

Nov. 7

10:30 - 10:45 Opening ceremony

10:30 1stAM

10:45 - 11:50 Keynote

10:45 1stAM

Lunch

Chair:Eiji Kondo (Kagoshima Univ.) [101] 014.T01-5: Surface Integrity in Ball Nose End Milling: Noriyuki KORETA, Hiroyuki SAKAI, Hiroaki EZAKI, Noriaki NAGAYOSI	Chair:Hwa-Soo Lee (Nihon Univ.) [201] 121.T01-30: Research on Chemo-Mechanical-Grinding (CMG) of large size silica glass substrate: Takeshi SHIINA, Libo ZHOU, Zhongjun QIU, Takeyuki YAMAMOTO, Jun SHIMIZU, Hiroshi EDA	Chair:Hisanobu Terai (Kitakyusyu National College of Technology) [301] 004.T08-1: CAD/CAM-based Position/Force Control for a Ball-end Abrasive Tool and Its Application to an Industrial Robot: Fusaomi NAGATA, Tetsuo HASE, Zenku HAGA, Masaaki OMOTO, Keigo	Chair:Hayato Yoshioka (Tokyo Inst. of Technology) [401] 021.T09-1: A Novel Interpolation method for Quadrature Encoder: LIU Yong, HAO Shang-hui HAO Ming-hui	Chair:Yoshio Mizugaki (Kyushu Inst. of Technology) [501] 018.T04-1: Fabrication of Micro Compound Tools and Their Application in Drilling: Muhammad Aziz, Osamu OHNISHI, Hiromichi ONIKURA, Nuraslina Sharkawi, Weichen KUO	Chair:Hideki Aoyama (Keio Univ.) [601] 005.T11-1: Software and Electronic Based on-line Shafts External Diameter Measurement System: M.A. Rahbary	13:15 1stPM
[102] 047.T01-14: Dynamic Characteristics of Small Diameter End Mill: Takashi MATSUMURA, Yasuaki MIYAHARA, Takenori ONO	[202] 122.T01-31: Development of High Performance Wheels for Chemo-Mechanical-Grinding: Yoshiaki Tashiro, Masaaki Kenmochi, Bahman Soitani, Tatsuya Tsuruga, Libo Zhou, Jun Shimizu, Hiroshi EDA	[302] 133.T08-19: Method for Determining the Power-saved Driving Motion of Manipulators by Heuristic Algorithms (In Case of CP Control): Michihiro HAYASHI, Hiroshi TACHIYA, Naoki ASAKAWA, Yutaka MATSUBARA	[402] 051.T09-5: A study on the Model of 3D-coordinate Measuring Machine Error Compensation Based on Finite Element Simulation: Jizhu Liu, Shuanghui Hao, Minghui Hao, Baoyu Song	[502] 025.T04-2: Grooving Performances of Developed Micro Diamond Grinding Tool by Electroless Composite Plating on Hard and Brittle Materials: Ahmad SHARIFUDDIN, Hiromichi ONIKURA, Osamu OHNISHI, Heung-Kil PARK	[602] 022.T11-2: Considerations of Reverse Engineering through CAD/CAM of a Lure: Sande GAO, Atsushi KATO, Xiaochu TANG, Xue CHEN, Jing LI	13:40 1stPM
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Chair:Akio Katsuki (Kyushu Univ.) [107] 028.T01-9: Effect of Edge Geometry on PVD-TiN Coated Carbide Tools when Face Milling Titanium Alloy, Ti-6246: Safian SHARIF, Erween Abd. RAHIM, Amrifan Saladin MOHRUNJI, Ashraf JAWAID	[207] 161.T01-44: Investigation on reactive ion etching CVD diamond Film: Choung-Lii Chao, Wen-Chen Chou, Ta-Tung Chen, Chung-Woei Chao	[307] 126.T08-18: A Long-term Control Scheme of Cutting Forces to Regulate Tool Life in End Milling Processes: Soichi IBARAKI, Takuya SHIMIZU, and Atsushi MATSUBARA	[407] 035.T09-2: A Newly Developed Compact Nano-Positioning Table System Using Squeeze Bearing: Toshimichi GOKAN, Hayato YOSHIOKA, Hidenori SHINNO	[507] 045.T04-5: A High-speed Profile Measurement System for Scroll Compressors: Akinori INADA, Wei GAO	[607] 040.T11-6: Basic Study on Development of System to Determine Machining Conditions for Minimizing Energy Consumed in Machine Tool: Yuki ARAKAWA, Hideki AOYAMA	15:45 1stPM
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[109] 062.T01-18: Finish machining of Inconel 718 by circular vibration planing – an alternative for ball end milling: Nandita HETTIARACHCHI, Toshimichi MORIWAKI, Toshiro SHIBASAKA, Keiichi NAKAMOTO	Break [209] ::	Chair:Soichi Ibaraki (Kyoto Univ.) [309] 141.T04-17: Consistent Processing and Measurement Procedure on Micro Cutting: Tetsuya NARUSE, Kazu ANDOU, Yutaka KAMEYAMA, Masayoshi MIZUTANI, Yoshihiro UEHARA, Kazutoshi KATAHIRA, Weimin LIN, Chikako SASAKI, Hito	Break [409] ::	Break [509] ::	Chair:Hideki Aoyama (Keio Univ.) & Keiichi Shirase (Kobe Univ.) [609] 059.T11-7: Machining Error Compensation Based on 3D Surface Model Modified by Measured Accuracy: Go ABE, Masatoshi ARITOSHI, Tomoki TOMITA, Keiichi SHIRASE	16:35 1stPM
[110] 157.T01-43: High Speed Drilling Ti6Al4V: Kamaruddin KAMDANI, Erween Abd. RAHIM, Safian SHARIF	Chair:Yoshio Mizugaki (Kyushu Inst. of Technology) [210] 015.T01-6: Grinding of C/C-SiC Composite: Tetsuya TASHIRO, Junsuke FUJIWARA	[310] 153.T04-18: Study on Nanomachining Process of Si Wafer using an Atomic Force Microscope: Jun SHIMIZU, Takashi TSUMURA, Yumetaka SUEHISA, Libo ZHOU, Hiroshi EDA	Chair:Tadahiko Shinshi (Tokyo Inst. of Technology) [410] 124.T09-13: NURBS Interpolator for Improved High Speed Machining using Minimum Time Method: Dong-Mok LEE, Sekar MOHAN, Seung-Han YANG	Chair:Yasuhiro Takaya (Osaka Univ.) [510] 041.T04-4: Nano-surface Generation of Glass Using Low-pressure Super-finish with Fine-grit Stones: Sachiko OGAWA, Eiichi AOYAMA, Toshiaki HIROGAKI, Yoshiaki ONCHI	[610] 074.T11-8: Quality Control of Tooth Contact of Gear using Infrared Ray Imagery: Takahiro IIDA, Yasuhiro UENISHI, Toshiaki HIROGAKI, Eiichi AOYAMA	17:00 1stPM
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Chair:Katsuhiko Sekiya (Hiroshima Univ.) [113] 180.T01-48: Investigation of Chip Formation in Milling Titanium Alloy: K. KAMDANI, E.A. RAHIM, F. ABDULLAH, S. THAMIZHMANI	Chair:Yoshio Ichida (Utsunomiya Univ.) [213] 084.T01-24: The study of High accuracy Inner Gear Surface Finishing Method: Hisatoshi KOJIMA, Toshiya HAYASHI, Chunye PENG, Katsumi NAGASAKA	Chair:Keiichi Nakamoto (Kobe Univ.) [313] 008.T08-3: An Approach to Estimate the Inherent Deviations by Means of Simultaneous Five-axis Motion: K.M. Muditha Dassanayake, Masaomi TSUTSUMI, Kenji HIGASHIYAMA, Ken YAMAMOTO4	Chair:Tadahiko Shinshi (Tokyo Inst. of Technology) [413] 100.T09-9: Crystal Grain Size Control by Polarized Laser Irradiation And its Application to Positioning of Micro Object: Naoki NARUO, Akira KAKUTA, Yuji FURUKAWA	Chair:Masahiko Yoshino (Tokyo Inst. of Technology) [513] 056.T04-7: Effect of ELID Grinding on Conductive Rubber-Bond Wheel : Yuji HASEGAWA, Nobuhide ITOH, Goroh ITOH, Hitoshi OHMORI, Teruko KATOH, Akihiko NEMOTO, Takashi MATSUZAWA, Hiroshi MIZUTANI	Chair:Toshiki Hirogaki (Doshisha Univ.) [613] 088.T11-9: A Prediction System for Surface Properties for End Mill Operations: H. Narita, H. BAN, H. Fujimoto, K. Shirase, E. Arai	9:00 2ndAM
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[115] 211.T01-55: Application of Response Surface Methodology Coupled with Genetic Algorithm in the Optimization of Cutting Conditions for Surface Roughness in End-Milling of Inconel 718 Using Coated WC-Co Inserts: M. H. ISHTIYAQ, A.K.M. Nurul AMIN, A.N.	[215] 139.T01-40: Dynamic Consideration of Crowded Magnetic Particle Behavior in Magnetic Field Assisted Finishing Process: Masayuki NATSUME, TakeoSHINMURA, Hitomi YAMAGUCHI	[315] 083.T08-12: A Study of the Elastic Deformation Error of Parallel Kinematic Mechanism Machine Tool: Tetsuya MATSUSHITA, Hiroshi UENO, Atsushi MATSUBARA	[415] 120.T09-12: Dynamic Characteristics and Positioning Performance of Piezoactuator integrated Ball Screw Drive: Tomoya FUJITA, Daisuke KONO, Atsushi MATSUBARA, Iwao YAMAJI, Soichi IBARAKI	[515] 160.T04-19: Experiment and Theoretical Analyses on the ELID Grinding Forces: Jianqiang GUO, Hitoshi OHMORI, Yutaka WATANABE, Yoshihiro UEHARA, Muneaki ASAMI	[615] 142.T11-11: Finite Element Modeling and Analysis of Workpiece Elastic Deflection Under Cutting Forces in Turning Operation: Hamidreza NAMAZI	9:50 2ndAM
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Chair:Akira Hosokawa (Kanazawa Univ.) [117] 030.T01-11: Study on geometrical shapes of cutting edges for turning micro shafts: Atsushi TORIDE, Shuichiro ARAKI, Hwa-Soo LEE, Takazo YAMADA	Chair:Kazutoshi Katahira (RIKEN) [217] 127.T01-32: Fractal Analysis of Cutting Edge Wear in Superabrasive Grinding: Yoshio ICHIDA, Ryunosuke SATO, Masakazu FUJIMOTO, Hiromichi TANAKA	Break [317] ::	Break [417] ::	Chair:Takashi Matsumura (Tokyo Denki Univ.) [517] 080.T04-11: Development of a micro-fabrication process for micro devices: Ryo Hibino, Masahiko Yoshino	Chair:Kenji Yura (Univ. of Electro-Communications) [617] 077.T12-6: Solving job shop scheduling problem by a hybrid genetic algorithm: Yingjie XING, Zhentong CHEN, Jing SUN	10:40 2ndAM
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[119] 101.T01-26: Application of Amorphous SiC Coating to Cutting Inserts: Ryo TEZUKA, Katsuhiko SEKIYA, Masahiko KATO, Yasuo YAMANE, Keiji YAMADA	[219] 214.T01-56: Investigation of the Rotary Disc Dressing Process: Hamid BASERI, Seyed Mehdi REZAEI, Abdoreza RAHIMI, Mohsen REZAEIAN	[319] 086.T08-13: Study on Cutting Mechanism and Cutting Performance of Machining for Curved Surface by Ball End Mill using 3D CAD: H. IWABE, Hideki MIWA	[419] 052.T09-6: Research on Integrated Simulation and Development Environment for Digital Controlled AC Servo System: Weifeng ZHENG, Shuanghui HAO, Minghui HAO, Haimiao WU	[519] 190.T04-22: Self-assembly of fine particles on patterned wettability in dip coating and its scale extension with contact printing: Yoshihito KANAMORI, Arata KANEKO, Nobuyuki MORONUKI, Takafumi KUBO	[619] 194.T12-17: Job Shop Scheduling with Capacity Adjustment: Toru EGUCHI, Mitsunobu YODA, Takeshi MURAYAMA, Fuminori OBA	11:30 2ndAM
[120] 003.T12-1: Cutting Mechanism in Turning of Super Heat-Resistant Alloy Inconel 718 under Oil Mist Application: Toru YATSUZAKI, Hiromichi ONIKURA	Break [220] ::	[320] 114.T08-17: Appropriate Tool Orientation for Precise Machining for Ball End Milling: Hisanobu TERAJ, Teruyuki ASAO, Yoshio MIZUGAKI	[420] 060.T09-8: An Application of State Observer in Current Control for PMSM Based on Entire Integer Operation: LIU Jie, HAO Shuanghui, ZHENG Weifeng, HAO Minghui	[520] 198.T04-23: High Efficiency Mixing by the Use of Cross-Linked Micro Capillary Fluid Filter: Kuniyo FUJIWARA, Yoshiaki UKITA, Yuichi UTSUMI	Break [620] ::	11:55 2ndAM
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Chair:Akira Hosokawa (Kanazawa Univ.) [121] 116.T01-29: Effect of Rotary Cutting Tool Posture on Multi-Tasking Lathe: Hiroshi NAKAJIMA, Atsushi KATO, Hiroyuki SASAHARA, Hiromasa YAMAMOTO, Toshiyuki MURAKI, Masaomi TSUTSUMI	Chair:Hwa-Soo Lee (Nihon Univ.) [221] 129.T01-34: Material removal mechanism in ultrahigh-speed grinding with cBN wheels: Koji KOSHIKUMO, Yoshio ICHIDA, Ryunosuke SATO, Yoshitaka MORIMOTO	Chair:Koichi Morishige (Univ. of Electro-Communications) [321] 192.T08-30: A Framework of Compositional Machining Simulation for Versatile Machining Simulation: Koji TERAMOTO, Jun ichi KANEKO, Tohru ISHIDA, Yoshimi TAKEUCHI	Chair:P. S. Pa (National Taipei Univ. of Education) [421] 090.T02-7: Advantage of Flange Type Electrode in Deep-Hole EDM: Ryuichi YASUDA, Akira OKADA, Yoshiyuki UNO	Chair:Arata Kaneko (Tokyo Metropolitan Univ.) [521] 078.T04-10: Effect of electrical current to critical depth of hard-brittle materials: Ryo Okabe, Masahiko Yoshino	Chair:Yasushi Umeda (Osaka Univ.) [621] 079.T12-7: Reactive Scheduling Based Multi Objectives Negotiation for Dynamic Supply Chain Model: Jia Yee CHAI, Tatsuhiko SAKAGUCHI, Keiichi SHIRASE	13:15 2ndPM
[122] 152.T01-41: Analytical Prediction of Sequential Cutting Process: Mitsuru SHIMOMURA, YuLong TANG, Hiroyuki SASAHARA	[222] 130.T01-35: Profile Grinding of High-Speed Steels using Ultrafine-Crystalline cBN Wheels: Yoshio ICHIDA	[322] 033.T08-5: Development of a New Versatile Tube Bending Machine Using 6-DOF Parallel Kinematics: Hiroyuki GOTO, Ken ICHIRYU, Yutaka TANAKA	[422] 091.T02-8: Effect of Surface Quality of Brass Coating Wire on Wire EDM Characteristics: Kimihiko ARIZONO, Toshiyuki YAMAUCHI, Akira OKADA, Yoshiyuki UNO	[522] 216.T04-25: Ion shot dressing grinding for desk-top machine tools with V-Cam system: Y. Uehara, H. Ohmori, W. Lin, Y. Watanabe, K. Katahira, T. Naruse, N. Mitsuishi, T. Miura	[622] 095.T12-8: Development of a Portal Collaboration Type Operation and Maintenance Support System: Toshiaki KIMURA, Takahiro INOUE, Yuichi KANDA	13:40 2ndPM
[123] 203.T01-54: Development of a DLC-Coated Tool with Thin Film Thermocouples: Kazuaki KAMIO, Toshiyuki OBIKAWA, Ali BASTI, Jun SHINOZUKA, Yasuhiro KAMATA	[223] 131.T01-36: Study on Grindability of Fine Ceramics: Shigeru HABU, Yoshio ICHIDA, Hideo UENO	[323] 145.T08-21: Design of a Precision 5-Axis Grinding Machine with Three Metrology Frames: Jun QIAN, Dries HEMSCHOOTE, Hendrik VAN BRUSSEL, Dominiek REYNAERTS	[423] 098.T02-13: Surface Pattern and Machining Characters Analysis of Machined Insulating Ceramics ZrO2 by EDM: YongFeng Guo, GuanQun. Deng, JiCheng Bai, ZeSheng. Lu	Break [523] ::	[623] 112.T12-10: A Multi-layered Model for Dynamic Supply Chain Configuration: Chisato OZAWA, Yoshitaka TANIMIZU, Koji IWAMURA, Nobuhiro SUGIMURA	14:05 2ndPM
Break [124] ::	Break [224] ::	Break [324] ::	[424] 213.T02-21: Wear properties of surface modified hard layers using electrical discharge machine: Koei MATSUKAWA, Katsunori SATOH, Akihiro GOTO, Nagao SAITO, Noatake MOHRI	Chair:Ryuta Sato (Tokyo Univ. of Agriculture and Technology) [524] 119.T10-1: Study on Path Control Scheme for Vision Guided Micro Manipulation System: Hirotaka OJIMA, Hiroyuki ASANO, Genki SHIMIZU, Libo ZHOU, Jun SHIMIZU, Hiroshi EDA	[624] 115.T12-11: Products Refurbishment and its Logistics in Environment Conscious Product Lifecycle Management: Kenji YURA	14:30 2ndPM

Chair:Hiroiyuki Sasahara (Tokyo Univ. of Agriculture and Technology)[125] 001.T01-1: Dry Turning of ASTM Grade 2 Austempered Ductile Iron with Polycrystalline Cubic Boron Nitride Cutting Tools: Kambuyi KATUKU, Andreas KOURSARIS, Iakovos SIGALAS	Chair:Fumiki Tanaka (Hokkaido Univ.) [225] 037.T07-1: Design Optimization of Cooling Structure of Block Laminated Mold by Using Genetic Algorithm: Jianguo LIANG, Feng GAO, Hiroshi KORESAWA, Hiroyuki NARAHARA, Hiroshi SUZUKI	Chair:Koji Teramoto (Muroran Inst. of Technology) [325] 061.T08-7: Rapid Removal Volume Evaluation for Tool Posture Decision in 3+2-Axis Control Milling: Keiichi NAKAMOTO, Mitsuru TSUNODA, Takaaki INAKA, Keiichi SHIRASE, Toshimichi MORIWAKI	Break [425] ::	[525] 149.T10-3: Development and Performance Evaluation of Collection /Dilution Systems of Saliva for Diagnosis Systems: Yuji JOU, Takashi TOMIKAWA, Keisuke MORISHIMA, Yuji FURUKAWA, Shuichi Takayama	Break [625] ::	14:55 2ndPM
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Chair:Toshiyuki Obikawa (Univ. of Tokyo) [130] 016.T01-7: Comparison of Chip Breakability between Age-hardened Al-Cu and Al-Cu-Si Alloys: Masatsugu KAMIYA, Tomohiro SASAKI, Takao YAKOU	Chair:Jiawang Yan (Tohoku Univ.) [230] 073.T03-1: Application of Ultra-Precision Diamond Cutting for Fabrication of Cylindrical Micro Coil Line: Koichi OKUDA, Naoki FUJIWARA, Yuichiro SUMIYOSHI, Tadashi HATTORI	Chair:Atsushi Matsubara (Kyoto Univ.) [330] 075.T08-11: Development of Cutting Device with Enlargement Mechanism of Displacement – Application of Non-circle Cutting -: Yoshitaka MORIMOTO, Yoshio ICHIDA, Ryunosuke SATO, Yukio OHORI	Chair:Etsuji Ohmura (Osaka Univ.) [430] 082.T02-6: Three-Dimensional Microfabrication System Using Focused Fiber Laser Beam: Takuya SEMBA, Testuro YAMAGUCHI, Yoshifumi AMAMOTO	Chair:Yasuhiro Kakinuma (Keio Univ.) [530] 058.T13-3: Development of a Laser-Guided Deep-Hole Measuring System: Measurements of the Roundness, Cylindricity and Straightness: Akio KATSUKI, Hiroshi MURAKAMI, Hiromichi ONIKURA, Takao SAJIMA	Chair:Toru Eguchi (Hiroshima Univ.) [630] 010.T12-2: AGV Action Control of Autonomous Decentralized FMS by Fickleness: Hidehiko YAMAMOTO, Shinsuke KATO	9:00 3rdAM
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Chair:Tomohiro Sasaki (Yokohama National Univ.) [138] 009.T01-3: Chemical Etching of Copper Surface by Fluorescent Substance Excited with Ultraviolet Ray ~ Study of Ultraviolet Ray-Assisted Machining ~: Takeshi TANAKA, Yoshihiko CHIWAYA	Chair:Jiwang Yan (Tohoku Univ.) & Koichi Okuda (Univ. of Hyogo) [238] 181.T03-7: Precision Grinding of Artificial Head (Co-Cr alloy) with a New Electrical Grinding System: Masayoshi MIZUTANI, Noriyuki HISAMORI, Takafumi MIZUNO, Hitoshi OHMORI, Kazutoshi	Chair:Keiichi Shirase (Kobe Univ.) [338] 171.T12-15: Optimization of Multipass Turning Parameters by GA-ANN based Hybrid Approach: Nafis AHMAD, Masataka TANASE, Tomohisa TANAKA, and Yoshio SAITO	Chair:Yasuhiro Okamoto (Okayama Univ.) [438] 097.T02-12: Partial Growth of Crack in Laser Scribing of Glass: Koji YAMAMOTO, Noboru HASAKA, Hideki MORITA, Etsuji OHMURA			13:15 3rdPM
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[141] 065.T01-20: Cutting Mechanism of Aluminum Foil on Underlays during Wedge Shearing Process: Seksan CHAIJIT, Shigeru NAGASAWA, Yasushi FUKUZAWA, Mitsuhiro MURAYAMA, Isamu KATAYAMA		[341] 163.T08-25: Monitoring for Ultra-Precision Turning of Single Crystal Silicon using Diamond Tool with Large Nose Radius and Small Chamfer at Cutting Edge: Ryuichi IWAMOTO, Eiji KONDO, Satoko NAGAYAMA, Norio KAWAGOISHI				14:30 3rdPM