

Workshop on Tip- and laser-based 3D-Nanofabrication in extended working volumes. 13-15.09.2018 in Wrocław

Thursday, 13.09.2018

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|---------------------------------------|-----------|------------------------------|--|
| | 16:00 | Prof. Gotszalk+ Prof. Manske | Welcoming / Opening by Prof. Gotszalk + Prof. Manske |
| Session 1, Chairman Prof. Gotszalk | 16:15 | Prof. Manske | Nano positioning and measuring machines as a basis for tip and laser based nanofabrication in extended working volumes |
| | 16:50 | Maciej Rudek | SThM metrology |
| | 17:10 | Martin Hofmann | Field Emission from Diamond Nanotips for Scanning Probe Lithography |
| | 17:30 | Shraddha Supreeti | Development and Analysis of an Integrated Soft UV-Nanoimprint Lithography process for imprinting on flat and non-flat surfaces |
| | 17:50 | | Close Thursday |
| | ~18:30:00 | | Get Together doctoral students and Professors in a restaurant at Odra riverside: Dinner, volleyball, soccer, boccia |



Wrocław University
of Science and Technology

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Friday, 14.09.2018

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| Session 2, Chairman Prof. Rangelow | 10:00 | Prof. Gotszalk | Nanometrology Division activities |
| | 10:30 | Dr Łukasz Gelczuk | Deep Level Transient Spectroscopy-Basics and applications |
| | 10:50 | Wojciech Majstrzyk | Active piezoresistive nanoforce reference |
| | 11:10 | Oliver Dannberg | Traceable calibration of small cantilevers with an electromagnetic nano force balance |
| | 11:30 | | Coffee |
| Session 3, Chairman Dr. Kühnel | 11:50 | Krzysztof Gajewski | High resolution, spatially resolved surface potential investigations on high strength metallurgical graphene using scanning tunnelling potentiometry |
| | 12:10 | Maximilian Darnieder | Sensitivity enhancement of weighing cells with flexure hinges |
| | 12:30 | Taras Sasiuk | High - accuracy torque generation in the region of 1mNm – 1Nm based on the Jockey – Weight principle". |
| | 12:50 | Bartosz Świadkowski | Metrology and control of electromagnetically actuated cantilevers |
| | 13:10 | | Lunch |
| Session 4, Chairman Prof. Sinzinger | 13:50 | Jarosław Serafińczuk | 2D Materials -basics and possible applications |
| | 14:10 | Piotr Kunicki | SEM/FIB fabrication and metrology of MEMS tools |
| | 14:30 | Xinrui Cao | Lau effect in the lithographic micro-nanostructuring |
| | 14:50 | David Fischer | Maskless lithography for microstructuring of 3D surfaces |
| | 15:10 | | Coffee |
| Session 5, Chairman Prof. Manske | 15:30 | Karolina Orłowska | Photon force MEMS based metrology |
| | 15:50 | Laura Weidenfeller | Investigations on sub micrometer direct laser writing with the nanopositioning and nanomeasuring machine NMM-1 |
| | 16:10 | Johannes Kirchner | A combined laser scanning and DLW tool for measuring and fabrication tasks with NPMM |
| | 16:30 | | Close Friday |
| | 16:40 | | Lab Tour |
| | ~18:00 | | Doctoral students (Wroclaw-Ilmenau) self organized dinner and bar in the city center Professors: Dinner and discussions in "Lemberg Restaurant" |

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Saturday, 15.09.2018

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| Session 6, Chairman Dr. Schäffel | 10:00 | Dr Tomasz Piasecki | Impedance spectroscopy-basics and applications |
| | 10:20 | Ralf Schienbein | The implementation of ultra precision rotations to multiaxial nanofabrication machines: challenges and solution concepts |
| | 10:40 | Florian Fern | Ultra precise motion error measurement of rotation kinematics for the integration in nanomeasuring and nanofabrication machines |
| | 11:00 | Stephan Gorges | Design and Modeling Approach for a Lifting and Actuating Unit for the Application in Nano-Precision Machines |
| | 11:20 | | Coffee |
| Session 7, Chairman Prof. Reger | 11:40 | - | - |
| | 12:00 | Christoph Weise | Observer with Improved Convergence for a Class of Initialized FO-LTI Systems |
| | 12:20 | Oscar Cieza | Algebraic IDA-PBC for Polynomial Systems with Input Saturation: An SOS-based Approach |
| | 12:40 | Michał Babij | High-frequency SPM nanodisplacement reference |
| | 13:00 | | Lunch |
| Session 8, Chairman Prof. Füßl | 14:00 | Florian Weigert | Novel concepts for the high reproducible change of tools and sensors in nanofabrication machines |
| | 14:20 | - | - |
| | 14:40 | Bartosz Pruchnik | Efficiency of electrothermal actuation - study and metrology |
| | 15:00 | Krzysztof Kwoka | Soft piezoresistive cantilevers for adhesion force measurements |
| | 15:20 | | Coffee |
| Session 9, Chairman Dr. Piasecki | 15:40 | Ewelina Gacka | Noise metrology of semiconductor lasers and piezoresistive cantilevers |
| | 16:00 | Paulina Szymanowska | Influence of the geometry on the LTCC integrated electrochemical cell performance |
| | 16:20 | | Close Saturday |