Poster Information

Wednesday 10th June 2025, 16.50 – 18.00
Thursday 11th June 2025, 10:45 – 12:30

Poster No.	ICE26 Paper No.	Metrology
P1.01	**ICE26171**	**Analysis of measurement uncertainty contributions of optical sensors for the development of digital-metrological twins in coordinate metrology** Daniel Heißelmann[1], Lea-Jean Frömel[1], Katharina Janzen[1], Wiktor Harmatys[2], Adam Gąska[2], Ulrich Neuschaefer-Rube[1] *[1]Physikalisch-Technische Bundesanstalt (PTB), Coordinate Metrology Department, Braunschweig, Germany [2]Cracow University of Technology, Mechanical Dep. Laboratory of Coordinate Metrology M10, Krakow, Poland*
P1.02	**ICE26104**	**Wafer warpage measurements by stitching lateral shearing interferometry** Seongwook Jang[1] and Ki-Nam Joo[1] *[1]Department of Photonic Engineering, Chosun University, 309 Pilmun-daero, Dong-gu, Gwangju 61452, South Korea*
P1.03	**ICE26105**	**Lateral resolution enhancement of white light scanning interferometer** Min Seo Cho[1] and Ki-Nam Joo[1] *[1]Department of Photonic engineering, Chosun University, Gwangju, Republic of Korea*
P1.04	**ICE26106**	**Assembly and evaluation of a spectrometer by using a spectral interferometer** Seoyoon Lee[1] and Ki-Nam Joo[1] *[1]Department of Photonic Engineering, Chosun University, 309 Pilmun-daero, Dong-gu, Gwangju 61452, South Korea*
P1.06	**ICE26131**	**Thermal behavior analysis of a novel measurement system for precise displacement sensors calibration** Luka Čas, Bojan Ačko and Rok Klobučar *University of Maribor, Faculty of Mechanical Engineering, Laboratory for Production Measurement*
P1.07	**ICE26137**	**Multisensory and multiscale characterization of selected technological surfaces using optical methods** *Michał Jakubowicz[1], Karol Grochalski[1], Tomasz Bartkowiak[1], Bartosz Gapiński[1], Michał Wieczorowski[1]* *[1]Poznan University of Technology, Jacka Rychlewskiego Street 1, 61-131 Poznan*

P1.08	**ICE26143**	**Glossary of terms and definitions of digital metrological twins for freeform metrology** Ivana Linkeová[1], Jan Soukal[1], Daniel Heißelmann[2], Katharina Janzen[2], Ulrich Neuschaefer-Rube[2], Lea-Jean Frömel[2], Adam Wojtowicz[3,11], Dariusz Czulek[3], Hichem Nouira[4], Ermes Xhafa[4], Sten Bergstrand[5], Andreas Thore[5], Carl-Henrik Hanquist[5], Walter Knulst[6], Marcel van Dijk[6], Devrim Nalbantoglu[6], Gertjan Kok[6], Björn Hemming[7], Ville Heikkinen[7], Antti Lassila[7], Guido Tossello[8], Nabil Anwer[9], Pablo Puerto[10], Asier Garcia Berdote[10], Adam Gaska[11], Wiktor Harmatys[11], Giacomo Maculotti[12], Maurizio Galetto[12], Elisa Verna[12], Gianfranco Genta[12], Matthias Bodenbenner[13], Yixiang Dang[13], Robert H. Schmitt[13], Gorka Kortaberria[14], Eneko Gomez-Acedo[14], Unai Mutilba[14], Enrico Savio[15], Sofia Catalucci[15], Lorenzo Didonè[15], Hageney Hageney[16], Andreas Pierro[16], Florian Paul[16], Thomas Maresch[17], Makoto Abe[18], Dietrich Imkamp[19], Osamu Sato[20] *[1]Czech Metrology Institut (CMI), Czechia [2]Physikalisch-Technische Bundesanstalt (PTB), Germany [3]Central Office of Measures (GUM), Poland [4]Laboratoire national de métrologie et d'essais (LNE), France [5]RISE Research Institutes of Sweden AB, Sweden [6]VSL B.V., Netherlands [7]Teknologian tutkimuskeskus VTT Oy, Finland [8]Danmarks Tekniske Universitet (DTU), Denmark [9]Ecole Normale Supérieure Paris-Saclay, France [10]IDEKO, Basque Research and Technology Alliance (BRTA), Spain [11]Cracow University of Technology, Faculty of Mechanical Engineering, Poland [12]Department of Management and Production Engineering, Politecnico di Torino, Italy [13]WZL-IQS | RWTH Aachen University, Germany [14]Fundacion Tekniker, Spain [15]Università degli Studi di Padova, Italy [16]Eumetron GmbH, Germany [17]Hexagon Metrology GmbH, Germany [18]Mitutoyo CTL Germany GmbH, Germany [19]Carl Zeiss Industrielle Messtechnik GmbH, Germany [20]National Institute of Advanced Industrial Science and Technology (AIST), Japan*
P1.09	**ICE26145**	**Mathematical softgauges: a new method for validating metrology algorithms** Blateyron F[1] *[1]Digital Surf, Besançon, France*
P1.10	**ICE26154**	**Automated Geometric Segmentation of Additively Manufactured Strut-Based Lattices for Geometric Characterization: Node – based Analysis** *Y. Zekalmi [1a], D. Gallardo[2], L.C. Díaz-Pérez[2], J.A. Albajez[2], J.A. Yagüe-Fabra[2]* *[1]University of Zaragoza, Zaragoza, Spain [2]I3A, Universidad de Zaragoza, Zaragoza, Spain*
P1.11	**ICE26156**	**Deep learning-based removal of phase shift errors in phase-shifting interferometry for high-accuracy surface metrology** Young-Sik Ghim[1, 2], Manh The Nguyen[1], Hyug-Gyo Rhee[1, 2] *[1]Length and Dimensional Metrology Group, Division of Physical Metrology, Korea Research Institute of Standards and Science (KRISS), Science Town, Daejeon 34113, South Korea, [2]Department of Science and Measurement, University of Science and Technology (UST), Science Town, Daejeon 34113, South Korea*
P1.12	**ICE26173**	**Generalization of area-scale analysis for complex additively manufactured freeform surfaces** Tomasz Bartkowiak[1], Antoni Milecki[1], Michał Jakubowicz[1], Patryk Mietiński[1], Michał Wieczorowski[1], Christopher A. Brown[2] *[1]Institute of Mechanical Technology, Poznan University of Technology, Poland [2]Surface Metrology Laboratory, Worcester Polytechnic Instutute, Worcester, MA, USA*
P1.13	**ICE26182**	**Assessment of Geometric Errors in Coordinate Measuring Machines with Ring Gage** Sousa, Andre[1] *[1]Federal Institute of Science and Technology of Santa Catarina, Brazil*
P1.15	**ICE26185**	**Digital metrological twins for stereovision systems - A literature review** Katarina Josic[1,2,3], Ladji Fofana[1,2,3], Louis-Ferdinand Lafon[1], Charyar Mehdi-Souzani[2], Romain Brault[3], Nabil Anwer[2], Olivier Bruneau[2], Hichem Nouira[1] *[1]Laboratoire national de métrologie et d'essais/Conservatoire national des arts et métiers, 1 Rue Gaston Boissier, 75015 Paris, France, [2]Université Paris-Saclay, ENS Paris-Saclay, LURPA, 91190 Gif-sur-Yvette, France, [3]Centre technique des industries mécaniques, 52 Avenue Félix Louat, 60300 Senlis, France*

P1.16	**ICE26189**	**Non-contact calibration of resin gauge for assessing measurement errors of X-ray CT** Mari Watanabe[1,2], Osamu Sato[1], Mariko Kajima[1], Youichi Bitou[1], Masaki Michihata[2], Satoru Takahashi[2] *[1]Dimensional Standards Group, Research Institute for Engineering Measurement, NMIJ, AIST, [2]Department of Precision Engineering, School of Engineering, The University of Tokyo*
P1.17	**ICE26195**	**Probe head errors module for digital-metrological twin of five-axis CMM based on use of neural networks** Piotr Gąska[1], Wiktor Harmatys[2], Maciej Gruza[2], Adam Gąska[2] *[1]AGH University of Krakow, Faculty of Mechanical Engineering and Robotics, [2]Cracow University of Technology, Faculty of Mechanical Engineering*
P1.20	**ICE26209**	**Evaluation of radii in machined components** Adam Szczepański[1], Marek Magdziak[2] *[1]Pratt & Whitney Rzeszów, Poland, [2]Faculty of Mechanical Engineering and Aeronautics, Rzeszów University of Technology, Rzeszów, Poland*
P1.21	**ICE26210**	**Surface Analysis and Evaluation of Corrosion-Induced and Pore-Like Textures** Aleksandra Mirowska[1,2], Robert Tomkowski[2], Michał Dobrzyński[1], Amir Rashid[2], Sasan Dadbakhsh[2] *[1]Faculty of Mechanical Engineering and Ship Technology, Gdansk University of Technology, Narutowicza 11/12,80-233 Gdansk, Poland, [2]Department of Production Engineering, KTH Royal Institute of Technology, Brinellvägen 68, 114 28 Stockholm, Sweden*
P1.22	**ICE26224**	**Deep learning-driven visual inspection methodology for automated defect detection and dimensional assessment in die-cast parts** Sofia Catalucci and Enrico Savio *University of Padua, Department of Industrial Engineering (DII), Italy*
P1.25	**ICE26228**	**Complex coordinate measurement models for GUM uncertainty framework** Wojciech Płowucha[1], Mirosław Wojtyła[1], Izabela Hura[1], Alessandro Balsamo[2] *[1]University of Bielsko-Biała, Laboratory of Metrology, Willowa 2, PL43-309 Bielsko-Biała [2]INRIM (National Institute of Research in Metrology), Str. delle Cacce, 91, 10135 Torino TO, Italy*
P1.26	**ICE26230**	**Surface roughness influence on chromatic confocal dimensional measurements** Lorenzo Didonè, Sofia Catalucci, Enrico Savio *Department of Industrial Engineering, University of Padua, UNIPD, Via Venezia 1, Padova, Italy*
P1.27	**ICE26232**	**Systematic error correction for thickness measurements with optical distance sensors** Dario Pasin, Sofia Catalucci, Enrico Savio *Università degli Studi di Padova, Department of Industrial Engineering, Padova, Italy*
P1.28	**ICE26233**	**Digital twin of a reference rotary table for traceable angular metrology** Rim Bennoune[1, 2], Nabil Anwer[2], Mohamed Damak[3], Hichem Nouira[1] *[1]Laboratoire national de métrologie et d'essais (LNE), France, [2]Université Paris-Saclay, ENS Paris-Saclay, LURPA, 91190, Gif-sur-Yvette, France, [3]GEOMNIA - École Nationale Supérieure des Arts et Métiers (LISPEN), France*
P1.29	**ICE26244**	**Multi-Material Empirical Artifact Correction (MEAK): Efficient Algorithm for** Correcting Beam Hardening Artifacts in Multi-Material CT Philip Trapp[1,2], Frederic Ballach[2], Tobias Müller[2], Michael Hammer[2], Raoul Christoph[2], Ralf Christoph[2], and Marc Kachelrieß[1] *[1]German Cancer Research Center (DKFZ), Im Neuenheimer Feld 280, 69120 Heidelberg, Germany, [2]Werth Messtechnik GmbH, Siemensstraße 19, 35394 Giessen, Germany*
P1.30	**ICE26249**	**Device for roundness measurement of continuously changing diameter objects** Sampo Haikonen[1], Nhat Huy Nguyen[1], Elmo Laine[1], Raine Viitala[1] *[1]Aalto University, Department of Energy and Mechanical Engineering*

P1.31	**ICE26257**	**An ultra-compact chromatic confocal sensing probe enabled by metasurfaces and micron resolution 3D printing** J. Williamson[1], D.J. Townend[1], D. Tang[1], R. Owen[2], W. Zhong [1], A.J. Henning[1], H. Martin[1], V.R. Konnanath Puthanveetil[1], X. Jiang[1] *[1]Centre for Precision Technologies, University of Huddersfield, Queensgate, Huddersfield, HD1 3DH, [2]School of Pharmacy, University of Nottingham Biodiscovery Institute, University of Nottingham, University Park, Nottingham, NG7 2RD*
P1.32	**ICE26263**	**Investigating non-uniformity of spatial resolution in X-ray computed tomography** **Shiran Shan[1], Wenjuan Sun[1,2], Xiao Chen[3], Shan Lou[3]** *[1] Department of Mechanical Engineering, Celestijnenlaan 300, KU Leuven, 3001 Leuven, Belgium,* *[2] Flanders Make @KU Leuven, 3001 Leuven, Belgium,* *[3] EPSRC Future Metrology Hub, University of Huddersfield, Queensgate, Huddersfield, UK*

Poster No.	ICE26 Paper No.	Measuring Instruments & Machine Tools
P2.01	**ICE26234**	**On-machine optical tool characterisation using dictionary-based sub-pixel edge detection** Moritz Genzwürker[1], Matthias Geiselhart[1], Giuliano Bissacco[1] *[1]Technical University of Denmark, Department of Mechanical Engineering, 2800 Kgs. Lyngby, Denmark*
P2.02	**ICE26102**	**Modeling and Quantification of Parameter-Induced Thermal Errors in a Hydrostatic Turntable System** Jun Zha[1,2], Changhui Ke[3], Lipu Song[1,2], Chengwei Kang[1,2] *[1]School of Mechanical Engineering, Xi'an Jiaotong University, Xi'an 710049, China [2]Xi'an Jiaotong University-Genertec Joint Research Institute, Xi'an 710049, China [3]School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China*
P2.03	**ICE26108**	**Simulation study on viscous friction reduction effect of textured oil-lubricated hydrostatic bearings** Dmytro Fedorynenko[1], Naofumi Ohnishi[1], and Yohichi Nakao[2] *[1]Department of Aerospace Engineering, Tohoku University, Sendai, Japan [2]Department of Mechanical Engineering, Kanagawa University, Yokohama, Japan*
P2.04	**ICE26116**	**A new backlight imaging method for in-machine measurement of flank wear** Lukas Jansen[1], Knut Sørby[1] *[1]Department of Mechanical and Industrial Engineering, NTNU Norwegian University of Science and Technology, Trondheim, Norway*
P2.05	**ICE26117**	**Measurement and improvement of bit error rate in 16QAM using laser hydrophones** Rin Furuya[1], Norio Tsuda[1], and Daisuke Mizushima[1] *[1]Aichi Institute of Technology*

P2.08	**ICE26141**	**Investigation of a novel motorised milling spindle with thermoelectric temperature control system based on a tubular Peltier module** Eckart Uhlmann[1,2], Mitchel Polte[1,2], Florian Triebel[1], Alphin Judy[1], Roland Binninger[3], Andreas Moll[4], Jörn Sieberg[4] *[1]Technische Universität Berlin, Institute for Machine Tools and Factory Management IWF, Pascalstr. 8-9, 10587 Berlin, Germany, [2]Fraunhofer Institute for Production Systems and Design Technology IPK, Pascalstr. 8-9, 10587 Berlin, Germany, [3]Fraunhofer Institute for Physical Measurement Techniques IPM, Georges-Köhler-Allee 301, 79110 Freiburg, Germany, [4]FISCHER Deutschland GmbH, Marie-Curie-Strasse 2, 40764 Langenfeld, Germany*
P2.09	**ICE26142**	**Evaluation of the temperature influence in the measurement uncertainty of a telescopic simultaneous ball-bar for manufacturing systems verification** Francisco Javier Brosed[1,2,3], Juan José Aguilar[1,2], Sergio Aguado[1,2], Marcos Pueo[1,2], Ana Cristina Majarena[1,2], Jesús Velázquez[1,2] *[1]Department of Design and Manufacturing Engineering, University of Zaragoza, María de Luna 3, 50018 Zaragoza, Spain. [2]Instituto de Investigación en Ingeniería de Aragón (I3A), 50018 Zaragoza, Spain*
P2.10	**ICE26155**	**A compact cube-shaped parallel kinematic machine for dynamic and high-precision positioning in six degrees of freedom** Tillmann Volz 1, Stefan Schulz1, Stephanie Streit1 *1Physik Instrumente (PI) SE & Co. KG*
P2.11	**ICE26162**	**Design and calibration of a single-camera near-field photometric stereo head with tiltable illumination** Seunghun Oh[1], Jinsung Son1, Kihyun Kim[2], Hyo-Young Kim[2], Moon-Gu Lee[3] and Jaehong Shim[2] *[1]Department of IT and Semiconductor Convergence Engineering, Graduate School, Tech University of Korea (TU Korea), [2]Department of Mechatronics Engineering, Tech University of Korea (TU Korea), [3]School of Mechanical Engineering, Ajou University, Korea*
P2.13	**ICE26169**	**A novel approach for a coordinate measuring machine probing head with a levitating probe integrating the Kibble-balance principle and a Maxwell-clamp-like mounting concept** Yujie Zhong[1], Tino Hausotte[1], Georg Hein[2], Julien Schinn[1], Norbert Rogge[2] and Thomas Fröhlich[2] *[1]Chair of Manufacturing Metrology, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Faculty of Engineering, Department of Mechanical Engineering, [2]Institute of Process Measurement and Sensor Technology, Technische Universität Ilmenau, Department of Mechanical Engineering*
P2.14	**ICE26206**	**A Reduced-Order Modelling Framework for the Receptance Coupling Method** Özgür Taylan Kenanoğlu[1,2,] Yiğit Özcan[1,2,] Shashwat Kuswaha[1,2,] Dominiek Reynaerts[1,2] *[1]Department of Mechanical Engineering, Manufacturing Processes and Systems, KU Leuven, Leuven 3001, Belgium* *[2]Member Flanders Make, Belgium*
P2.15	**ICE26207**	**Metrological constraints in predicting tool deflection for error compensation** Paweł Majda[1], Paweł Dunaj[1], Bartosz Powałka[1] and Andreas Archenti[2] *[1]West Pomeranian University of Technology, Szczecin, Poland, [2]KTH Royal Institute of Technology, Stockholm, Sweden*

P2.18	**ICE26222**	**Capability Modelling of Robotic Machining System based on Digital Twin** Abdullah All Mamun Anik[1], Andrew Longstaff[1], Simon Fletcher[1], Xianzhi Zhang[1] *[1] School of Computing and Engineering, University of Huddersfield, Huddersfield, Queensgate, United Kingdom*
P2.19	**ICE26226**	**Development of submerged solar power generation system (Effect of waves on power generation performance of solar panel)** Akinori Yui[1], Ashin Hirao[1], Yoshihiro Takita[2], Daisuke Terada[2] and Hirofumi Suzuki[3] *[1]Kanagawa Universty [2]National Defense Academy [3]Chubu university*
P2.20	**ICE26240**	**Axial spindle deformation due to Poisson's effect under centrifugal loading** Byron R. Knapp, Dave Arneson, and Dan Oss *Professional Instruments Company, Hopkins, Minnesota, USA*
P2.21	**ICE26241**	**Investigation of spindle thermal displacement and cooling unit energy consumption characteristics under various operating conditions** Gyungho Khim[1], Sungchuel Lee[1], and Jeong Seok Oh[1] *[1]Department of Ultra Precision Machines & Systems, Research Institute of Autonomous Manufacturing, Korea Institute of Machinery and Materials*
P2.22	**ICE26242**	**Robust Parameter Estimation for Optical Surface Roughness Measurement Using a Physics-Based Model** Sungcheul Lee[1], Hyun-soo Kim[1], Seong-Kook Ro[1] *[1]Ultra Precision Machines and Systems, Korea Institute of Machinery and Materials, 156, Gajeongbuk-ro, Yuseong-gu, Deajeon, Republic of Korea*
P2.23	**ICE26247**	**Design and experimental analysis of a thermoelectrically temperature-controlled bearing shield for motorised spindles** Leon Naatz[1,2], Florian Triebel[1], Katrin Schmitt[3,4], Jürgen Wöllenstein[3,4], Roland Binninger[3] *[1]Technische Universität Berlin, Institute for Machine Tools and Factory Management IWF, Pascalstr. 8-9 10587 Berlin, Germany, [2]Technical University of Applied Sciences Wildau, Hochschulring 1, 15745 Wildau, Germany, [3]Fraunhofer Institute for Physical Measurement Techniques IPM, Georges-Köhler-Allee 301 79110 Freiburg, Germany, [4]University of Freiburg, Department of Microsystems Engineering – IMTEK, Laboratory for Gas Sensors, Georges-Köhler-Allee 102, 79110 Freiburg, Germany*
P2.24	**ICE26255**	**Automatic Text Analysis for Machine Maintenance in Float-Zone Crystal Growth Production** Eugenia Freggia[1], Marta Barbieri[2], Irene Spada[1], Gualtiero Fantoni[1], Matteo Calaon[2] *[1]Univerisity of Pisa, 56122 Pisa, Italy; [2]Technical University of Denmark, 2800 Kgs. Lyngby, Denmark*
P2.25	**ICE26267**	**A multiphysics finite element model for hydrostatic guideway systems** Markel Alaña[1], Julen Bastardo[1], Gorka Aguirre[1], Harkaitz Urreta[1] *[1]Design and Precision Engineering, IDEKO, Elgoibar, Gipuzkoa, Spain*

Poster No.	**ICE26 Paper No.**	**Precision Manufacturing Processes**
P3.01	**ICE26251**	**Ultrafast laser fabrication of transparent superhydrophobic silica glass for optical window applications** Kai Liao[1], Chi Fai Cheung[1], Chunjin Wang[1] *[1]State Key Laboratory of Ultra-precision Machining Technology, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, China*

P3.02	**ICE26110**	**Porous metal aerostatic bearing restrictors manufactured with laser-based powder bed fusion** Onni Leutonen[1], Mikael Miettinen[1], Valtteri Vainio[1], Roy Björkstrand[1], Mika Salmi[1], Raine Viitala[1] *[1]Aalto University, School of Engineering, Department of Energy and Mechanical Engineering, Espoo, Finland*
P3.05	**ICE26119**	**Investigation of the transferability of pulsed electrochemical machining process parameters from simple substitute models to complex manufacturing applications** Falko Böttcher[1], Sepideh Ghorbanalipour[2], Jan Edelmann[1] *[1]Fraunhofer IWU, Institute for Machine Tools and Forming Technology, Reichenhainer Straße 88, 09126 Chemnitz, Germany* *[2]Chemnitz University of Technology, Reichenhainer Straße 70, 09126 Chemnitz, Germany*
P3.06	**ICE26123**	**Study on effect of tool edge geometry on residual stress in metal cutting** Hiroyuki Sasahara [1] and Tatsuya Tanaka [1] *[1]Tokyo University of Agriculture and Technology*
P3.07	**ICE26126**	**Dimensional accuracy and IT7 fits in FDM-printed PLA elements: statistical evaluation and correction guidelines** Bartłomiej Byczuk[1], Mirosław Rucki[1], Marcin Wikło[2], Arturas Kilikevicius[1], Patryk Osuch[3] *[1]Vilnius Gediminas Technical University, Vilnius, Lithuania* *[2]Casimir Pulaski Radom University, Radom, Poland*
P3.09	**ICE26128**	**Sustainable manufacturing of metallic wires through solid-state processes with continuous Al6061 chips** Zichen WANG[1,2], Vincent Beng Chye TAN[1], Dennis Wee Keong NEO[2], and Nicholas Yew Jin TAN[2,3] *[1]Department of Mechanical Engineering, National University of Singapore, 9 Engineering Drive 1, Singapore 117575, Republic of Singapore* *[2]Singapore Institute of Manufacturing Technology (SIMTech), Agency for Science, Technology and Research (A*STAR), 5 Cleantech Loop, Singapore 636732, Republic of Singapore* *[3]Advanced Remanufacturing and Technology Centre (ARTC), Agency for Science, Technology and Research (A*STAR), 3 Cleantech Loop, Singapore 637143, Republic of Singapore*
P3.10	**ICE26130**	**Systematic design and high-resolution prototyping of diffractive optical elements for industrial mold texturing** Marco Sorgato[1]; Giacomo Baruffa[1]; Giovanni Lucchetta[1]; Enrico Savio[1] *[1]Department of Industrial Engineering, University of Padova, via Gradenigo 6/A, 35131 Padova, Italy*
P3.11	**ICE26144**	**Influence of Cutting Temperature on Affected Layer in Cutting of Aluminum Alloy Castings with PCD tool** Hiroo Shizuka[1,] Katsuhiko Sakai[1),] Koki Tokai[1] *[1] Shizuoka University,3-5-1 Johoku Naka-ku Hamamatsu Shizuoka 432-8561 Japan*

P3.13	**ICE26160**	**Electrochemical Machining of Pre-Defined Kinematic Surface Roughness on Nickel 201 with Continuous Electrolyte Jet** André Martin[1, *,] Tehreem Javed[1], Sepideh Ghorbanalipour[1], Andreas Schubert[1] *[1]Chemnitz University of Technology, Professorship Micromanufacturing Technology, Reichenhainer Str. 70, 09126 Chemnitz, Germany*
P3.14	**ICE26161**	**Surface Alloying of Stainless-Steel Parts with Tungsten During Electrical Discharge Machining for Increased Hardness** Viet D. Bui[1*], André Martin[1], Andreas Schubert[1,2] *[1]Chemnitz University of Technology, Professorship Micromanufacturing Technology, Reichenhainer Str. 70, 09126 Chemnitz, Germany* *[2]Fraunhofer Institute for Machine Tools and Forming Technology, Reichenhainer Str. 88, 09126 Chemnitz, Germany*
P3.15	**ICE26164**	**Pore-aware dwell map construction from in-situ pad-glass contact imaging in optical polishing** Nico Zettler[1], Adam Wilczek[1], Prof. Dr. Rainer Börret[1] *[1]Aalen University, Center for Optical Technologies (ZOT), Beethovenstr. 1, 73430 Aalen, Germany*
P3.16	**ICE26172**	**Residual stress modification and surface enhancement of PBF-LB/M components via particle blasting and plasma electrolytic polishing** Neel Kamal Gupta[1]*, Toni Böttger[1], Christian Schimpf[2], Henning Zeidler[1] *[1]Institute for Machine Elements, Engineering Design and Manufacturing (IMKF), Technische Universität Bergakademie Freiberg, Freiberg, Germany* *[2]Faculty for Materials Science and Materials Technology, Technische Universität Bergakademie Freiberg, Freiberg, Germany*
P3.17	**ICE26176**	**Voxel-Scale Misalignment Detection for Orthogonal Metasurface-Produced Holograms via error-compensated Volumetric Imaging** Gavin Stafford[1], Timothy Yap[2], Michael Cullinan [1] *[1,2]The University of Texas at Austin, Walker Department of Mechanical Engineering*
P3.18	**ICE26188**	**Novel niobium carbide cermet and manufacturing techniques for moulds; improving durability and flowability in ceramic injection moulding** Muhammad Hazak Arshad[1,5], Victor Laermans[2], Mian Monib Ur Rehman[3,5,] Tim Evens[2], Shuigen Huang[4,] Krishna Kumar Saxena[1,5], Sylvie Castagne[3,5,] Albert Van Bael[2], Jozef Vleugels[4], Dominiek Reynaerts[1,5, *] *[1]Department of Mechanical Engineering, Manufacturing Processes and Systems, Micro- & Precision Engineering Group, KU Leuven, Leuven, Belgium.* *[2]Department of Materials Engineering, Structural Composites and Alloys, Integrity and Nondestructive Testing, Polymer Processing & Engineering Group, KU Leuven, Diepenbeek, Belgium.* *[3]Department of Mechanical Engineering, Manufacturing Processes and Systems, Laser Micromanufacturing Group, KU Leuven, Leuven, Belgium.* *[4]Department of Materials Engineering, Surface and Interface Engineered Materials, KU Leuven, Leuven, Belgium.* *[5]Member Flanders Make, Leuven, Belgium.*

P3.19	**ICE26191**	**FFF System for continuous fibre reinforcement and enhanced composite properties** J. Polte[1, 2,] E. Uhlmann[1, 2], S. Bode[1], L.-A. Edinger[1] *[1]Institute for Machine Tools and Factory Management IWF, Technische Universität Berlin, Germany* *[2]Fraunhofer Institute for Production Systems and Design Technology IPK, Germany*
P3.22	**ICE26205**	**Electrochemical deposition of active materials towards integrated sensing on mechanical components** Zhaozhi Lyu[1, 2,] Muhammad Hazak Arshad[1, 2,] Krishna kumar Saxena[1, 2, *,] Dominiek Reynaerts[1, 2,] *[1]KU Leuven, Department of Mechanical Engineering, Manufacturing Processes and Systems, Micro- & Precision Engineering Group, Leuven, Belgium.* *[1]Member Flanders Makde, Leuven, Belgium.*
P3.23	**ICE26208**	**Metrological Characterization of Shrinkage in Precision Injection Moulded Polypropylene Plates through Experimental Measurements and Process Simulation** Juan J. Ortiz-Vazquez[1,2,] Hallgrimur Kjartansson[1], Renan Melhado Mazza[3], J. Israel Martínez-López[2], Alireza Mollaei Ardestani[1], Yang Zhang[1] and Guido Tosello[1] *[1]Department of Civil and Mechanical Engineering, Technical University of Denmark, DK-2800 Kgs. Lyngby, Denmark* *[2]School of Engineering and Science, Tecnologico de Monterrey, MX-64700 Monterrey, México* *[3]AB Tetra Pak, SE-223 55 Lund, Sweden*
P3.25	**ICE26243**	**Mechanical properties of additive manufactured components with combined short and continuous fiber reinforcement** J. Polte[1, 2,] S. Bode[1], S.Yazgan[1] *[1]Institute for Machine Tools and Factory Management IWF, Technische Universität Berlin, Germany* *[2]Fraunhofer Institute for Production Systems and Design Technology IPK, Germany*
P3.26	**ICE26256**	**Development of Lattice Structures of pure Tungsten for Applications in Fusion Energy** Miguel Zavala-Arredondo[1], Ahmed Tawfik[2], Liam Blunt[2], Jeong-Ha You[3] *[1]UKAEA, 2A Lanchester Way, Advanced Manufacturing Park, Rotherham, S60 5FX, UK.* *[2]The Future Advanced Metrology Hub fr Sustainably Manufacturing, University of Huddersfield, UK* *[3]IPP (Max Planck Institute for Plasma Physics), Garching, Germany*
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P6.02		**Fundamental Investigation of Cutting Mechanisms in Ultra-Precision Machining of KTP Crystals for Quantum Communication** E. Uhlmann[1,2] , M. Polte[1,2] , T. Hocke[1,2], T. D. Le[1] *[1] Institute for Machine Tools and Factory Management IWF, Technische Universität Berlin, Germany* *[2] Fraunhofer Institute for Production Systems and Design Technology IPK, Germany*

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