

Program Day 1 - Inertial Systems and Applications

DGON ISA 2026

Tuesday, October 6, 2026

8:45 Registration - Welcome Coffee

9:15 Welcome 63th - Conference Chair

Peter Hecker

Session 1: Past and Future - Chair: Ulrich Mangold

9:25 Reinhard Wussow and the Very Early Design of an Inertial Platform

Jörg Wagner
University Stuttgart, Germany

9:50 Sensor design for absolute airborne quantum gravimetry

Tanja Deppner
DLR, Germany

10:15 Coffee Break

Session 2: Sensor Data Fusion & Analysis - Chair: Lorenz Schmitt

10:45 A Tightly Coupled Camera-IMU-LiDAR-GPS SLAM Framework for Robust Autonomous Ground Vehicle Navigation

Mohammad Irfan
Thales, France

11:10 MARK: A Multi-Residual Analytical Redundancy Framework for Acoustic Interference Detection in Inertial Sensors

Chudamani Sahu
AcSIR Australia, India

11:35 IMU-GNSS-based center of mass estimation in show jumping horses

Gerrit Lang,
TU Dortmund, Germany

12:00 Lunch

Session 3: Sensor Data Fusion - Chair: Edgar v. Hinüber

13:00 Lie group filtering for inertial navigation in GNSS-denied environments

Alexandre Cellier-Devaux
Université Lyon, Thales, France

13:25 Data-Driven and Learning-Based Covariance Estimation for Enhanced Kalman Filtering in Hybrid Inertial Navigation

Filippo Smaldone
Unisity Rome, Bari, LITAL, Italy

13:50 MGC-UKF: Multiple Gaussian Component Unscented Kalman Filter with Road Curvature Constraints for Vehicle Localization in Tunnels

Haitao Wang
Southeast University, China

14:15 Coffee Break

Session 4: New Sensor Technologies - Chair: J.L. Gruver

14:50 A Portable NMR Gyroscope for GNSS-Denied Areas: Fast North-Finding and Inertial Reference for RADAR and EW

Mikhail Padniuk
Arda/Hensoldt, Germany, Germany

15:15 Advances in the fabrication of polymer-free atom chips

Lauritz Keinert
University Hannover, Germany

15:40 Information about Conference Tour

16:00 Visit to the Renaissance town of Wolfenbüttel and a social event in the castle hall

Program Day 2 - Inertial Systems and Applications

DGON ISA 2026

Wednesday, October 7, 2026

9:00 Welcome Coffee

Session 5: Fiber Optic Gyros - Chair: Andreas Fischer

9:30	Single axis FOG: How robust can it get?	Michael Weingärtner, <i>NG LITEF, Germany</i>
9:55	Research on Miniaturization and Heat Dissipation Characteristics of Fiber Optic Gyroscope	Yichen Wu <i>Xi'an Aerospace Inst., China</i>

10:20 Coffee

Session 6: MEMS Sensors - Chair: Tobias Hiller

10:45	Numerical Modelling of Geometrically Nonlinear Electromechanical Actuators: Experimental Validation	Sreevidya Guru <i>Bosch, Germany</i>
11:10	Study of improving the accuracy of azimuth angle estimation using low-cost MEMS gyro sensors	Taisei Hayashi <i>NDA, Japan</i>
11:35	Measurement of Unsoftened Oscillator Properties in Electrostatically Softened MEMS Accelerometers	Faris Hamdy <i>Collins/Exeter, UK</i>

12:00 Lunch

Session 7: Accelerometers I - Chair: Mark Marshall

13:00	Novel Amplitude-Acceleration Characteristic for Mode-Localized Vibrating Beam Accelerometers	José Luis Gruver <i>IAI, Israel</i>
13:25	Measurement trade-offs in a vibrating beam accelerometer using the frequency counter method	Theo Miani <i>Silicon Microg, UK</i>
13:50	Compact, low-noise, low-power electronics for space accelerometer	Didier Chérubin Negretto <i>ETH/Exail, Suisse</i>

14:15 Coffee

Session 8: Accelerometers II - Chair: T. Lesage

14:40	Equivalent Residual-Force Reconstruction from In-Plane and Out-of-Plane MEMS Accelerometer Pull-In Transients	Matteo Tabusso <i>Bosch, Germany</i>
15:05	Vibration Rectification Saturation in Closed-Loop MEMS Accelerometers	Ardalan Armin <i>Collins, UK</i>
15:30	MEMS driven high-performance closed-loop accelerometer	Thibaut Contremoulins <i>Colibrys/Safran, Suisse</i>

15:55 Closing & Announcement of next DGON ISA 2027 Peter Hecker

16:00 End of Conference

Poster 2026

1.	Sparse and Gated 3D Gaussian Map Observations for GNSS-Denied INS Aiding	YH.Zhou <i>Southeast University, China</i>
2.	On-chip cold atom clocks and accelerometers	Matthieu Dupont-Nivet <i>Thales, France</i>
3.	Fiber-Optical Gyroscopes (FOGs) – Fundamentals and Solving Key Challenges by Materials Research	Christian Dreyer <i>IMAR, TH Wildau, Germany</i>