

Programme Day 1 - 2018 DGON Inertial Sensors and Systems

Tuesday, September 11, 2018

8:00 9:00	Registration Welcome	Peter Hecker <i>TU Braunschweig, Germany</i>
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Session 1: Optical gyroscopes I- Chairmain: Bertrand Morbieu

9:20	Sensitivity enhancement of a mode-locked ring laser gyroscope by giant intracavity dispersion	Matthias Lenzner <i>Lenzner Resarch LLC, USA</i>
9:45	Improvements to signal processing and component miniaturization of compact resonator fiber optic gyroscopes	Wesley Williams <i>Honeywell Advanced Technology, USA</i>

10:10 **Coffee Break**

Session 2: Optical gyroscopes II- Chairmain: Thomas Erler

10:35	Reduction of thermal strain induced rate error for navigation grade fiber optic gyroscope	Berk Osunluk <i>Bilkent University, Turkey</i>
11:00	Strapdown Inertial North and Latitude Finder	Vadym Avrutov <i>National TU of Ukraine, Ukraine</i>

Session 3: Resonator gyroscopes - Chairman: Edgar von Hinüber

11:25	The world smallest, most accurate and reliable pure inertial module: ONYX™	Benjamin Deleaux <i>Safran, France</i>
11:50	Strapdown Inertial Navigation System of Minimum Dimension (3D oscillator as a complete inertial sensor)	Sergey E. Perelyaev <i>Ishlinsky Institute , RAS, Russia</i>

12:15 **Lunch**

Session 4: MEMS I - Chairman: Fabrice Delhayé

13:45	Multi-degree-of-freedom MEMS coriolis vibratory gyroscopes designed for dynamic range, robustness, and sensitivity	Andrei M. Shkel <i>University of California, USA</i>
14:10	Reduction of vibration and mechanical shocks in MEMS gyroscopes for space application	Mikulas Jandak <i>Honeywell Int., Czech Republic</i>

Session 5: MEMS II - Chairman: Steffen Zimmermann

14:35	A resonant frequency shift quartz accelerometer with 1st order frequency $\Delta\Sigma$ modulators for a high performance MEMS IMU	Masayoshi Todorokihara <i>Seiko Epson Corporation, Japan</i>
15:00	Behavioral performance during vibration and shock for a tactical grade IMU	Hans Schou <i>Sensoror AS, Norway</i>

15:25 **Coffee Break**

Session 6: MEMS III - Chairman: Mike Perlmutter

15:50	Analysis and simulation of phase errors in quadrature cancellation techniques for MEMS capacitive gyroscopes	Ahmed Omar <i>Si-Ware Systems, Egypt</i>
16:20	Digital architecture for vibrating inertial sensors: modularity, performances, self-calibrations	Léopold Delahaye <i>Onera, France</i>

17:45
19:00 **Get together „City-Walk“ Meetingpoint @ Corner Vor der Burg/Burgplatz/Domplatz
Restaurant Rudas - Best Western FOURSIDE - Burgpassage**

Programme Day 2 - 2018 DGON Inertial Sensors and Systems

Wednesday, September 12, 2018

Session 7: Visual Aiding - Chairmain: Peter Hecker

9:00	Visual inertial hybridization technique based on beacons identified by Deep Learning	Fabrice Delhaye <i>Safran Electronics & Defense, France</i>
9:25	Qualification of a new CVG-based inertial reference unit in a combined stellar-inertial attitude determination system for space applications	Florian Schuh <i>Jena-Optronik, Germany</i>
9:50	SLAM for direct optimization based visual inertial fusion	Manuel Schwaab <i>Hahn-Schickard-Gesellschaft für angewandte Forschung, Germany</i>

10:15 Coffee Break

Session 8: Data Fusion and Filtering I - Chairman: Jörg Wagner

10:45	Fast RodFilter for Precision Attitude Computation	Yuanxin Wu <i>Shanghai Jiao Tong University, China</i>
11:10	Novel robust generalized high-degree cubature kalman filter for transfer alignment	Kai Wang <i>Harbin Institute of Technology, China</i>

11:35 Poster Intro - Moderation: Steffen Zimmermann

12:10 Lunch

Session 9: Data Fusion and Filtering II - Chairman: Jörg Wagner

14:00	Electrically integrated miniature motion tracking module with multiple external GNSS receiver support	Michele Crabolu <i>Xsens Technologies, Netherlands</i>
14:25	In-motion alignment algorithm of strapdown inertial navigation systems	Ana Cristina Vieira Gonçalves <i>Military Institute of Engineering, Brazil</i>

14:50 Coffee Break

Session 10: Systems - Chairman: Gert Trommer

15:15	An advanced ITAR-Free INS/GPS designed and developed in Italy	Giovanni Mattei <i>Northrop Grumman Italia, Italy</i>
15:40	An integrated gravimetric system to measure absolute gravity aboard a moving base	Alexander Sokolov <i>Concern CSRI Elektropribor, Russia</i>
16:05	Development of inertial sensors for AHRS considering DO-254	Uwe Herberth <i>Northrop Grumman LITEF, Germany</i>
16:30	Goodbye / Announcement of next Symposium	Peter Hecker <i>TU Braunschweig, Germany</i>

16:35 End of Conference

Poster and Get together - 2018 DGON Inertial Sensors and Systems

1.	An optimal tightly-coupled stellar-inertial integrated navigation method for daytime application	Dongkai Dai <i>National University of Defense Technology, China</i>
2.	An analysis of the effect of gravity anomaly to attitude estimation in high-precision GNSS/INS integrated navigation systems under overturning cases	Hao Xiong <i>College of Advanced Interdisciplinary Studies, National University of Defense Technology, China</i>
3.	Research on optimum modulation phase of interferometric fiber optic gyroscope in the space radiation	Jia Sun <i>Harbin Institute of Technology, China</i>
4.	Noise suppression method of rotating accelerometer gravity gradiometer instrument based on oversampling	Li Da <i>Tianjin Navigation Instrument Research Institute, China</i>
5.	Effect of temperature sensitivity of coating adhesive on thermal induced non-reciprocal bias in fiber optic gyroscopes	Xiaodan Wang <i>Tianjin Navigation Instrument Research Institute, China</i>



Get together

17:45 - 19:00 h „City-Walk“ - Braunschweig

Meetingpoint @ Corner Vor der Burg / Burgplatz / Domplatz 52.264527, 10.523291

will end at

19:00 h Restaurant Rudas - Best Western FOURSIDE

Burgpassage, Jöddenstr. 3, Welfenhof 52.265300, 10.521794