Workshop Program

10th Pico- and Nanosatellite Workshop 2017

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Day 1 - Wednesday, 13th September, 2017	
08:30	Registration
09:00	Welcome *Klaus Schilling, Department of Robotics and Telematics, University of Würzburg, Germany*
Session 1: In-Orbit Experience	**Chair: Klaus Schilling**
09:10	In Orbit Results of the ADCS Commissioning of a QB50 CubeSat *Herman Steyn, University of Stellenbosch, South Africa*
09:30	Radiation measurement and radiation shielding demonstration on-board Czech CubeSat *Vladimír Dániel, Aerospace Research and Test Centre Prague, Czech Republique*
09:50	Initial Flight Results from the TechnoSat Technology Demonstration Mission *Marc Lehmann, TU Berlin, Germany*
10:10	*Morning Coffee Break*
Session 2: Key Technologies	**Chair: Stephan Busch**
10:40	Integration & Verification Concepts for High Quantities of Small Satellites *Oliver Ruf, Zentrum für Telematik e.V., Germany*
11:00	An On-Board Data Handling System for Miniature Satellites Containing Highly Autonomous Payloads *Alexander Schneider, University of Würzburg - Aerospace Information Technology, Germany*
11:20	OSIRIS Payload for CubeSat *Sriram Hariharan, German Aerospace Center (DLR), Germany*
11:40	Open Source Implementation of the ECSS CAN Bus Protocol for CubeSats *Artur Scholz, LibreCube Initiative, Germany*
12:00	Design Guidelines for SmallSat Communication Systems *Nicolas Appel, TU Munich, Germany*
12:30	*Lunch Break*
13:30	*Guided tour: Local Facilities*
Session 3: Small Satellite Missions I	**Chair: Stephan Römer**
14:30	Applying the advances of CubeSat technologies for the 12U nanosatellite platform ERNST *Martin Schimmerohn, Fraunhofer Institute for High Speed Dynamics - EMI, Germany*
14:50	MOVE-II – The Munich Orbital Verification Experiment II *Martin Langer, TU Munich, Germany*
15:10	Mission Definition and Conceptual Design of MECSE Nanosatellite *Ana Azevedo/Jorge Monteiro, University of Beira Interior, Portugal*
15:30	*Afternoon Coffee Break*
Session 4: Orbit Control	**Chair: Jürgen Vogel**
16:00	Single Printed Circuit Board Laser Ablative Thruster *Raoul-Amadeus Lorbeer, German Aerospace Center (DLR), Germany*
16:20	NanoFEEP – A Highly Miniaturized Electric Propulsion System for CubeSats *Daniel Bock, TU Dresden, Germany*
16:40	Electric Propulsion on UWE-4: Mission Operations Concept *Alexander Kramer, University of Würzburg, Germany*
17:00	Development of the De-Orbit Subsystem for the 12U-CubeSat ERNST *Nico Reichenbach, Fraunhofer EMI and HPS GmbH, Germany*
17:20	Pre 5th Mission Idea Contest
17:40	*End of Day 1*
19:00	*Conference Dinner in Bürgerspital, Theaterstraße 19, Würzburg*

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Day 2 – Thursday, 14th September, 2017	
Session 5: Small Satellite Missions II	**Chair: Wang Xinsheng**
09:50	NEX-Sat : CubeSat for Near Earth Space eXploration *In-Seuck Jeung, Seoul National University, South Korea*
10:10	A Swarm of Femtosatellites to Determine the Density of the Lower Thermosphere (100–250 km) *Jordi L. Gutiérrez, Universitat Politècnica de Catalunya, Spain*
10:30	Small Satellite Missions for Maritime Disasters Monitoring *Nissen Lazreg, University of Monastir, Tunisia*
10:50	*Morning Coffee Break*
Session 6: Attitude Determination and Control	**Chair: Herman Steyn**
11:20	Comparison of attitude estimation algorithms for nanosatellites *Pawel Zagorski, AGH University of Science and Technology, Krakow, Poland*
11:40	Spin Control of a Picosatellite by means of Magnetic Torquers and Reaction Wheels Actuation *Genaro Islas, University of Würzburg, Germany*
12:00	Hardware-in-the-Loop testing the ADCS of the CubeSat MOVE-II *Jonis Kiesbye, TU Munich, Germany*
12:30	*Lunch Break*
Session 7: Small Satellites – Programmatic Aspects	**Chair: Norimasa Yoshida**
13:30	Pico- and Nano-Sats at the turning point: from academia to commerce, from single satellites to formations *Klaus Schilling, Department of Robotics and Telematics, University of Würzburg, Germany*
13:50	Changing of the requirements and business models for cubesat deployer *Stephan Roemer, Astro- und Feinwerktechnik Adlershof GmbH, Germany*
Session 8: Space Education	**Chair: Dietmar Kubat**
14:10	Interdisciplinary project based learning of space science and technology for Lithuanian University students *Raimondas Pomarnacki, Vilnius Gediminas Technical University, Lithuania*
14:30	Education Curriculum and Practice on Small Satellite Technology in RCSSTEAP, China *Wang Xinsheng, Beihang University, School of Astronautics, Dept.of Spacecraft Technology, China*
14:50	*Afternoon Coffee Break*
Session 9: Groundstation	**Chair: In-Seuck Jeung**
15:20	Simultaneous launch of small satellites in one rocket mission - point of view of ground station operators *Ivo Vertat, University of West Bohemia, Czech Republique*
15:40	Beamforming array antenna for the LEO satellites ground stations *Michal Pokorny, University of West Bohemia, Czech Republique*
16:00	*End of Day 2*

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