Micro-dosing system for space-resolved multi-material PBF-LB/M processes.
Hans-Christian Möhring (1), Sohan Acharya, Adrian Fried

M14 - Near-field acoustic gripping for contactless semiconductor die handling
Yaoke Wang, Ziming Zhao, Yi Shi, Ping Guo (2)

M15 - Implementation of gear shaping on multi-tasking machine tools
Kotaro Mori (2), Minoru Tanemoto, Hiroya Ishiyama, Woelk Eugen

M16 - Development of a multi-phase spindle motor with active damping for chatter reduction
Steffen Ihlenfeldt (2), Dennis Guhl, Damian Anders, Lars Penter

production systems and organizations (o)

O1 - Condition-based scheduling for EV battery remanufacturing under uncertainty
Xingyu Li, Aydin Nassehi (1)

O2 - Production quality control of mechanical recycling systems for specification-compliant circular manufacturing of fiber-reinforced polymer products
Marcello Colledani (1), Giacomo Bonaiti, Cortinovis Fabio, Marco Diani

O3 - Dynamic reassembly control in flexible remanufacturing systems using ant colony optimisation
Finn Bail, Nicole Stricker, Jonas Schwenker, Marcello Urgo (2), Gisela Lanza (1)

O4 - Feasibility of utilising waste heat from data centres for production processes requiring heat treatment: A cooperative game theory approach
Kohei Nishiyama, Sangjic Lee, Hideyoshi Yanagisawa, Nariaki Nishino (2)

O5 - LLM agents-driven layout generation for reconfigurable manufacturing systems
Tianyu Wang, Zhihao Liu, Xi Vincent Wang (2), Lihui Wang (1)

O6 - An integrated multi-horizon approach for long-term reconfiguration and mid-term sequencing in global production networks
Michael Martin, Vanessa Altmann / H. Weule (1)

O7 - Operational and economical performance of Equipment-as-a-Service
Maria Chiara Magnanini (2), Tullio Tolio (1)

O8 - Multi-agentic production planning utilising simulation and optimisation
Merlin Korth, Martin Benfer, Gisela Lanza (1)

O9 - LLM actor-critic based dispatching rule generation for dynamic job shop scheduling
Marvin Carl May, Shady Salama, Johannes Pflüger, Toshiya Kaihara (1)

O10 - A Wire Laser DED aware process planning framework with topology optimization enabled by dual-gate simulation
Nan Yu, Jinpeng Lyu, Long Ye, Ruslan Melentiev, Stephen T. Newman (1)

O11 - Capturing mold qualification sensitivities for adaptive startup tuning in injection molding
Giovanni Lucchetta (2), Andrea Pieressa, Anna Bortoletto, Enrico Bovo, Nicola Milan, Marco Sorgato

O12 - Human and automated demonstration data acquisition for learning repetitive industrial handling operations
Ludger Overmeyer (2), Mirko Schaper, Phil Köhne, Justus Lübbehusen

O13 - An operations memory-enhanced multi-agent system for human-centric manufacturing process monitoring and decision support
Dongpeng Li, Wenhang Dong, Yuchen Ji, Weihua Li, Pai Zheng (2), Soh Khim Ong (1)

Precision Engineering & Metrology (P)

P1 - Task-specific systematic error evaluation of optical 3D coordinate measuring systems
Maurizio Galetto (2), Giacomo Maculotti, Mattia Trombini, Alessandro Balsamo (1)

P2 - Metrological stability of multi-camera photogrammetry systems
Edward Morse (2), Robert Schmitt (1), Jorian Khan, Matthias Bodenbonner, Yixiang Dang

P3 - Development of an optical linear encoder with a function of calibrating scale pitch deviation
Yuki Shimizu, Hyunsung Lim, Naoya Tashiro, Tomoki Kitazume / A. Matsubara (1)

P4 - Absolute linear encoder based on a dual-periodic diffraction grating with self-referenced phase indexing
Masaki Michihata (2), Tianyu Zhou

P5 - Integrated approach for function-driven metrology of lattice structures
Filippo Zanini, Nicolò Bonato, Simone Carmignato (1)

P6 - A laser confocal angle sensor for surface inclination measurement
Ryo Sato, Chen Li, Wei Gao (1)

P7 - Estimation and uncertainty assessment of TCP deflection under external loads in industrial iobots for machining applications
Beñat Iñigo (3), June Legorburu, Markel Alaña, Gorka Aguirre, Andreas Archenti (2)

P8 - Sensitivity-enhanced spin-Hall-effect ellipsometry for thin film measurement using Laguerre–Gaussian beams
Yasuhiro Mizutani, Naila Zahra, Tsutomu Uenohara, Yasuhiro Takaya (1)

P9 - Robust full-field absolute optical thickness profiling of glass substrates combining deep learning and virtual wavelength scanning Fourier analysis
Yangjin Kim, Hwan Kim, Toru Kizaki (2), Sung-Tae Hong (2)

P10 - A misalignment identification method based on relative ray vector observation
Yufeng Yuan, Yueqi He, Huaming Wang, John Yin, Jianying Zhu (1)

Surfaces (S)

S1 - Investigation of low-cycle fatigue life of electropolished 316L stainless steel in hydrogen environment
Sun-Ho Chang, Hyun-Taek Lee, Eun-Sang Lee / S.H. Ahn (1)

S2 - Solid-state-recycled aluminum profile with notable fatigue and corrosion fatigue properties made by chip extrusion
Alexandros Prospathopoulos, Schulz Oliver, Johannes Gebhard, Yannis P. Korkolis, A. Erman Tekkaya (1), Nikolaos Michailidis (1)

S3 - The combined effect of microstructure anisotropy and surface integrity on the fatigue resistance of AM and wrought Ti6Al4V titanium alloy.
Rachele Bertolini, Andrea Stramare, Alberto Campagnolo, Andrea Ghiotti (1), Enrico Savio (1), Stefania Bruschi (1)

S4 - Subsurface transformations in ground Inconel 718 – obtain complementary quantitative surface integrity information through grazing-angle XRD
Shusong Zan, Erik Abba, Dragos Axinte (1), Zhirong Liao (2)

S5 - Load-independent low friction of fouling release coating in shipyard
Seounghee Yun, Joohyun Park, Simkwan Oh, Euiseok Kong, Minsung Chun, Sanha Kim (2)

S6 - A single-experiment method for coupled transient characterization of contact heat transfer and friction in glass molding
Thomas Bergs (2), Anh Tuan Vu, Cornelia Rojacher

S7 - Atomic-level diamond surface fabrication by combining gas cluster ion beam amorphousization and plasma-assisted polishing
Quanpeng He, Junkai Ren, Yongyu Fan, Yongjie Zhang, Kege Xie, Hui Deng (2)

S8 - An adaptive sparse profiling and extraction of composite texture method for the mid-spatial frequency characterization of optical surfaces
Ze Li, Chi Fai Cheung (1), Zili Zhang, Lai Ting Ho, Kin Man Lam

S9 - Ultra-precision contour machining of CaF_2 cylindrical micro lens arrays
Duo Li, Yuhu Liu, Lingwen Tan, Zelong Jia, Zhe Zhang, Mustafizur Rahman (1), Xinquan Zhang (2)

S10 - Characterization of surface damage evolution in thin film composite membranes via in-situ SEM tensile testing and numerical simulations
Fatima G. Alabtah, Abrar S. Ebrahim, Abedalkader Alkhouzaam, Brad L. Kinsey (1), Marwan K. Khraisheh (2)

S11 - Chemical mechanical polishing mechanism of lutetium oxide with ceria abrasive in water: A reactive force field modelling study
Min Lai, Boyi Sun, Guangyue Bi, Daniel Meyer (2), Fengzhou Fang (1)

S12 - Physics-informed graph transformer for surface hardness prediction under data-limited conditions
Dongqing Yan, Sina Malakpour Estalaki, Clayton Cooper, Robert X. Gao (1)