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OS01-02 Design of an RFID-based part identification approach: a case study in an automotive manufacturing plant

Xi Vincent Wang and Felix Buchner

OS01-03 Diaphragm bellows fatigue prediction using structural simulation

Doyoon Jeon, Junyeong Lee and Seungmo Kim

Korea University of Technology and Education

OS01-04 Eccentric machining of a crankshaft using feature-based simultaneous four-axis machining using STEP-NC

Shunta Onodera, Fumiki Tanaka and Masahiko

OS01-05 Additive Manufacturing of Multi-Scale Porous Gyroid Infill Structures with Tailored Hardness

Yunlong Tang, Zifan Wang, Christopher Sutanto and Xinni Tian

Monash University

OS01-06 A Study on Easy to Build Friction Models for Feed Axis Simulation of Machine Tools

Taro Ogiso and Shunsuke Aoki

Fanuc Corporation

OS01-07 A study on Computer Aided Process Planning to allocate the operation sequence by referring to workpiece material

Ryo Hamanaka, Eisuke Sogabe and Keiichi Nakamoto

Tokyo University of Agriculture and Technology

OS01-08 A Study on Suppression of Variation in Tool Center Points for Ball-End Milling of Free-Form Surfaces

Eisuke Sogabe and Keiichi Nakamoto

OS01-09 An optimization model for cutting tool allocation in flexible manufacturing systems considering remaining usable times and machine load balance

Taketo Fujii and Haruhiko Suwa

Setsunan University

OS01-10 A Study on Computer Aided Process Planning to Realize Parts Machining on a Sliding Headstock Lathe

Taichi Takanami, Shuichi Watabe, Naoki Akiyama,

Kazuhiko Sannomiya, Takaichi Nakaya and Keiichi

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Daisuke Narita, Hayato Yoshioka and Zongwei Ren

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Tong Zhu, Carman K. M. Lee, Denghui Li, Suet To and Wai Sze Yip

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Kosuke Yamamoto, Yuta Noro, Toshiki Hirogaki, Masao Nakagawa and Eiichi Aoyama

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OS02-03 Modeling Object-Concepts in Engineers' Thinking under Digital Triplet Framework

Yiming Hou, Shinsuke Kondoh, Yasushi Umeda, Masahiro Nishio and Koji Makino

The University of Tokyo

OS02-05 Extraction of Knowledge for Plant Inspection based on Behavior Comparison between Experts and Novices

Hiroto Kitamori, Yasushi Umeda, Jun Ota, Hajime Asama, Seiji Kasahara, Naoya Yamato, Hiroyuki Ito, Taizo Daito, Sunao Tamura, Toshiya Kato, Masahiro Korenaga, Akinobu Sasamura and Fumihiko Nonaka

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OS03 Advanced system design and applications

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Jipeng Cui, Liangchi Zhang and Yaoyu Wang
Southern University of Science and Technology

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Koji Iwamura, Nobuhiro Sugimura, Yasuhiro Kinoshita and Junichi Yamaguchi
Osaka Metropolitan University

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Yuga Suzuki, Yusuke Tsutsui, Yoshiki Shimomura and Akira Tsumaya
Okayama Prefectural University

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Yunxiang Zheng, Cheng Hu, Mao Wang, Zongpu Wu, Jianguo Zhang and Jianfeng Xu

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Koki Kuroda, Hidenori Nakatsuji and Isamu Nishida
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Tatsuki Ono and Koichi Morishige
The University of Electro-Communications

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Linxuan He and Masatomo Inui
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Shuntaro Yamato, Takashi Yanagitani, Burak Sencer and Anthony Beaucamp
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Liboriu Hendrik, Werner Jonas Maximilian, Nestler Andreas, Drossel Welf-Guntram and Schubert Andreas
Chemnitz University of Technology, Professorship
Micromanufacturing Technology

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Yu Yan, Koji Teramoto, Naruki Shoji and Hiroki

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Yuichi Kurane, Ashwani Pratap, Burak Sencer and Anthony Beaucamp
Keio University

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Naofumi Tsuji, Kota Takashima, Hirofumi Kawamura, Keisuke Hara, Ryutaro Tanaka, Akira Sakurada, Kazuto Miyawaki and Hiromi Isobe
Nagaoka University of Technology / National Institute of Technology, Akita College

OS05-05 A Comparative Analysis of the Cutting Separation Criteria in Finite Element Simulations of Orthogonal Metal Cutting

Yaoyu Wang, Liangchi Zhang, Zhen Li and Jipeng Cui
Southern University of Science and Technology

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Isaí Espinoza-Torres, Tanaka Ryutaro, Israel Martinez-Ramirez, Katsuhiko Sekiya and Keiji Yamada
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OS05-07 Research on effect of ultra-high pressure coolant supplied from flank face in end milling of aerospace alloys supported by CFD simulations

Jingtian Mao, Kensuke Tsuchiya, Chikara Morigo and Shinji Yukinari
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OS05-09 Microtexture Processing on Three-Dimensional Curved Surfaces Using Ultrasonic Milling
Keisuke hara, Atsuhiko Yoshida, Naofumi Tsuji, Kota Takashima, Hirofumi Kawamura and Hiromi Isobe
National Institute of Technology, Ichinoseki College

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Kazuki Murooka, Tadashi Akechi, Tomohiro Koyano, Akira Hosokawa, Tatsuaki Furumoto and Hiroko Mikado
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OS05-11 The Machinability of Diamond-Coated Ball-End Tools in Milling of Free-Cutting Cemented Carbide
Kota Toyooka, tetsuo Samukawa, Masafumi Nagata, Kazuhiro Tezuka and Haruiko Suwa
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OS05-12 3D microstructure imaging of dual-phase steels with different carbon contents and thermal histories using a 3D internal structure microscope
Yuuki Aida, Norio Yamashita, Shinya Morita, Takayuki Shiraiwa, Manabu Enoki, Naoya Kiyokane, Kazuhiko Yamazaki, Shinjiro Kaneko and Hideo Yokota
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OS05-13 An Experimental Study on the Machining Performance of Cubic Boron Nitride Tools in Ultra-Precision Machining of Ti-6Al-4V with Magnetic Field Assistance
Louis Luo Fan, Ho Wan Leung, Wai Sze Yip and Suet

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Takehiro Sasaki, Hirotaka Satoh, Masahiko Yoshino, Hiroshi Nanjo, Ryuta Nakamura, Takayuki Kuzumi and Yoichi Akagami
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Zhejiang University

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Wang Jiacheng, Namlu Ramazan Hakki, Kilic Sadik Engin, Mativenga Paul and Kilic Zekai Murat
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OS05-33 Effect of disturbance and tool condition on cutting temperature measurement by utilizing tool-work thermocouple method
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Teppei Onuki, Kyo-ichiro Shiba, Yusuke Mogaki, Libo Zhou, Hirotaka Ojima and Jun Shimizu

OS06-02 Physics informed generative neural network of multireflection interference fringes for optical thickness gauge

Teppei Onuki, Takeshi Mochizuki, Yuta Toshima, Hirotaka Ojima, Jun Shimizu and Libo Zhou

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Bing Chen and Ye Guo
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OS06-04 Application of coarse grained grinding wheels for precision grinding of glassy carbon

Bernhard Karpuschewski, Carsten Heinzl, Oltmann Riemer, Kai Rickens and Barnabas Adam
Bremen University, Leibniz-IWT

OS06-05 Creep Feed Grinding Characteristics of Maraging Steel Using Porous Vitrified cBN Wheel

Masakazu Fujimoto and Haruya Tanaka
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OS06-06 Investigation of the Wheel Vibration and Surface Integrity by In-situ Magnetic Field Assisted Parallel Ultra-Precision Grinding of Inconel 718

Te Zhao, Tengfei Yin, Yi Tan, Denghui Li and Suet To
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Zongwei Ren and Hayato Yoshioka
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OS06-08 Towards Uniformity and Efficiency: Managing the Free-Form Surface Polishing through Kinematic Analysis and Trajectory Planning

Zipu Yan and Liangchi Zhang
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Yujun Wu and Weimin Lin
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<p>OS06-10 Study of surface integrity on high-speed grinding of iron metal Juan Chen, Bi Zhang and Suet To The Hong Kong Polytechnic University</p>
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<p>OS06-16 Evaluation on fine cutting edges of PCD grinding tool and mirror finishing surface on SiC substrates Haruto Konishi, Takashi Fujita, Ryota Fukunaga, Yuki Izutani, Yasuo Izumi and Junji Watanabe</p>
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Ryoga Tsuiki, Tsunehisa Suzuki, Tatsuya Fujii, Mitsuyoshi Nomura and Tomoya Abe
Akita Prefectural University

OS06-20 Direct observation of the clogging development during the grinding process

Haonan Ren, Toru Kizaki, Hiroyuki Kamura, Takayuki Nishizawa, Chao Wang and Naohiko Sugita
University of Tokyo

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Haohan Zhang, Jing Ni and Zhen Zhang
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Yifan Li, Liangchi Zhang

Southern University of Science and Technology

OS07-02 Deformation and cracking mechanisms of single crystal indium phosphide induced by nanoscratch

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Mengying Luan, Jinhui Yu, Pingfa Feng, Feng Feng and Jianjian Wang

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Qi Liu, Xichun Luo, Wenkun Xie, P. M. Abhilash, Charles Walker and Rajeshkumar Madarkar

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OS07-05 Fabrication of membrane optics by diamond turning combined with spin molding

Zhiyu Zhang, Ruoqi Wang, Chengli Guo, Xuejun Zhang and Jiwang Yan

Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences

OS07-06 Experimental Investigation on Ultrasonic-assisted Ultraprecision Turning of Zinc Selenide

Spherical Surface with Straight-nosed Diamond Tools

Minghan Chen, Linhe Sun, Hongqiang Qi, Hanqiang Wu and Yongbo Wu

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OS07-07 Investigation on the surface integrity and subsurface damage of SiCp/Al by in-situ laser assisted diamond cutting

Mao Wang, Zongpu Wu, Yunxiang Zheng, Kai Huang, Jianguo Zhang and Jianfeng Xu

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<p>OS07-12 GRA-RSM Analysis of Surface Features Fusion for Micro-Milling UD-CF/PEEK Composites Da Qu, Qiwei Wu, Zhihang Li, Xiaoyu Ma, Jianwei Ji, Yang Song and Yong Ma Chongqing University of Technology</p>
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Peerapong Kasuriya, Takeshi Watanabe, Takashi Goto and Masahiko Jin

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OS08-04 Removal characteristics of single crystal diamond (111) substrate by vacuum-ultraviolet assisted polishing

Sora Ninomiya and Akihisa Kubota

OS08-05 Polishing methods for large-area mosaic diamond substrate

Keiji Kasamura, Yusuke Shirayanagi, Hiroki Toyoda, Shingo Tomohisa, Takashi Takenaga and Akihisa Kubota

OS08-06 Fluid jet polishing of stainless-steel optical molding inserts

Ashish Kumar, Ashwani Pratap and Anthony Beaucamp
Keio University

OS08-07 Optimization of oscillation control by simulation for uniform polishing amount in ECMP processing of SiC wafers

Aoi Kaneko, Rongyan Sun, Yuji Ohkubo and Kazuya Yamamura

OS08-08 Surface polishing of YAG ceramics using catalyst-referred etching

Yusuke Yoshida, Kiyoto Kayao, Daisetsu Toh, Jumpei Yamada, Kazuto Yamauchi and Yasuhisa Sano
Osaka University

OS08-09 High-efficiency Polishing of GaN(0001) Substrates Using Catalyst-referred Etching Assisted by Photoelectrochemical Reaction

Kiyoto Kayao, Tatsuya Fukagawa, Daisetsu Toh, Jumpei Yamada, Kazuto Yamauchi and Yasuhisa Sano
Osaka University

OS08-10 Magnetic Field-assisted Mass Polishing of Optical Glasses
Yee Man Loh, Chunjin Wang, Rui Gao, Lai Ting Ho and Chi Fai Cheung
The Hong Kong Polytechnic University

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Bing Wu, Shengnan Zhang and Hui Deng
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Yuan Xie and Hui Deng
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Xinyu Li and Hui Deng
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Chuhong He and Hui Deng
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Jianli Guo, Satoru Egawa, Hiroto Motoyama and Hidekazu Mimura
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OS08-17 Synthesis of nano-sized cerium oxide particles for chemical mechanical polishing of quartz glass and evaluation of their polishing properties
Xianglong Liu, Akihisa kubota, Makoto Tokuda and Tsutomu Mashimo
Kumamoto university

OS08-18 Tip-based nanofabrication on a hydrogen-terminated diamond surface by electrochemistry
Jinyan Tang, Mao Peng, Yangyang Li and Yuan-Liu Chen

OS08-19 Planarization of substrate with metal wiring using catalyst-referred etching -Etching characteristic of wiring metal-

Hiroto Yamasaki, Kiyoto Kayao, Daisetsu Toh, Jumpei Yamada, Kazuto Yamauchi and Yasuhisa Sano
Osaka University

OS08-20 Highly Efficient Etching of GaN (0001) Substrate by Photoelectrochemical Etching

Tatsuya Fukagawa, Kiyoto Kayao, Toh Daisetsu, Jumpei Yamada, Kazuto Yamauchi and Yasuhisa Sano
Osaka University

OS08-21 Fluid jet polishing of functional structured surfaces

Chunjin Wang, Zili Zhang and Benny C. F. Cheung

OS08-22 Electrochemical shear thickening polishing of single crystal silicon carbide

Mengmeng Shen, Wei Hang, Hongyu Chen, Binghai Lyu and Yunxiao Han
Zhejiang University of Technology

OS08-23 Fixed-abrasive electrochemical mechanical polishing of single-crystal silicon

Xiaozhe Yang, Shenglong Zhang, Xu Yang, Kazuya Tamamura and Zhuangde Jiang
Xi'an Jiaotong University

OS09-01 Influence of Dielectric Oil Cooling-Effect on Wire EDM Characteristics

Shixian Liu, Ren Sakata, Akira Okada and Tomohiko Kitamura

Okayama University

OS09-02 Non-Circular Section Machining of Glass with Lathe-Type Electrochemical Discharge Machine

Katsushi Furutani and Toshiki Irie

Toyota Technological Institute

OS09-03 Enhancing Formability of SiCp/Al Composites through Compression Molding Assisted by Ultrasonic Vibration

Zhen Li, Zhengji Yang and Liangchi Zhang

Southern University of Science and Technology

OS09-05 Effect of Amplitude on Ultrasonic Vibration Assisted EDM of SKD 61 S teal: Theoretical Analysis and CFD Study

Chenxue Wang, Tomohiro Sasaki and Atsutoshi Hirao

Niigata University

OS09-06 In-situ observation of molten pool in ultrasonic vibration-assisted laser directed energy deposition

Yuya Hagihara, Yuichiro Miyata, Takanori Mori, Iwao Yamaji, Weilong Cong and Daisuke Kono

Kyoto University

OS09-07 Development of A Novel Near Dry Mist Electrical Discharge Machining A n Environment Friendly Precise Process

Albert Wen-Jeng Hsue and Tsung-Rei Lin

National Kaohsiung University of Science & Technogy

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OS09-08 Machine learning application in Laser forming - Predicting scanning paths with CNN and structured patterns -

Ping-Hsien Chou, Takuma Miyake, Keiji Yamada, Yean-Ren Hwang, Eisuke Sentoku, Ryutaro Tanaka and Katsuhiko Sekiya

Hiroshima University

Hiroshima University

OS09-09 Study on Surface Smoothing of Metal Lattice Structures by Large area Electron Beam Irradiation Method

Seiya Miura, Togo Shinonaga, Atsushi Yamaguchi and Akira Okada

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<p>OS09-10 Selective Laser Melting of AlCoCrMoNbNi Refractory High-Entropy Alloy with Titanium and Carbon Nanoparticle Additions: Exploring the Microstructure and Mechanisms</p> <p>Tsai, Meng-Hsiu and Chuang, Yu-Chieh</p> <p>National Kaohsiung University of Science & Technology</p>
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<p>OS09-12 An experimental investigation on magnetic field assisted ultra-precision diamond machining of microgrooves on titanium alloy surfaces</p> <p>Linhe Sun, Suet To and Wai Sze Yip</p> <p>The Hong Kong Polytechnic University</p>
<p>OS09-13 Investigation of the influence of base metal size on residual stress and deformation in directed energy deposition</p> <p>Kaito Sekiguchi, Yuichiro Miyata, Shogo Sugimoto, Takeyuki Abe and Junichi Kaneko</p>
<p>OS09-14 Numerical Analysis of Atmospheric Pressure Inductively Coupled Argon Plasma</p> <p>Xinyang Wei, Itsuki Noto, Rongyan Sun, Yuji Ohkubo and Kazuya Yamamura</p> <p>Osaka University</p>
<p>OS09-16 Notch effect in blanking of local heating with ultrashort pulsed laser for Fe-based amorphous alloys and its influence on soft magnetic properties</p> <p>Chieko Kuji, Tatsuya Fujii, Tsunehisa Suzuki and Masayoshi Mizutani</p> <p>Tohoku University</p>
<p>OS09-17 Joining of Additive Manufactured Metals via Friction Welding Technology</p> <p>Fatma Nur Depboylu and Andrei-Alexandru Popa</p> <p>University of Southern Denmark, Center for Industrial Mechanics</p>

<p>OS09-19 In-process X-ray observation of electrical discharge machining revealing electrode behavior inside metal workpiece</p> <p>Hiroto Motoyama, Satoru Egawa, Gota Yamaguchi, Jianli Guo, Hirokatsu Yumoto, Takahisa Koyama, Hidekazu Takano, Yujiro Hayashi, Haruhiko Ohashi, Makima Yabashi and Hidekazu Mimura</p> <p>The University of Tokyo</p>
<p>OS09-20 In-situ characterization of molten pool evolution in laser powder bed fusion via multi-dimensional illuminating high-speed imaging</p> <p>Yoshiki Sakai, Hiroaki Suzuki, Liwei Chen, Yusuke Ito and Keisuke Nagato</p> <p>University of Tokyo</p>
<p>OS09-21 A new characteristic method for Directed Energy Deposition (DED) additive manufacturing based on point cloud analysis</p> <p>Hao Xue, Long Ye, Yipeng Wang, Fangda Xu, Chang Liu, S. Tammam-Williams and Nan Yu</p> <p>University of Edinburgh</p>
<p>OS09-22 Additive-manufacturing-inspired control for the uniform placement of abrasive grains in grinding wheels</p> <p>Haruki Matsuzuka, Yoshinori Izawa, Toru Kosemura and Masayoshi Mazutani</p> <p>Tohoku University</p>
<p>OS09-23 Investigation of the effect of gravity on melt pool formation in powder bed fusion using simulation</p> <p>Yoshitomo Ichise and Ryo Koike</p> <p>Keio university</p>
<p>OS09-24 Femtosecond laser studies on ablation efficiency and surface quality of alumina</p> <p>Taiga Tanaka, Ryo Koike, Yasuhiro Kakinum, Hideki Aoyama, yusuke Ogiso and Tomoki Nagae</p> <p>Keio University</p>
<p>OS09-25 Highly Efficient Surface Smoothing of AMed Metal Products by Long-pulse Electron Beam Irradiation</p> <p>Xuze Zhao, Togo Shinonaga and Akira Okada</p> <p>Okayama University</p>
<p>OS09-26 Development of deposition height control system for GTAW-based additive manufacturing</p> <p>Masahiro Kawabata, Tomoaki Sasaki, Katsunori Wada, Shuhei Kanemaru, Yuji Nomura and Hiroyuki Sasahara</p> <p>Tokyo University of Agriculture and Technology</p>

OS09-27 Study of GaN anodization characterization for electrochemical mechanical polishing

Xu Yang, Liwei Zhu, Xiaozhe Yang, Kazuya Yamamura and Zhuangde Jiang

Xi'an Jiaotong University

OS09-28 Modeling of parallel discharge mechanisms in multi-wire EDM

Junming Guan, Yijin Zhong and Yonghua Zhao

Southern University of Science and Technology

OS10 Energy beam processing

OS10-01 Shape control of the silver precipitation layer by laser irradiation inside borosilicate glass

Miyuka Kono, Souta Matsusaka, Sho Itho and Hirofumi Hidai

OS10-02 Laser Treatment Induced Two-Way Shape Memory Effect on different thickness TiNiCu films

Chihiro Nara, Takahiro Kurosawa, Daijiro Tokunaga, Atsushi Hirata, Jumpei Sakurai and Yuko Aono
Tokyo Institute of Technology

OS10-03 Formation mechanism of Optical Waveguide in α -Quartz by Ultrashort Pulse Laser

Reina Yoshizaki, Tomohiro Fukui, Yusuke Ito, Junya Hattori and Naohiko Sugita
The university of Tokyo

OS10-04 Precision ultrashort pulsed laser processing of silica glass by modulating pulse energy

Ryota Hasegawa, Junya Hattori, Tomohiro Fukui, Naohiko Sugita and Yusuke Ito
University of Tokyo

OS10-05 Avoiding intermetallic compound formation in Al/Cu laser welding via a nickel interlayer

Liwei Chen, Ryo Okawara, Yoshiki Sakai and Keisuke Nagato
University of Tokyo

OS10-07 Time-resolved nano-scale measurement of surface displacement of silica glass during ultrashort-pulse laser ablation

Shogo Kitamura, Chaoran Wei, Junya Hattori, Naohiko Sugita and Yusuke Ito
The University of Tokyo

OS10-08 Improvement of Wear Resistance of Titanium Alloys by Laser-Induced Wet Surface Treatment Using Aluminum Nitrate Solution

Atsushi Ezura, Kazutoshi Katahira and Jun Komotori
Sanjo City University

OS10-09 Picosecond Observation of Laser-induced Disturbances on the Water Jet in Water Jet Guided Laser Processing

Shoichi Ui, Shuzo Masui, Shotaro Kadoya, Masaki Michihata and Satoru Takahashi
The University of Tokyo

OS10-10 Investigation of intense stress wave generated by double femtosecond laser pulses in fused silica

Huijie Sun, Junya Hattori, Tao Sun, Tomohiro Fukui, Horiki Matsumoto, Naohiko Sugita and Yusuke Ito

OS10-11 Fundamental Study on Calcination of Limestone Particles by Near-infrared Wavelength Laser with Vibration Stirring

Naoki Kotake, Yasuhiro Okamoto, Masakazu Oka, Shuji Fujiki, Shunjiro Shizuka and Akira Okada
Okayama university

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Manufactured Desktop Type Grinder
Masakazu Fujimoto , Yuki Inoue and Tomoya
Yamamoto

OS11-02 Virtual Material Contact Model for Estimation
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Reiji Hirasawa and Daisuke Kono
Kyoto University

OS11-03 Estimation of Spindle Dynamic Compliance
Using the Coil Current of a Contactless Electromagnetic
Loading Device
Kai Iwai, Shuntaro Yamato and Atsushi Matsubara
Kyoto University

OS11-04 Proposal and prototype design of a new
machine tool configuration with multiple spindles
Kianoosh Rossoli and Soichi Ibaraki
Hiroshima University

OS11-05 A direct method for the normal stiffness of an
aerostatic slide considering the fluid-structure interaction
Wenyuan Wei, Qiang Gao and Lihua Lu
Harbin Institute of Technology

OS11-06 Chuck with integrated clamping force
measurement for thin walled workpieces
Berend Denkena, Henning Buhl, Eike Wnendt and
Matthias Meier
Leibniz University Hannover, Institute of Production
Engineering and Machine Tools (IFW)

OS11-07 Compensation of strain gauge signal changes
due to position-based internal changes in sensory linear
guides
Berend Denkena, Henning Buhl, Dennis Kowalke, Rico
Ottermann and Marc C. Wurz

OS11-08 Development of Machine Tool Spindle for
Non-axisymmetric and Non-circular Inner Cylinder
Machining
Masayuki Obata, Yoshitaka Morimoto, Masahide
Oshima, Akio Hayashi and Kai Segawa

OS11-09 Prediction of thermally induced motorized
spindle displacement using cooling fluid temperature
Ryota Ishida, Shumon Wakiya, Jumpei Kusuyama and
Yohichi Nakao
Kanagawa University

<p>OS11-10 Feasibility study on direct immersion cooling for mechanical devices</p> <p>Genki Uchiyama, Jumpei Kusuyama and Yohichi Nakao Kanagawa University</p>
<p>OS11-11 Reduction of vibration during machining by applying cast iron with excellent damping properties to the structure</p> <p>Taiji Yamada, Shuta Irako, Toru Kizaki, Naohiko Sugita, Masahide Sakada, Taskuo Umetani and Nobuhiro Kai Tokyo University</p>
<p>OS11-12 FEM Analysis for Torsional Stiffness of a Leaf-Spring Type Coupling Considering Contact Surface Characteristics</p> <p>Yuta Kondo, Ryuta Sato, Eiji Shamoto and Taichi Sasaki</p>
<p>OS11-13 Modeling of friction characteristics in feed drives and its application to dynamics prediction of machine tools</p> <p>Yosuke Higuchi and Yasuhiro Kakinuma</p>
<p>OS11-14 Evaluation of air-cooling effect improvement using heat dissipating paint</p> <p>Runfeng Zhao, Rin Takamizawa, Hiromitsu Wada, Naohiko Suzuki, Yoshiyuki Kaneko and Yohichi Nakao Kanagawa University</p>
<p>OS11-16 Experimental study on temperature-dependent spindle vibration analysis with in-process measurements</p> <p>Jihui Liu, Shun Tanaka, Yiju Liao, Kenichi Nakanishi, Shogo Nakamura, Toru Kizaki and Naohiko Sugita</p>
<p>OS11-17 Study of technology for fine conditioning of pad surfaces with fiber conditioner in CMP</p> <p>Haruki Hashimoto and Takashi Fujita Kindai University</p>
<p>OS11-21 The improvement of thermal error modeling on machine tools by optimal selection of temperature measuring points</p> <p>Lei Cao, Gyungho Khim, Seung-Kook Ro and Chun-Hong Park Korea institute of machinery & materials</p>

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OS12-01 Miniaturized peristaltic pipe travelling robot capable of moving in the 30mm diameter pipe

Yujie Shi, Masato Muzukami, Naohiko Hanajima and Yoshinori Fujihira

Muroran Institute of Technology

OS12-02 Molding of dissolving microneedle arrays

Yuusei Takaki, Harunori Takei, Natsumi Amano, Takahiro Ito, Sunao Murakami, Tomohiro Hikima, Hirotsada Tsubaki, Masaaki Matsuo, Masaya Hara, Yasunori Tashiro and Takahiro Oniki

Kyushu Institute of Technology

OS12-03 Impulse-Driven Traveling Capsule Endoscope

- Wireless Power Supply Position Control -

Kenji Miyauchi, Kohei Fujita, Takahiro Ito, Sunao Murakami and Toshihiro Kimura

Kyushu Institute of technology

OS12-04 Mechanical behavior of nanoclay/polyester composite coatings for pre-coated metal sheets

Weikang Lin, Grant Edwards, Shuning Song, Michael Heitzmann, Darren Martin, Mingyuan Lu, Lisbeth Grøndahl and Han Huang

The University of Queensland

OS12-05 Impedance Matching Between a Waveguide and a Transmission Line Using a Flexible Conductive Membrane Micro-actuator for Beyond 5G/6G

Communication

Chao Qi, Sangyeop Lee and Tadahiko Shinshi

OS12-06 High Thermal Stability Design Method for a Dualaxis Photoelectric Level

Yong-Jun Wang, Rui-Jun Li, Wan Fang and Peng-Hao Hu

OS12-07 Analysis of Minimization-Conscious Colonoscope Insertion Device

Yuichi Nakazato, Naoki Takahashi, Taisei Furukawa, Hikari Kyushiki, Kensuke Takita and Masaru Higuchi

Nippon Institute of Technology

OS12-08 Development of a two-dimensional large-stroke nanopositioning table

Jie Li, Rui-Jun Li, Qiang-Xian Huang and Yi Hu

Hefei university of technology

OS12-09 An Ultra-Thin Variable Aperture Mechanism
Using a Micro Flat Motor with a Multi-Pole Ring Magnet
Keita Nagai, Riku Fukazawa, Yu Okawara, Haruhiro
Komura and Tadahiko Shinshi
Tokyo Institute of Technology

OS13 Robotics and mechatronics

OS13-01 Visual odometry equipment of mobile robots based on moving-image processing of road surface for inspecting outdoor underground facilities

Toya Kaneko, Takuya Kosakai, Yoshikazu Ebina, Masato Mizukami and Shoji Mochizuki

Muroran Institute of Technology

OS13-03 Novel Force Decoupling Admittance Control of Linear Motors for Grinding Applications

Jietian Li, Beichen Ding, Yu Yin and Han Huang

Sun Yat-sen University

OS13-04 Design of inchworm stick-slip composite piezoelectric linear motor

Mengtao Luo, Yuguo Cui, Yiling Yang, Rongxi Liang and Xing Tang

Ningbo University

OS13-05 Development of a Bearing Hub Unit Having Embedded Tri-Axis Force Sensor Functionality

Daisuke Matsuura, Yudai Baba and Tsune Kobayashi

Tokyo Institute of Technology

OS13-06 Modelling and control of the occlusal force for simulating voluntary chewing by a robot

Bangxiang Chen, Jaspreet S. Dhupia and Weiliang Xu

The University of Auckland

OS13-08 Robot grasping based on deep learning and three-dimensional information

Bang-Wei Yu, Yu-Ling Liu and Hung-Yin Tsai

Department of Power Mechanical Engineering, National Tsing Hua University

OS13-09 Pneumatic robot arm for assisting in power line maintenance

Kouga Narita, Hiroaki Seki, Tokuo Tsuji, Tatsuhiro

Hiramitsu, Takehiro Nagata, Kazushige Matsumoto and Taiki Imada

OS13-11 Sensorless rotor positioning for a bearingless slice doubly salient permanent magnet motor

Zeqiang He and Tadahiko Shinshi

Tokyo Institute of Technology

OS13-12 High-speed coating inspection robot for suspended box-shaped objects

Shota Iwasaki, Hiroaki Seki, Tokuo Tsuji and Tatsuhiro

Hiramitsu

Kanazawa University

OS13-13 Displacement of a mechanism using piezoelectric element and electropermanent magnet
Takeshi Inoue, Takato Sakai, Akihiro Torii, Suguru Mototani and Kae Doki
Aichi Institute of Tehcnology

OS13-14 Design and Evaluation of Robotic End-effectors for Precise Manipulation of Biological Samples
Elia Martinelli, Hung-Ching Lin, Saúl Alexis Heredia Pérez, Kanako Harada and Andreas Archenti
KTH Royal Institute of Technology

OS13-15 Drone flight path generation with LLM
Atori Ikeyama, Sho Yamauchi and Keiji Suzuki
Future University Hakodate

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OS14-02 Compound fuzzy control- based position tracking accuracy improvement method

Hongfang Chen, Bailing Liu, Ziqi Liang and Zhaoyao Shi
Beijing University of Technology

OS14-04 Effect of Additional Compensator Based on Internal Model Principle in Precision Motion Control

Xuan Gan, Mizuki Takeda and Kaiji Sato
Toyohashi University of Technology

OS14-05 On the Stiff Spring Effect of Linear Ball Guides and its Functions towards Ultra Precise Positioning

Shigeru Futami
THK Co., Ltd.

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OS15-01 Multi-wavelength interferometer for measuring absolute distances using numerous frequency modes of the electro-optic comb

Jonghan Jin, Jungjae Park and Yoon-Soo Jang
Korea Research Institute of Standards and Science

OS15-02 An Optical Angle Measurement Based on Dual Comb Spectroscopy

Sota Iguchi, Hiraku Matsukuma, Kakeru Ikeda, Ryo Sato and Wei Gao
Tohoku University

OS15-03 Calibration Method for Optical Angle Measurements using Diffraction Gratings

Hiraku Matsukuma, Sota Iguchi, Kakeru Ikeda, Ryo Sato and Wei Gao
Tohoku University

OS15-04 Research on conjugate differential interferometric self-calibration method for large-scale planar variable-line-spacing gratings

Xin Xiong, Chenguang Yin, Ziran Chen, Xiaokang Liu and Wei Gao
Chongqing university of technology

OS15-05 Towards Nanoindentation Metrological Digital Twin: traceable automated procedure for out-of-control measurements identification

Giacomo Maculotti, Rachele Bertolini, Gianfranco Genta, Lorenzo Giorio, Anna Bottin, Enrico Savio and Maurizio Galetto
Politecnico di Torino

OS15-06 Top-down and bottom-up traceability approaches for applied nanodimensional metrology

Gaoliang Dai and Jens Fluegge
Physikalisch-Technische Bundesanstalt (PTB)

OS15-07 Understanding the Interplay between Hardness and Yield Stress in Fused Silica

Asit Kumar Gain, Liangchi Zhang and Zhen Li
Southern University of Science and Technology

OS15-08 A non-orthogonal Lloyd's mirror interferometer with a spatial light modulator for arbitrary pattern fabrication

Nozomu Takahiro and Yuki Shimizu

<p>OS15-09 Sensitivity improvement of an optical head for measurement of the pitch deviation of a diffraction grating based on angles of diffraction of diffracted laser beams</p> <p>Tomoki Kitazume, Yuya Yamazaki and Yuki Shimizu</p>
<p>OS15-10 Development of a modified optical head for measurement of the pitch deviation of a diffraction grating having a pitch narrower than laser wavelength</p> <p>Yuya Yamazaki, Tomoki Kitazume and Yuki Shimizu Hokkaido University</p>
<p>OS15-11 Expansion of measuring range of optical angle sensor with light source having multiple longitudinal modes</p> <p>Keita Nakaoka and Yuki Shimizu</p>
<p>OS15-13 Roundness Metrology of Small Cylinders with a Developed Non-contact Precision Two-dimensional Coordinate Measuring Device</p> <p>Qiaolin Li, Chuang Zeng, Borong Wu, Xiaohao Wang and Xinghui Li Tsinghua University</p>
<p>OS15-14 Sub-micrometer scale pulsed laser ablation in water and nanofluids medium using position controlled photonic nanojet</p> <p>Reza Aulia Rahman, Tsutomu Uenohara, Yasuhiro Mizutani and Yasuhiro Takaya Osaka University</p>
<p>OS15-15 A compact non-orthogonal Lloyd's interferometer for fabrication of two-axis scale gratings</p> <p>Satoshi Kodaka, Chenguang Yin, Ryo Sato, Hiraku Matsukuma and Wei Gao Tohoku University</p>
<p>OS15-16 Absolute Grating Encoder with Nano-level Precision on Meter-level Measurement Range</p> <p>Shengtong Wang, Feifan Cao, Linbin Luo, Yifeng Wang and Xinghui Li Tsinghua University</p>
<p>OS15-17 Form deviation measurement of probe tip ball for CMM using a rotatable ring gauge</p> <p>Tatsuki Tsuda, So Ito, Kimihisa Matsumoto and Kazuhide Kamiya Toyama Prefectural University</p>

<p>OS15-18 Stitching interferometry method for self-calibration of large-scale variable-line-spacing gratings by using a Fizeau interferometer Chenguang Yin, Xin Xiong, Ryo Sato, Hiraku Matsukuma and Wei Gao Tohoku university</p>
<p>OS15-19 Diameter measurement of microprobe tip ball using a non-contact contour measuring machine Daichi Inukai, So Ito, Takehiro Tomioka, Kimihisa Matsumoto and Kazuhide Kamiya Toyama prefectural university</p>
<p>OS15-22 A high precision point cloud registration method for micro-nano CMM and white light interference based on a triangular frustum calibrator Yunlong Liu, Ruijun Li, Zhenying Cheng and Yonghong Wang</p>
<p>OS15-23 Improving spatial resolution of passive near-field microscope by fabricating ultra sharp tungsten tips Jizhou Tang, Kuan-Ting Lin and Yusuke Kajihara The University of Tokyo</p>
<p>OS15-24 Prediction of the main measurement errors of conical grating interferometer based on grating diffraction wavefront Lin Liu, Zhaowu Liu, Wei Wang, Shan Jiang and Wenhao Li Changchun Institute of Optics, Fine Mechanics and</p>
<p>OS15-25 A High Precision Capacitive Absolute Angular Displacement Sensor with a Cross-Signal Transmission Structure Changliang Wu, Bingnan Zhan, Zhicheng Yu, Xingchen Fan and Peiyu Yu Beijing Institute of Technology</p>
<p>OS15-27 Femtosecond laser absolute encoder employing a variable line spacing grating Ryota Okimura, Ryo Sato, Hiraku Matsukuma and Wei Gao</p>
<p>OS15-28 Ultra-precision and Highly Uniform One-Dimensional Nano-grating Standard By 50 nm Pitch For Nanoscale Calibration Yaxin Zhang, Song Wang, Feng Han, Yifan Zhao, Kun Zheng, Chenying Wang, Weixuan Jing, Niancai Peng and Zhuangde Jiang Xi'an Jiaotong University</p>

OS15-29 Nano-Bubble Shape Deformation Investigation in Multi-Darkfield Optical Microscopy
Hibiki Fujishima, Panart Khajornrungruang, Yuki Ohta
Kyusyu Institute of Technology

OS15-30 Pellin-Broca Prism for Plenty of Multi-wavelengths in Evanescent Optical System with Chromatic Aberration Reducibility
Shuka Ouchida, Panart Khajornrungruang and Yuki Ohta

OS15-31 Evaluation of internal residual stress of injection molded-plastic parts through THz wave
Weiyang Chen, Naoyoshi Murata, Masaaki Tachioka, Natsumi Yagi, Shuohan Wang and Yusuke Kajihara
The University of Tokyo

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Wijayanti Dwi Astuti, Prastowo Murti and Wei Gao

OS15-34 High-resolution ghost imaging with correlation learned neural network for defect inspection in a large area
Shoma Kataoka, Yasuhiro Mizutani, Tsutomu Uenohara and Yasuhiro Takaya

OS15-35 Depth Estimation For Autostereoscopic 3D Surface Measurement Using A Deep Encoder-decoder Network
Sanshan Gao and Chi Fai Cheung
The Hong Kong Polytechnic University

OS16 Science and applications of nanostructure formation

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Atsuki Tsuji and Junji Murata

Ritsumeikan University

OS16-02 Development of laser assisted electrodeposition system without a solution cell

Yuki Tamura, Kenta Nakazawa and Futoshi Iwata

Shizuoka University

OS16-03 Antibacterial Spectra of Nanosized Resin Pillars with Different Shapes

Satoka Matsumoto, Shigemitsu Tanaka, Hiroaki Tatsuoka, Miki Yoshii, Toshihiro Nagao, Tomohiro Shimizu, Shoso Shingubara and Takeshi Ito

Kansai University

OS16-04 In-situ Calibration Method for Areal Surface Measurement Technique Based on Thickness Distribution of Fluorescent Liquid Film

Saeko Fujii, Motoya Yoshikawa, Shuzo Masui, Shotaro Kadoya, Masaki Michihata and Satoru Takahashi

The University of Tokyo

OS16-05 Formation of Anti-reflection Structures on Polyimide via Oxygen Ion Beam Irradiation

Yoritaka Danjo and Jun Taniguchi

Tokyo University of Science

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Kent Kumagai, Tomohiro Takami and Dong Wei
Nagaoka University of Technology

OS17-02 Study on Filter Determination in Time-Frequency Domain for Reconstruction of White-Light Interference Fringe Envelopes

Ryota Kobayashi and Dong Wei
Nagaoka University of Technology

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Taketo Miura, Naru Hasegawa and Dong Wei
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Kohei Chiba, Taiyu Okatani, Naoki Inomata and Yoshiaki Kanamori
Tohoku University

OS17-05 Development of deformable mirror with bonded multiple piezoelectric substrates for high spatial frequency shape control

Maaya Kano, Takato Inoue, Junya Yoshimizu, Toma Ueyama and Satoshi Matsuyama
Nagoya University

OS17-06 Study on One-shot Optical Phase Measurement using Deep Learning

Ryuuma Akao, Yizhao Guan, Shuzo Masui, Shotaro Kadoya, Masaki Michihata and Satoru Takahashi
The University of Tokyo

OS17-07 Numerical analyses of trapping behavior of contour-tracking optical tweezers

Ryohei Omine, Shuzo Masui, Shotaro Kadoya, Masaki Michihata and Satoru Takahashi
The University of Tokyo

OS17-08 Three dimensional measurement of hand scraped surface by an oblique incident interferometer using a near infrared laser source
Takumi Yamagishi, So Ito, Kimihisa Matsumoto and Kazuhide Kamiya
Toyama Prefectural University

OS17-09 In-situ measurement of photoluminescence and electroluminescence of porous silicon under electrochemistry oxidation
Lianhua Jin, Kota Fukumoto and Bernard Gelloz
University of Yamanashi

OS17-10 Design and Performance Evaluation of an Eye-tracking System Based on an Electrostatic MEMS Scanning Mirror
Haoyu Tan, Yifei Li, Xiang Guo, Yisen Hu, Cao Xia, Yuanlin Xia and Zhuqing Wang
Sichuan University

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Toma Ueyama, Takato Inoue, Junya Yoshimizu, Maaya Kano, Kenta Kanazaki, Ryota Minamisawa and Satoshi Matsuyama
Nagoya University

OS17-12 Analysis of Thermally Excited Evanescent Waves on Dielectrics by a Spectroscopic System
Wentao Zhou, Ryoko Sakuma, Kuan-Ting Lin and Yusuke Kajihara
The University of Tokyo

OS17-13 Development of ultraprecise X-ray multilayer mirrors for nanometer-resolution phase-contrast imaging
Kota Shioi, Jumpei Yamada, Gota Yamaguchi, Daisetsu Toh, Kazuto Yamaguchi, Makina Yabashi and Yasuhisa

OS17-14 A femtosecond laser confocal probe for multi-dimensional measurement
Chen Li, Ryo Sato, Hiraku Matsukuma and Wei Gao
Tohoku University

OS18 Advanced image processings and applications

OS18-01 Object detection and recognition method of inland ships based on improved YOLOv8

Jingang Wu and Liuyang Zhou

Hunan University of Science and Technology

OS18-02 A 3D surface reconstruction method employing adaptive determination strategy for high reflective surface

Bo Zhang, Shangcheng Qu, Jinhui Li, Zhiyong Deng, Ji Li, Kai Liu and Bin Xu

OS18-03 Research on dynamic correction system for eye's aberrations based on image processing technology

Zhigang Jia, Weijang Yan and Zhongxiang Zhang

OS18-04 Multiple moving object detection for stereo vision on single-board computer

Yoshito Yabuta

Tottori University

OS18-05 YOLOv8 Model-based Welding Defect Detection and its Dimension Measurement

Yindi Cai, Dianpeng Zhang, Yuxuan Wang, Zimeng Sun, Shang Gao, Hang Gao, Zhigang Dong and Renke Kang

OS18-07 Hydroponic Crops Modeling and Growth Prediction

Shingo Aoyagi, Sho Yamauchi and Keiji Suzuki

Future University Hakodate

OS18-08 New vision-based evidence of the nature of vibro-impacts in an impact-damped boring bar

Janhavi Bhoge, Madhav Kumar, Hari Charan, Arjun Patel and Mohit Law

IIT Kanpur

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OS19-01 A Study on Triangular Mesh Generation for TLS Point Clouds Using Implicit and Region-based Methods

Daiki Koyama, Hiroaki Date and Satoshi Kanai

OS19-02 Quality Improvement of CT Reconstruction for Multi-scanning of Large Scale Objects

Chelhum Park and Yutaka Ohtake

The University of Tokyo

OS19-03 Comparison of point cloud densification from multi-view stereo and 3D Gaussian splatting in industrial photogrammetry

Mingda Harvey Yang, Mohammed A Isa, Adam Thompson, David T Branson III and Samanta Piano
University of Nottingham

OS19-04 Generation of Training Data from CAD Models Suitable for Component Recognition from Point Clouds of Industrial Plants

Kosei Otani, Takuma Nagumo and Hiroshi Masuda
The University of Electro-Communications

OS19-05 Point Cloud Segmentation of Production Lines in Factories

Kakeru Takeda and Hiroshi Masuda

The University of Electro-Communications

OS19-06 Point cloud Classification for Components of Industrial Facilities Using Laplacian Features

Takeshi Otsuka, Kosei Otani and Hiroshi Masuda
The University of Electro-Communications

OS19-07 Comparative analysis of surface determination techniques in coordinate metrology with X-ray computed tomography

Huan Shao, Federico Pirillo, Stefano Petrò and Giovanni Moroni

Politecnico di Milano

OS19-08 Scale-aware Volume Filtering by Splitting Transformed Voxel-Domains

Shin Yoshizawa and Hideo Yokota

RIKEN

OS19-10 3D mode shape visualization of machining robots using motion magnification

Madhav Kumar, Hari Charan and Mohit Law

IIT Kanpur

OS19-11 Real-Time Assembly Inspection of Factory Pipes Using Skelton Structure from Point-cloud

Yusei Sakoguchi and Yutaka Ohtake

The University of Tokyo

OS19-12 Bas-relief shape modeling from RGB-D images using feature lines and vector fields

Takumi Kimura and Yukie Nagai

Tokyo Metropolitan University

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Afif Hamzens, Shota Mochizuki, Hiromasa Ohmi and Hiroaki Kakiuchi
Osaka University

OS20-02 Study on mechanism of surface instability in Sn-Bi alloy lapping plate
Bei Hu, Wenjun Zhou and Kensuke Tsuchiya
Univerisity of Tokyo

OS20-03 Porous Silicon Oxide Formation Using Atmospheric-Pressure Very High-Frequency Plasma for Single-Layer Anti-Reflection Coatings on Transparent Substrates
Leapheng Uon, Naoto Mizusawa, Reo Yamauchi, Hiromasa Ohmi and Hiroaki Kakiuchi
Osaka University

OS20-04 Surface modification of Si-MEMS using electron beam induced silicon nanodots
Abhiraj Singh, Shingo Kammachi, Nobutaka Goami, Muncyuki Naito, Ryosuke Matsumoto and Takahiro Namazu

OS20-05 Ultrasonic-assisted fabrication of water-dispersed photonic crystals for self-reporting surface pressure sensor application
Daniel Saldivar-Ayala and Takahiro Namazu
Kyoto University of Advanced Science

OS20-07 Effect of substrate temperature on mechanical property of amorphous silicon carbon nitride films deposited by surface-wave plasma CVD
Ippei Tanaka, Yuki Hattori, Yuki Hatae and Yasunori Harada

OS20-08 Effect of Containing Copper Particles on Mechanical Characteristics of Sintered Ag film for SiC Die Bonding
Chessadakorn Chantawong, Michiko Shindo, Mitsuhiro Nishida and Takahiro Namazu
Kyoto University of Advanced Science

OS20-09 Evaluation of adhesion resistance of PVD films to hot dip galvanized and pure Zn
Yusuke Ushiro, Ippei Tanaka, Yasunori Harada, Yuji Nanba and Takashi Ogisu
Umetoku Co., Ltd.

<p>OS20-10 W-Ti alloy films prepared by dual source dc magnetron sputtering Hibiki Okada and Shozo Inoue University of Hyogo</p>
<p>OS20-11 The effect of ion irradiation on the growth of sputtered metal thin films Tatsuhiro Inoue, Shinpei Nagai and Shozo Inoue University of Hyogo</p>
<p>OS20-12 The effect of concentration modulation on friction properties of diamond films synthesized by microwave plasma CVD Ryota Ohnishi, Ippei Tanaka, Natsuki Kawaguchi and Yasunori Harada University of Hyogo</p>
<p>OS20-13 Improvement of etching rate of gallium nitride substrates by atmospheric pressure plasma with H₂/O₂/He gas Motoki Nabata, Genta Nakaue, Daisetsu Toh, Jumpei Yamada, Kazuto Yamauchi and Yasuhisa Sano Osaka University</p>
<p>OS20-14 Damage-free Processing of Extremely Narrow Spaces via High-precision Etching Using High-pressure Plasma That Exceeds Atmospheric Pressure Masafumi Miyake, Shotaro Matsumura, Iori Ogasahara, Taito Osaka, Jumpei Yamada, Daisetsu Toh, Kazuto Yamauchi, Makina Yabashi and Yasuhisa Sano Osaka University</p>
<p>OS20-15 Mechanical Reliability of Sintered Ag Die Attach Assemblies with Al/Ni Rapid Heat Treatment Hiroya Saegusa, Daisuke Yasugi and Takahiro Namazu Kyoto University of Advanced Science</p>
<p>OS20-18 Strength prediction of metal-polymer joints using machine learning from metal surface images Zhongqi Cui, Shuohan Wang, Yuuka Ito, eiji Yamaguchi, Fuminobu Kimura and Yusuke Kajihara The university of Tokyo</p>
<p>OS20-19 Enhancing Wear Resistance of IN 625 Alloy Through Parameter Optimization in Wire Arc Additive Manufacturing Ankit Kumar, Mayank Arun Sontakke, Gurminder Singh and Rahul S. Mulik The Indian Institute of Technology Bombay, INDIA</p>

OS20-20 Polishing of Hardened Steel Components
using Magnetic Abrasive Finishing

Hiroyuki Matsumura, Julian Long and Hitomi Yamaguchi
University of Florida

OS20-22 Surface texture creation mechanisms and
surface properties of intermittent burnishing process

Masato Okada, Hayato Nakagawa, Makoto Nikawa and
Shunki Kitagawa
University of Fukui

OS21 Micro fabrications for functional surfaces

OS21-01 Creating Pore-Gradient Ti6Al4V Alloys through the Fusion of Particle Dynamics and Powder Metallurgy
Yaole Cui, Asit Kumar Gain, Liangchi Zhang and Zhen Li

OS21-03 Mechanism of Surface Nanostructure Generation via Hot Water Treatment for Improving the Hybrid Joining of Galvanized Steel-Polymer
Jianxing Ren, Weiyan Chen, Fuminobu Kimura and Yusuke Kajihara
The University of Tokyo

OS21-04 Development of optical trapping substrates for the capturing of microparticles
Masahiko Yoshino, Ryuji Yamasaki, Motoki Terano and Takashi Matsumura
Tokyo Institute of Technology

OS21-05 Study on Fabrication of Functional Electromagnetic Shielding Material Based on Flake Carbonyl Iron Powder and Reduced Graphene Oxide
Wei-chi Chen, Hsiang-Yi Chung and Hung-Yin Tsai
Department of Power Mechanical Engineering, National Tsing Hua University

OS21-06 Applicability of Projection Lithography Using a Gradient-Index Lens Array to Thick Resist Patterning
Toshiyuki Horiuchi, Naoyuki Otsuka, Takeharu Fukuhara and Hiroshi Kobayashi
Tokyo Denki University

OS21-07 Lubrication Characteristics of Aluminum Alloy Surfaces Textured by Microvibration-assisted Cutting
Jun Shimizu, Ryuta Koakutsu, Takeyuki Yamamoto, Kazuki Kaneko, Teppei Onuki and Hirotaka Ojima
Ibaraki University

OS21-08 Possibility of Self-Organized Bacterial Microstructure as Functional Surface inspired by Two-dimensional Pattern of *S. epidermidis*
Hayato Goto, Shuzo Masui, Masaki Michihata and Satoru Takahashi
University of Tokyo

OS21-09 Microfluidic device of white blood cell elimination for capturing circulating tumor cell - Prompting cell contact on antibody coated surfaces -
Masanori Hayase, Takuya Okamura and Shuhei Ogawa
Tokyo University of Science

<p>OS21-10 Fabrication of Micro 3-D Structures using Electrical Discharge Deposition in Atmospheric Environment</p> <p>Senryu Hayashi, Jun Shimizu, Takeyuki Yamamoto, Kazuki Kaneko, Teppei Onuki and Hirotaka Ojima</p>
<p>OS21-11 Effects of surface morphology of inkjet-printed MoS₂ nanoparticles on gas sensor characteristics</p> <p>Takahiro Kono, Takumi Masuda, Soichiro Nao and Arata Kaneko</p> <p>Tokyo Metropolitan University</p>
<p>OS21-12 Fabricating micropatterned yttria-stabilized zirconia using UV nanoimprint lithography</p> <p>Takuto Wakasa, Takao Okabe, Naoki Shikazono and Jun Taniguchi</p> <p>Tokyo University of Science</p>
<p>OS21-13 Tuning Cross-Linking Conditions of PDMS for Leak-Free Slip Action in SlipChip</p> <p>Inaam Rafia, Bolotrade Marcela, Shunya Okamoto, Takayuki Shibata and Moeto Nagai</p> <p>Toyohashi University of Technology</p>
<p>OS21-14 Spatially patterned laser through pixelated intensity modulation for fabrication of sub-wavelength surface structures</p> <p>Lingyu Huang, Kang Xu and Shaolin Xu</p> <p>Southern University of Science and Technology</p>
<p>OS21-15 Generation and Evaluation of Micro-Structured Surfaces for Hydrophilic Control</p> <p>Akira Kakuta and Robin Shindo</p> <p>National Institute of Technology, Tokyo Colleges</p>
<p>OS21-16 Efficient Processing of Consistent Inverted Pyramid Microstructure on Monocrystalline Silicon Surface</p> <p>Qingwei Wang, Peng Yao, Dongkai Chu, Shuoshuo Qu, HongTao Zhu, Hanlian Liu, Bin Zou and Chuanzhen</p>
<p>OS21-17 Sol Gel Glass Micro and Metasurface Fabrication</p> <p>Xiaohua Liu, Xiaolin Li, Tiantong Chen, Muye Niu, Weinan Xu, Shih-Chi Chen and Allen Y Yi</p> <p>Chinese University of Hong Kong and The Ohio State</p>

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OS22-02 Free standing diamond nanostructures formed by sacrificial layer etching for nanoelectromechanical actuators

Taro Ikeda and Yoshiaki Kanamori

OS22-04 Design of a device for surface profile measurement integrating 3x3 displacement sensors
Kotaro Nakahara, Tatsuki Noda, Naoya Shirozu, Yuuma Tamaru and Hiroki Shimizu

Kyushu Institute of Technology

OS23-01 Parameter Identification and Energy Capture Mechanism of Multi-degree-of-freedom Oscillating Float-type Wave Energy Conversion Structure under Random Loads

Deli Wang, Wen Yang, Bingzen Wu, Xiuxiu Guo, Yazhou Xu, Haiqing Pei and Wei Xu

OS23-02 Development of Oral Sensor Based on Amine Film Formed on a Gold Surface for Sensing Bicarbonate Ion in Saliva

Suwu Han, Kazuma Sasaki, Jyoti Jaiswal and Kazuyoshi Tsuchiya
Tokai University

OS23-03 Numerical and experimental verification of super-resolution imaging and phase recovery with structured illumination

Shumpei Suzuki, Shin Usuki, Tadatoshi Sekine and Kenjiro T. Miura
Shizuoka University

OS23-04 Study on the relationship between the skin properties of the finger pad and vibration perception

Taaki Takanari, Takeshi Okuyama, Cyril Paillet-Mattei and Mami Tanaka
Tohoku University

OS23-05 Effects of applied voltage on electroporation to cell using polypyrrole electrode

F. Iimura, S. Amaki, S. Koeda, T. Kono, H. Miyoshi and A. Kaneko
Tokyo Metropolitan University

OS23-06 Finite Element Analysis for Hydrogel Microneedle on Skin Puncture Model And Mechanical Performance Evaluation

Shu Huang, Zhen Peng, Cao Xia, Yuanlin Xia and Zhuqing Wang
Sichuan University

OS23-08 Injection Molding of PLA Microneedles Mimicking Mosquitoes

Natsuo Otera, Daisuke Yamaguchi, Yuki Nakata, Shintato Kaku, Masato Suzuki, Tomokazu Takahashi, Seiji Aoyagi, Kochiro Suzuki, Zenku Haga and Yoshihiro Tanigawa

OS23-09 A new porous biomedical implant production process development for Laser Powder Bed Fusion (L-PBF) Technology

Fatma Nur Dephoğlu, Evren Yasa, Özgür Poyraz and Feza Korkusuz

University of Southern Denmark

OS23-11 Application of Design of Experiments for high-accuracy plastic micro needle arrays manufacturing

Alireza Mollaei Ardestani, Max Babenko, Matteo

Calaon, Jesper H. Hattel, Murat Kulahci, Ben Whiteside, Guido Tosello

Technical University of Denmark