

Quantum leaps in mechanical engineering - Quantum Sensing

Tuesday, June 20, 2023

Meeting of VDMA members at the VDMA Quantum Technologies and Photonics Forum at the DLR Institute of Quantum Technologies, Wilhelm-Runge-Strasse 10, 89081 Ulm

Agenda

Item 1 Arrival, Coffee 09:30 – 10:00

Item 2 Welcome of members and guests, Compliance 10:00 – 10:10
Dr. Sven Breitung, VDMA

Item 3 Commercial application opportunities and disruptive potential of quantum sensors 10:10 – 10:40
Prof. Kai Bongs, DLR

Short presentations on specific quantum sensors

Item 4 Quantum clock 10:40 – 10:55
Dr. Thilo Schuldt, DLR

Item 5 Inertial sensor 10:55 – 11:10
Prof. Claus Braxmaier, DLR

Item 6 NV magnetic field sensors 11:10 – 11:25
Prof. Fedor Jelezko, DLR

Item 7 Material characterization with matter wave interferometry 11:25 – 11:40
Dr. Christian Brandt, DLR

Item 8 Opportunities in the quantum sensor supply chain 11:40 – 12:10
Prof. Kai Bongs, DLR

Lunch 12:10 – 13:00

Item 9 Quantum Computing Initiative 13:00 – 13:15
Dr. Robert Axmann, DLR

**Company presentations on quantum sensor technology by
NVision Imaging Technologies, Q.ANT and Bosch**

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| Item 10 Engineering of quantum MRI probes for cancer diagnosis | 13:15 – 13: 35 |
| Jonas Handwerker, Lead Product Engineer for Hyperpolarized MRI
NVision Imaging Technologies | |
| Item 11 Starting up with Quantum Sensors | 13:35 – 13:55 |
| Dr. Robert Rölver, Head of Quantum Sensing, Q.ANT GmbH | |
| Item 12 Presentation by Bosch | 13:55 – 14:15 |
| tbd | |
| Item 13 Discussion and closing remarks | 14:15 – 14:30 |
| Item 14 Clean room tour | 14:30 – 15:30 |