

• nanoMan2018

Conference Programme
4-6 July 2018





3rd July 2018

7:00-10:00 pm

*PRE-CONFERENCE: EVENING DRINKS RECEPTION
LANCASTER SUITE, BRUNEL UNIVERSITY CAMPUS*

REGISTRATION DESK WILL BE OPEN DURING THIS EVENT

4th July 2018 (Day 1)

EVENTS

7:45-11:00 am	<i>REGISTRATION - TEA/COFFEE THE ATRIUM, EASTERN GATEWAY</i>
8:30-9:00 am	<ul style="list-style-type: none"> ✚ Welcome by Vice-Chancellor, Professor Julia Buckingham ✚ Introduction to nanoMan by Professor Fengzhou Fang ✚ Welcome by President of ISNM by Professor Dongming Guo <p>Chaired and introduced by Professor Kai Cheng</p>
9:00-10:30 am	<p>KEYNOTE SPEECHES (1), THE AUDITORIUM, EASTERN GATEWAY</p> <p>Chaired by Professor Fengzhou Fang and Professor Paul Shore</p> <ol style="list-style-type: none"> 1. Comparison of mastering methods for micro and nano structured drums Professor Dr.-Ing Christian Brecher <i>Werkzeugmaschinenlabor WZL, RWTH Aachen, Germany</i> 2. Nano manufacturing and metrology for giant opto-mechanical imaging machines Professor Dae Wook Kim <i>College of Optical Sciences, University of Arizona, USA</i>
10:30-11.10 am	<i>REFRESHMENT BREAK, NETWORKING AND EXHIBITION OF INDUSTRIAL COMPANIES THE AUDITORIUM, EASTERN GATEWAY</i>



<p>11.10-12.50 am</p>	<p>SESSION 1 Ultraprecision grinding and abrasive machining – (1) The Auditorium, Eastern Gateway SESSION CHAIR: Professor Dongming Guo, <i>Dalian University of Technology, China</i></p>	<p>SESSION 2 Ultraprecision and micro/nano machining – (1) Room 003, Eastern Gateway SESSION CHAIR: Dr.-Ing. Oltmann Riemer, <i>Bremen University, Germany</i></p>	<p>SESSION 3 Micro/Nano processing using lasers Room LC264, Lecture Centre SESSION CHAIR: Dr Richard Bateman, <i>Coventry University, UK</i></p>
	<ol style="list-style-type: none"> 1. Research on cryogenic and high speed grinding method for high-precision polymer film - <u>Ying Yan, Xiaoguang Guo, Ping Zhou, Qian Bai, Huiping Wang and Shangxiong Zhang</u> 2. An experimental Investigation of double- side eccentric disc processing of cylindrical rollers using fixed abrasive pellets - <u>Kaiping Feng, Zhaozhong Zhou, Jianping Yu, Xinglin Li and Julong Yuan</u> 3. Finite element analysis of temperature field of profile grinding of turbine blade - <u>Qing Miao and Wenfeng Ding</u> 4. Experimental study on machining mechanism of CVD-SiC - <u>Weimin Lin and Fengmin Ji</u> 5. Effective abrasive number in the lapping process by hydrophilic fixed abrasive pad - <u>Yongwei Zhu, Qi Shen and Jianbin Wang</u> 	<ol style="list-style-type: none"> 1. Influence of alloy composition and heat treatment on the cutting force in discontinuous micro turning - <u>Arne Beinhauer, Oltmann Riemer and Carsten Heinzl</u> 2. Microstructures fabricated by the revolving tip-based machining method and their applications - <u>Bo Xue and Yongda Yan</u> 3. AFM tip-based nanomachining: theoretical considerations when assessing the normal cutting load - <u>Raheem Al-Musawi and Emmanuel Brousseau</u> 4. Effect of electropulsing treatment on machinability of Ti-6Al-4V alloys in ultra-precision diamond turning - <u>Zeja Zhao and Sandy To</u> 	<ol style="list-style-type: none"> 1. Ytria Stablized Zirconia (YSZ) thin wall structure fabrication using laser engineered net shaping (LENS) technique - <u>Zhiqi Fan, Yitian Zhao, Mingyuan Lu and Han Huang</u> 2. The influence of laser-sintered parameters on microstructure of Al₂O₃/ZrO₂/SiO₂ and its thermal property - <u>Wei Wang, Sihang Wang, Qinglong Zhao and Zewei Yuan</u> 3. Study on fabrication of PCD micro-milling tools by ultrashort pulsed laser - <u>Yi Xia, Ning He, Guolong Zhao, Lanzhou Ma, Chen Wang and Mao Wang</u> 4. Mid-infrared ultrashort pulse laser for precision metrology - <u>Hiraku Matsukuma, Yoshiaki Kakimoto, Shigeki Tokita, Yuki Shimizu and Wei Gao</u>
<p>1.00-2.00 pm</p>	<p style="text-align: center;">LUNCH BREAK - THE AUDITORIUM, EASTERN GATEWAY</p>		



2.00-3.40 pm	<p>SESSION 4 Advanced materials and micro/nano manufacturing – (1) The Auditorium, Eastern Gateway</p> <p>SESSION CHAIR: Dr Shouxun Ji, <i>Brunel University London, UK</i></p>	<p>SESSION 5 Design of high precision machines – (1) Room 003, Eastern Gateway</p> <p>SESSION CHAIR: Professor Xichun Luo, <i>Strathclyde University, UK</i></p>	<p>SESSION 6 Vibration assisted machining – (1) Room LC264, Lecture Centre</p> <p>SESSION CHAIR: Professor Benny Cheung, <i>Hong Kong Polytechnic University, Hong Kong</i></p>	<p>ISNM Council Meeting starting at 3.00pm, Room 218, Eastern Gateway</p>
	<p>1. Reinforcement of TiB2 nano-particles in aluminium piston alloys for high performance at elevated temperatures - <i>Yijie Zhang, Sajjad Amirkhanlou and Shouxun Ji</i></p> <p>2. Effect of gas source on grown rate and surface free energy of diamond films deposited by MPCVD - <i>Shuai Tian, Feng Xu, Jinxin Wu, Chenhui Xu, Luqiang Tu, Xue Wang, Ji Xu and Dunwen Zuo</i></p> <p>3. Production ready processes for diamond turning tungsten carbide, steel and diffractive free (no colour) nickel plated lens moulds - <i>Andreas Kuchler</i></p> <p>4. Research on a sharing platform for 3D print equipment - <i>Leijie Fu, Yv Bai, Yan Cao and Zhijie Wang</i></p> <p>5. The application of precision machining and brazing in thermal protection structure of high temperature gas tunnel - <i>Ning Tian, Kai Cheng, Jiaqi Liu, Yanghui Zou and Lisong Zhang</i></p>	<p>1. Design of ultra-precision machine for integrated grinding and polishing of silicon wafers - <i>Xianglong Zhu, Junqing Li, Zhigang Dong, Renke Kang, Shang Gao and Dongming Guo</i></p> <p>2. Design and integration of a high-precision material handling system with a six-axis hybrid micro-machine - <i>Ross Walker, Wenbin Zhong, Xianwen Kong and Xichun Luo</i></p> <p>3. Investigation on effects of herringbone grooves for aerodynamic journal bearings with ultra-high speed applications - <i>Siyu Gao, Yungao Shi, Kai Cheng and Xiaoyu Zhang</i></p> <p>4. Study on the temperature characteristics and passive compensation method of thermal deformation for GMA - <i>Huifang Liu, Kai Ma and Qiang Zhao</i></p> <p>5. CFD-Based design and analysis of the paint spraying spindles - <i>Ali Khaghani and Kai Cheng</i></p>	<p>1. Finite element simulation and experimental investigation on cutting mechanism in vibration assisted micro-milling - <i>Wanqun Chen, Lu Zheng, Xiangyu Teng and Dehong Huo</i></p> <p>2. Ultrasonic vibration-assisted micro-grinding of glassy carbon - <i>Patrick Beiring and Jiwang Yan</i></p> <p>3. High-low frequency compound vibration machining technology for hard-brittle materials - <i>Haijun Zhang, Kai Du and Guo Li</i></p> <p>4. An experimental study of the coupled acoustic-electronic machining technology on titanium alloys - <i>Zhanwen Sun and Sandy To</i></p>	
3.40-4.10 pm	<p>REFRESHMENT BREAK, NETWORKING AND EXHIBITION OF INDUSTRIAL COMPANIES THE AUDITORIUM, EASTERN GATEWAY</p>			



<p>4.10-5.50 pm</p>	<p>SESSION 7 Metrology measurement and characterization – (1) The Auditorium, Eastern Gateway</p> <p>SESSION CHAIR: Dr Qing Ping Yang, <i>Brunel University London, UK</i></p>	<p>SESSION 8 Ultraprecision grinding and abrasive machining – (2) Room 003, Eastern Gateway</p> <p>SESSION CHAIRS: Professor Mark Jackson & Professor Yongda Yan <i>Kansas State University, USA</i> <i>Harbin Institute of Technology, China</i></p>	<p>SESSION 9 Vibration assisted machining – (2) Room LC264, Lecture Centre</p> <p>SESSION CHAIR: Dr Dehong Huo, <i>Newcastle University, UK</i></p>
	<ol style="list-style-type: none"> 1. Development of a prototype micro thermal sensor probe for non-destructive surface defect detection - <u>Yuki Shimizu</u>, <u>Yuki Matsuno</u>, <u>Hiraku Matsukuma</u> and <u>Wei Gao</u> 2. Instrumented indentation test: Contact stiffness evaluation in the nano-range - <u>Giacomo Maculotti</u>, <u>Gianfranco Genta</u>, <u>Massimo Lorusso</u>, <u>Matteo Pavese</u>, <u>Daniele Ugues</u> and <u>Maurizio Galetto</u> 3. Accurate subpixel edge detection of step edge based on gaussian Grayscale Surface Fitting Method - <u>Wenhui Zhao</u> and <u>She Liu</u> 4. A fiducial-aided data fusion method for the measurement of multiscale complex surfaces - <u>Shixiang Wang</u>, <u>Cheung Chi Fai</u> and <u>Mingyu Liu</u> 	<ol style="list-style-type: none"> 1. A Study of optimized tool path for uniform scallop-height in ultra-precision grinding of freeform surfaces - <u>Shanshan Chen</u>, <u>Benny Cheung</u>, <u>Feihu Zhang</u> and <u>Mingyu Liu</u> 2. Photoelectrochemically combined mechanical polishing of n-type gallium nitride wafer by using metal nanoparticles as photocathodes - <u>Liwei Ou</u>, <u>Zhigang Dong</u>, <u>Renke Kang</u>, <u>Kang Shi</u> and <u>Dongming Guo</u> 3. A spherical contour polishing method for curved diamond surface based on hot metal plate - <u>Qiangfeng Wang</u>, <u>Yan Cao</u>, <u>Yu Bai</u> and <u>Shuo Gao</u> 4. Monitoring the performances of grinding wheel by the analysis of grinding temperature - <u>Fangyi You</u>, <u>You Wang</u>, <u>Qiulian Dai</u> and <u>Xian Wu</u> 5. A comparison between conventional abrasives and super-abrasives in grinding of WC/Fe composite coating by laser cladding - <u>Qiulian Dai</u>, <u>Fangyi You</u> and <u>Canbin Luo</u> 	<ol style="list-style-type: none"> 1. Vibration assisted finishing of SLM-ed structured surface based on conformal polishing tool - <u>Jiong Zhang</u>, <u>Alvin You</u>, <u>Xiang Toh</u>, <u>Hao Wang</u>, <u>Wen Feng Lu</u> and <u>Jerry Ying Hsi Fuh</u> 2. Surface integrity in ultrasonic assisted diamond cutting of steel - <u>Melanie Willert</u>, <u>Kai Rickens</u> and <u>Oltmann Riemer</u> 3. Experimental investigation on burr formation in vibration assisted micro milling of Ti-6Al-4V - <u>Lu Zheng</u>, <u>Wanqun Chen</u>, <u>Dehong Huo</u> and <u>Michele Pozzi</u> 4. Materials removal characteristics of SiCp/Al composites in ultrasonic vibration assisted grinding - <u>Li Ling</u> and <u>Wei Zheng</u> 5. 3D fractal analysis of SiCp/Al composites in ultrasonic vibration assisted end grinding - <u>Wei Zheng</u> and <u>Li Ling</u>
<p>END OF DAY</p>			



5th July 2018 (Day 2)

EVENTS

8:00-8:30 am	<i>REGISTRATION - TEA/COFFEE</i> <i>THE ATRIUM, EASTERN GATEWAY</i>
8:30-9:10 am	KEYNOTE SPEECHES (2), THE AUDITORIUM, EASTERN GATEWAY Chaired by Professor Kornel Ehmann and Professor Wei Gao 3. Chasing nanometres - development of high-performance position encoders for accurate motion control in manufacturing <i>Dr Ian Carpenter, Encoder Products Division, Renishaw plc, New Mills, Gloucestershire, United Kingdom</i>
9:10-9:30 am	ISNM GENERAL ASSEMBLY AND MATTERS
9:30-10:40 am	INDUSTRIAL COMPANIES' PRESENTATIONS: <i>each company 5 minutes</i> Chaired by Professor JA McGeough
10:40- 11.10 am	<i>REFRESHMENT BREAK, NETWORKING AND EXHIBITION OF INDUSTRIAL COMPANIES</i> <i>THE AUDITORIUM, EASTERN GATEWAY</i>



11.10-12.50 am	<p>SESSION 10 Process monitoring and quality control The Auditorium, Eastern Gateway</p> <p>SESSION CHAIR: Professor Wei Gao, <i>Tohoku University, Japan</i></p>	<p>SESSION 11 Design of high precision machines – (2) Room 003, Eastern Gateway</p> <p>SESSION CHAIR: Professor Paul Shore, <i>National Physical Laboratory, UK</i></p>	<p>SESSION 12 Micro/Nano forming and injection moulding Room LC264, Lecture Centre</p> <p>SESSION CHAIR: Dr Emmanuel Brousseau, <i>Cardiff University, UK</i></p>
	<ol style="list-style-type: none"> Intelligent investigation for ultra-precision turning with on-machine surface measurement and neural network - <u>Duo Li</u>, <u>Xiangqian Jiang</u>, <u>Liam Blunt</u> and <u>Zhen Tong</u> Research on multi-method endpoint detection in the copper chemical mechanical planarization process - <u>Hongkai Li</u>, <u>Xinchun Lu</u> and <u>Jianbin Luo</u> A differential compensation strategy based piezoelectric force sensor system for force controlled ultra-precision diamond cutting - <u>Yuan-Liu Chen</u>, <u>Keisuke Tohyama</u>, <u>Yuki Shimizu</u>, <u>Hiraku Matsukuma</u> and <u>Wei Gao</u> Application of a MEMS Capacitive Sensor-based Force-measuring Tool Holder - <u>Zhengyou Xie</u>, <u>Jianguang Li</u>, <u>Yong Lu</u> and <u>Yang Bai</u> Method of acoustic emission signal processing in fixed abrasives lapping - <u>Jun Li</u>, <u>Haocheng Tong</u>, <u>Yongwei Zhu</u>, <u>Yuli Sun</u> and <u>Dunwen Zuo</u> 	<ol style="list-style-type: none"> Cavitation effect and lubrication property of journal bearing with textured surface - <u>Qingshun Bai</u>, <u>Hui Guo</u>, <u>Chengcheng Ji</u>, <u>Kai Cheng</u> and <u>Qingchun Zhang</u> Precision engineering design and manufacturing of air foil bearings - <u>Duc Ha</u> and <u>Yanmeng Xu</u> Design and validation of a self-driven joint for articulated arm coordinate measuring machine - <u>Wei Huang</u>, <u>Yi Hu</u>, <u>Xiaowei Gu</u>, <u>Penghao Hu</u>, <u>Bing Ye</u>, <u>Mengchao Ma</u> and <u>Rui-Jun Li</u> Reliability analysis of direct-driving A/C-axis bi-rotary precision milling head - <u>Peng Zheng</u>, <u>Zewei Yuan</u> and <u>Haobo Wang</u> PIRest technology for hybrid systems with permanent positioning and motion in the nanometer range - <u>Waldemar Spomer</u>, <u>Jonas Reiser</u>, <u>Harry Marth</u> and <u>Mathias Bach</u> 	<ol style="list-style-type: none"> Experimental and numerical study of the filling of a micro feature based on a microfluidic flow cytometer chip using micro injection moulding - <u>Haoyang Zhang</u>, <u>Fengzhou Fang</u>, <u>Michael Gilchrist</u> and <u>Nan Zhang</u> Electromagnetic peening -a novel sheet metal forming method - <u>Chunping Fang</u>, <u>Jingze Zhao</u>, <u>Li Ling</u>, <u>Wenping Wang</u> and <u>Min Wan</u> Microstructural characteristics of a novel Aluminium/Basalt composite - <u>Corentin Belloir</u>, <u>Onuh Adole</u>, <u>Henri Houdart</u>, <u>Laura Marras</u>, <u>Lorna Anguilano</u>, <u>Timothy Minton</u>, <u>Nilam Barekar</u>, <u>Nico Nelson</u>, <u>Aleksander Novytskyi</u> and <u>Brian McKay</u> Investigation on surface morphology generated by vibration assisted strengthening on aviation spherical plain bearings - <u>Zewei Yuan</u>, <u>Yue Qin</u>, <u>Kai Cheng</u>, <u>Wenzhen Zhao</u> and <u>Peng Zheng</u> Study on forming mechanism coupled thermo-mechanics of cold rolling for metal material - <u>Qiangfeng Wang</u>, <u>Yan Cao</u>, <u>Yu Bai</u>, <u>Shuo Gao</u> and <u>Chong Han</u>
1.00-2.00 pm	<p>LUNCH BREAK - THE AUDITORIUM, EASTERN GATEWAY</p>		



2.00-3.40 pm	<p>SESSION 13 Ultraprecision grinding and abrasive machining – (3) The Auditorium, Eastern Gateway</p> <p>SESSION CHAIR: Professor Mike Morgan, <i>Liverpool John Moores University, UK</i></p>	<p>SESSION 14 Micro-featured surfaces – (1) Room 003, Eastern Gateway</p> <p>SESSION CHAIR: Dr Sandy To, <i>Hong Kong Polytechnic University, Hong Kong</i></p>	<p>SESSION 15 Non-traditional processes for micro/nano manufacturing Room LC264, Lecture Centre</p> <p>SESSION CHAIR: Dr Atanas Ivanov, <i>Brunel University London, UK</i></p>
	<ol style="list-style-type: none"> Discrete element method for simulation of fluidized granular flow systems in vibratory mass finishing processes - <u>Arnón López Marrero</u>, <u>Matteo Villa</u>, <u>Michael Morgan</u> and <u>Mikdam Jamal</u> Study on ultra-precision finishing of glass lenses using magnetic abrasive finishing process - <u>Yanhua Zou</u> and <u>Huijun Xie</u> Application of abrasive flow machining for inner surface polishing in nano-scale - <u>Xuanping Wang</u>, <u>Haiquan Wang</u>, <u>Haibo Wei</u>, <u>Can Peng</u> and <u>Hang Gao</u> Novel approaches to determine element trajectory in vibratory mass finishing processes - <u>Xiaoxiao Liu</u>, <u>Mike Morgan</u>, <u>Shuwen Wang</u> and <u>Chao Zhang</u> Modelling and analysis of surface roughness and profile accuracy control in abrasive flow machining of the aerofoil structure and component - <u>Yizhi Shao</u> and <u>Kai Cheng</u> 	<ol style="list-style-type: none"> Micro-structuring on inner cylinder surfaces using a rotating active tool with on-line compensation - <u>Seung-Kook Ro</u>, <u>Soo-Bong Cho</u>, <u>Yangyang Guo</u>, <u>Byung-Sub Kim</u>, <u>Sungcheul Lee</u>, <u>Jeong Seok Oh</u> and <u>Jong-Kweon Park</u> Numerical study on friction reduction of micro-dimpled surface induced by vibration texturing - <u>Chi Shing Yeung</u> and <u>Ping Guo</u> Modelling and simulation of mechanical nanocutting of tubular nanostructures on the SiO₂ substrate - <u>Liuyang Zhang</u>, <u>Shuming Yang</u>, <u>Xiaoming Chen</u> and <u>Handing Liu</u> An investigation on topography evolution for ultraprecision machined surface of highly reactive Ce-5La(wt.%) alloy - <u>Qi Cui</u>, <u>Tianming Zhao</u>, <u>Jun Chen</u> and <u>Chengjie Li</u> Construction of antibacterial and bioactive surface for titanium implant - <u>Yi Wan</u>, <u>Guisen Wang</u>, <u>Bing Ren</u>, <u>Zhanqiang Liu</u> and <u>Peiqi Ge</u> 	<ol style="list-style-type: none"> Cathode design and experiment in electrochemical machining of cochlear channel of integral structure - <u>Qingming Fan</u>, <u>Zhijian Fan</u>, <u>Kai Cheng</u> and <u>Yan Cao</u> Characterization of Lu₂O₃ surface processed by plasma-assisted etching - <u>Peng Lyu</u>, <u>Min Lai</u>, <u>Jufan Zhang</u> and <u>Fengzhou Fang</u> Study on optimum design method of cathode profile for high precision Electrolytic Machining of Spur Face Gear - <u>Yan Cao</u>, <u>Liang Huang</u>, <u>Hu Qiao</u> and <u>Qingming Fan</u> µECM Process Investigation considering Pulse signal features and EDL capacitance - <u>Mina Mortazavi</u> and <u>Atanas Ivanov</u>
3.40-4.10 pm	<p>REFRESHMENT BREAK, NETWORKING AND EXHIBITION OF INDUSTRIAL COMPANIES THE AUDITORIUM, EASTERN GATEWAY</p>		



4.10-5.50 pm	<p>SESSION 16 Metrology measurement and characterization – (2) The Auditorium, Eastern Gateway</p> <p>SESSION CHAIR: Dr Hiraku Matsukuma, <i>Tohoku University, Japan</i></p>	<p>SESSION 17 Ultraprecision and micro/nano machining – (2) Room 003, Eastern Gateway</p> <p>SESSION CHAIR: Dr Mayo Adetoro, <i>Brunel University London, UK</i></p>	<p>SESSION 18 Digital design and manufacturing Room LC264, Lecture Centre</p> <p>SESSION CHAIRS: Dr Yanmeng Xu & Prof. Jiang Guo Brunel University London, UK Dalian University of Technology, China</p>
	<ol style="list-style-type: none"> 1. Construction of a system for simultaneous measurements of the diameter and the roundness of balls - <u>Yindi Cai</u>, Kuang-Chao Fan, Zhifeng Lou and Baokai Feng 2. Research on measurement method of spindle tilt error based on analysis of interference fringe - Pengqiang Fu, Qinghui Cao, Lijie Zhou, Yiwen Wang, Qiang Zhang, <u>Junjie Zhang</u> and Feihu Zhang 3. A method for roundness estimation of minimum zone circle - Jian Mei, <u>Qiangxian Huang</u> and <u>Liansheng Zhang</u> 4. Optimal design of a single sensor touch trigger probe - <u>Rui-Jun Li</u>, Xia-Wen Jin, Peng-Yu Wang, Peng Xu, Kuang-Chao Fan and <u>Yong-Hong Wang</u> 5. Accurate measurement of complex micro-structures by digital holographic microscopy - <u>Xiangchao Zhang</u>, Xiaolei Zhang, Min Xu and Xiangqian Jiang 	<ol style="list-style-type: none"> 1. Analysis and control of machining defects during milling of orthogonal aramid fiber-reinforced composites laminates - <u>Zhenyu Shi</u>, Peng Cui, Xin Li and <u>Yi Wan</u> 2. Research on the deep hole processing technic of 300M ultra-high strength steel part cavity for an aircraft landing gear - <u>Yan Cao</u>, Qiangfeng Wang, Liang Huang, Wen Wen, Feng Jia and <u>Qiao Hu</u> 3. Research on cutting temperature in high-speed milling Inconel 718 - Yubo Liu, <u>Can Zhao</u> and Yanfeng Xu 4. Surface integrity of difficult-to-machine metal materials for cryogeni machining: a review - <u>Haibo Liu</u>, <u>Lingsheng Han</u>, Jiaxin Liu, Jinyu Wang, Kuo Liu and Yongqing Wang 	<ol style="list-style-type: none"> 1. A virtual system for surface topography modeling for diamond turning process - Chunlei He and <u>Wenjun Zong</u> 2. The research on the 3D part modeling method for reuse the design knowledge - Du Jiang and <u>Yan Cao</u> 3. Investigation of the process monitoring of design and construction of a hybrid power plant prototype utilizing wind and solar energy - Tatang <u>Mulyana</u>, Darwin Sebayang, <u>Rasidi Ibrahim</u> and Didit Adytia 4. Construction of the knowledge base of industrial design for CNC machine tools - Xihui Yang, Xin Zhou and <u>Kai Cheng</u> 5. Research and development of the 3D part library of bite type tube fittings for digital manufacturing - Hui Yao, <u>Yan Cao</u> and Yv Bai
6:15 pm	<i>TRANSPORT FOR CONFERENCE DINNER - PICK UP POINT: OUTSIDE MARY SEACOLE BUILDING – see campus map</i>		
7:00-10:30 pm	<i>PRE-CONFERENCE DINNER DRINK CONFERENCE DINNER – WEMBLEY STADIUM</i>		



6th July 2018 (Day 3)

EVENTS

8:00-9:00 am	<i>REGISTRATION - TEA/COFFEE THE ATRIUM, EASTERN GATEWAY</i>
9:00-10:30 am	<p>KEYNOTE SPEECHES (3), THE AUDITORIUM, EASTERN GATEWAY</p> <p>Chaired by Professor H. Hansen and Professor Dongming Guo</p> <p>4. Laser transformation of materials at the nanoscale <i>Professor Bill O'Neill, Director of Studies in Engineering, Downing College, University of Cambridge, United Kingdom</i></p> <p>5. Polymer physics in nanoscale cutting: Opportunities for improved control in nano-manufacturing? <i>Professor Kristofer Gamstedt, Division of Applied Mechanics, Department of Engineering Sciences, Uppsala University, Sweden</i></p>
10:30-11.00 am	<i>REFRESHMENT BREAK, NETWORKING AND EXHIBITION OF INDUSTRIAL COMPANIES THE AUDITORIUM, EASTERN GATEWAY</i>



<p>11.00-12.50 am</p>	<p>SESSION 19 Ultraprecision grinding and abrasive machining – (4)</p> <p>The Auditorium, Eastern Gateway</p> <p>SESSION CHAIR: Professor Zhuangde Jiang, <i>Xian Jiao-Tong University, China</i></p>	<p>SESSION 20 Ultraprecision and micro/nano machining – (3)</p> <p>Room 003, Eastern Gateway</p> <p>SESSION CHAIR: Dr Seung-Kook Ro, <i>Korean Institute of Machinery and Materials, Korea</i></p>	<p>SESSION 21 Modelling and simulation</p> <p>Room LC264, Lecture Centre</p> <p>SESSION CHAIR: Prof. Xichun Luo & Prof. Jiang Guo <i>Strathclyde University, UK</i> <i>Dalian University of Technology, China</i></p>
	<ol style="list-style-type: none"> 1. Effect of polishing plate properties on YAG crystal disk polishing - Runli An, <u>Xiaolong Han</u>, <u>Xianglong Zhu</u>, <u>Zhuji Jin</u>, Qian Bai and <u>Dongming Guo</u> 2. A method of planar grinding plate with fixed eccentricity for ball finishing - Xuemei Ao, <u>Julong Yuan</u> and <u>Ping Zhao</u> 3. Preparation of superhydrophobic titanium surfaces via the combined modification of hierarchical micro-nano patterning and fluorination - <u>Bing Ren</u>, <u>Yi Wan</u>, Zhanqiang Liu, Guisen Wang and <u>Peiqi Ge</u> 4. Sensitivity of the surface integrity of silicon wafer to cutting speed - <u>Ping Zhou</u>, Ziguang Wang, <u>Ying Yan</u>, <u>Zhuji Jin</u>, <u>Renke Kang</u>, <u>Shang Gao</u> and <u>Dongming Guo</u> 5. Investigation on the correlation between the optics' surface finish and the polishing pad in full-aperture polishing - <u>Lele Ren</u>, Feihu Zhang and Defeng Liao 	<ol style="list-style-type: none"> 1. Investigation on micro milling of micro grooves with high aspect ratio - <u>Xiuging Hao</u>, Jinjin Han, <u>Ning He</u> and Liang Li 2. Magnesium nanocomposites: synthesis, characterization and micromachining - <u>Eugene Wong</u>, Xiangyu Teng, <u>Dehong Huo</u> and Manoj Gupta 3. Effect of cross-shaped chisel edge of non-coaxial helical point micro-drill on drilling performance - <u>Zhiqiang Liang</u>, Haixin Guo, <u>Xibin Wang</u>, Tianfeng Zhou, Zhibing Liu, Lijing Xie and Li Jiao 4. Research on ductile milling of engineering ceramics with large cutting parameters - Rong Bian, <u>Ning He</u>, Wenzheng Ding and Shuqing Liu 5. Crystal plasticity based finite element modeling and simulation of diamond cutting of polycrystalline copper - <u>Junjie Zhang</u>, Zhanfeng Wang, Hamad Ul Hassan, Jianguo Zhang, Guo Li, <u>Haijun Zhang</u>, <u>Yongda Yan</u>, Tao Sun and Alexander Hartmaier 	<ol style="list-style-type: none"> 1. Molecular dynamics simulation study on the nanoindentation of lutetium oxide crystal - <u>Min Lai</u>, Fengzhou Fang, Xiaodong Zhang and Yue He 2. Cleaning state of the loop case for optical crystal module in final optics assembly - <u>Qingshun Bai</u>, Kai Zhang, Yuhai Li, Chanbin Wang, Xiaodong Yuan and Feihu Zhang 3. Modelling of real-time quality intelligent monitoring network for multi-stage machining processes - Feng Jia, <u>Yan Cao</u> and Liang Huang 4. Design and analysis of micro-textured surfaces for self-cleaning and reducing production changeover complexity in food industry - <u>Khalid Mustafa</u> and <u>Kai Cheng</u>



1.00-2.00 pm	<i>LUNCH BREAK - THE AUDITORIUM, EASTERN GATEWAY</i>		
2.00-3.40 pm	<p>SESSION 22 Advanced materials and micro/nano manufacturing – (2) The Auditorium, Eastern Gateway</p> <p><i>SESSION CHAIR: Dr Tim Minton, Brunel University London, UK</i></p>	<p>SESSION 23 Ultraprecision and micro/nano machining – (4) Room 003, Eastern Gateway</p> <p><i>SESSION CHAIR: Professor Ning He, Nanjing University of Aeronautics and Astronautics, China</i></p>	<p>SESSION 24 Ultraprecision grinding and abrasive machining – (5) Room LC264, Lecture Centre</p> <p><i>SESSION CHAIR: Professor Yanhua Zou, Utsunomiya University, Japan</i></p>
	<ol style="list-style-type: none"> 1. Experimental study on the moisture absorption and bending properties of a carbon fiber composite material in hygrothermal conditions - Wen Cheng, <u>Yan Cao</u> and Qing-Ming Fan 2. Study on welding process and mechanical properties of AZ31 magnesium alloy - Qiangfeng Wang, <u>Yan Cao</u>, Yu Bai, Shuo Gao and Chong Han 3. In situ TEM study of nanotwinned nickel alloy nanopillar - <u>Bo Wang</u>, Zhenyu Zhang, Junfeng Cui and Leilei Chen 4. Experimental study on machining germanium wafer with ice particle fixed abrasive tools - <u>Yuli Sun</u>, Dunwen Zuo, Wenzhuang Lu, <u>Jun Li</u> and <u>Yongwei Zhu</u> 5. Scalable additive manufacturing solution for construction - Abdulrahman Albar, <u>Mohammad Rafiq Swash</u> and Seyed Ghaffar 	<ol style="list-style-type: none"> 1. Experimental investigation of feed per tooth on cutting forces in milling of 2.5D C/C material - Huan Luo, <u>Ming Luo</u> and Dinghua Zhang 2. An Analytical Approach for the Reduction of Friction Forces Using Vibration - <u>Oluwamayokun Adetoro</u>, Priyang Udaykant and Rui Cardoso 3. Deformation characteristics under Vickers indentation in CoCr and 316LVM stainless steel-based biomaterials - <u>Chengwei Kang</u> and <u>Fengzhou Fang</u> 4. The Study of UVAT Tool Holder: Preliminary Investigation of Conventional Machining In Cutting Force and Cutting Temperature - <u>Haris Rachmat</u>, <u>Mohd. Rasidi Ibrahim</u> and Sulaiman Hasan 5. Development of a framework for machinability assessment of PCD cutting tools using digital twin and smart machining - Paul O. Kanife and <u>K. Cheng</u> 	<ol style="list-style-type: none"> 1. Finishing of rectangular microstructured surface by localized vibration-assisted magnetic abrasive polishing (VAMAP) method - <u>Jiang Guo</u>, <u>Xianglong Zhu</u>, <u>Zhigang Dong</u>, <u>Xiaoguang Guo</u>, <u>Renke Kang</u> and <u>Dongming Guo</u> 2. Improvement of the surface shape error of the pitch lap to a deterministic continuous polishing process - Defeng Liao, Feihu Zhang and <u>Lele Ren</u> 3. Electrical enhanced photocatalysis polishing of silicon carbide wafers - Yan He, Zhenyun Duan, <u>Zewei Yuan</u>, <u>Kai Cheng</u> and <u>Peng Zheng</u> 4. Experimental study on plane machining of copper with large size - Sen Zhang, <u>Julong Yuan</u> and <u>Ping Zhao</u> 5. An optimized dwell time algorithm of magnetorheological finishing based on ill-posed removal function improving - Yunfei Zhang, <u>Fengzhou Fang</u> and Wen Huang
3.40-4.10 pm	<i>CONFERENCE CLOSE - REFRESHMENTS AVAILABLE IN THE AUDITORIUM, EASTERN GATEWAY</i>		



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NOTES

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4-6 July 2018

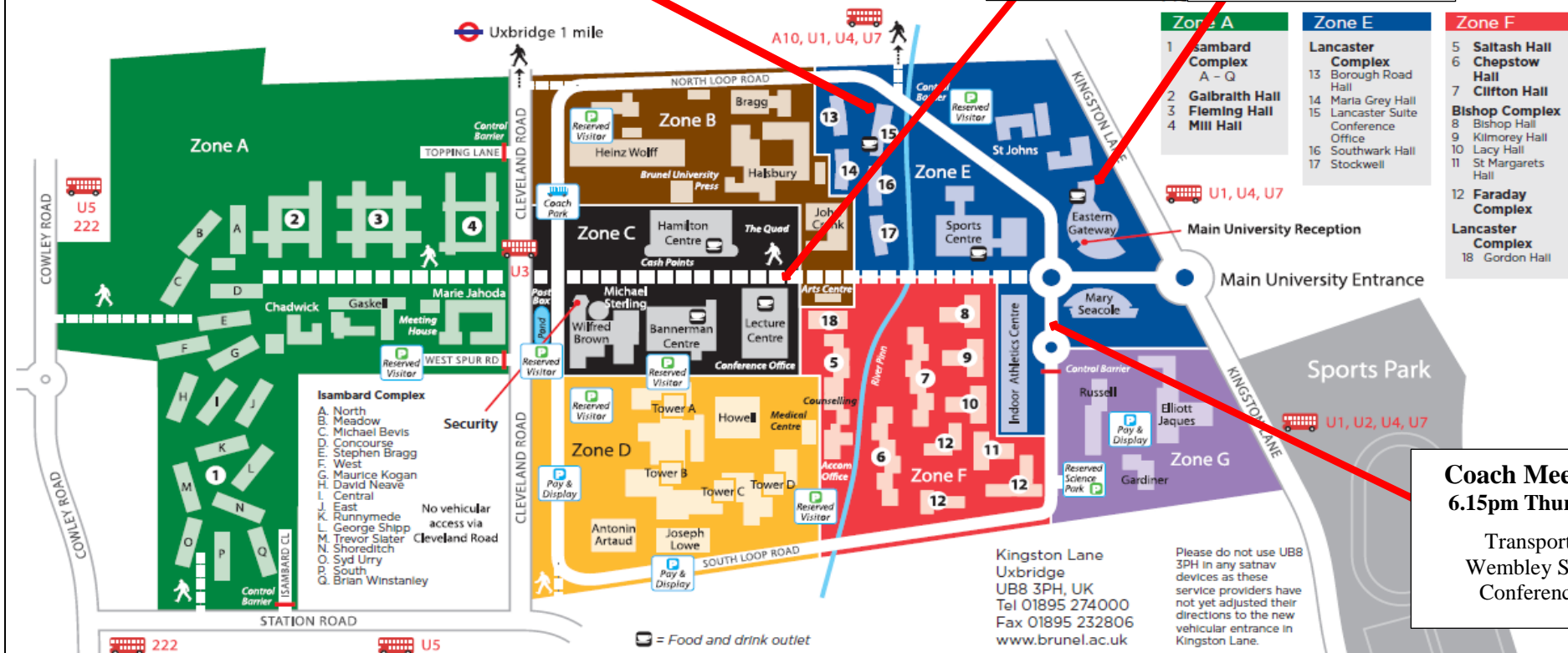
nanoMan 2018



Lancaster Hotel
Pre-conference drinks
7pm Tuesday 3 July

Lecture Centre
LC264

Eastern Gateway
Registration / The Atrium /
Auditorium / Room 003



Coach Meeting Point
6.15pm Thursday 5 July

Transport to/from
Wembley Stadium for
Conference Dinner

Brunel University London Campus Map

Zone A
Chadwick
Gaskell
Marie Jahoda
Meeting House

Zone B
Arts Centre
Bragg
Print and Design
Halsbury
Heinz Wolff
John Crank

Zone C
Bannerman Centre
Hamilton Centre
Lecture Centre
Michael Sterling
Wilfred Brown

Zone D
Antonin Artaud
Howell
Joseph Lowe
Medical Centre
Tower A
Tower B
Tower C and D

Zone E
Indoor Athletics Centre
Eastern Gateway
Lancaster Suite
Mary Seacole
Sports Centre
St Johns

Zone G
Brunel Science Park
Elliott Jaques
Gardiner
Russell

Zone F
Accommodation Office
Counselling Service
Housing Office
Sports Park
Sports Pavillion

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