



# 17. XMR-Symposium

## 12 & 13 March 2025 | Wetzlar, Germany

Magnetoresistive Sensors & Magnetic Systems

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### Magnetoresistive Sensors and Magnetic Systems

In today's „age of digitalisation“, sensors play a particularly important role, whether they measure movement, orientation, electric current or magnetic fields. New applications are emerging. In order to meet new and more demanding requirements, close cooperation between academia and industry is necessary. For an update on the latest developments, the XMR-Symposium is the ideal platform.

Are you a forward-thinking expert in magnetic sensing and want to be inspired by the latest developments in the field? Join us at the XMR-Symposium.

Registration will open in early December 2024 at [www.xmr-symposium.com](http://www.xmr-symposium.com).

#### Focus of the Symposium

The symposium serves as a forum for the exchange of innovative ideas and practical experience with magnetoresistive technology among experts from research institutes and practitioners from a variety of application areas, such as automotive sector, e-mobility, industrial automation, measurement technology, condition monitoring and others.

Presentations will also cover fundamental technological advances, e.g. in TMR sensor technology, as well as signal processing and sensor manufacturing aspects. Participants will get an overview of research results and latest developments to be prepared for the sensorisation of the future.

# CONFERENCE PROGRAMME

## 17. XMR-Symposium

### Magnetoresistive Sensors and Magnetic Systems

#### WHO SHOULD ATTEND

The international XMR-Symposium is addressed to technical and future-oriented experts from many industrial sectors such as automotive, e-mobility and industrial automation.

Representatives from all industries involved in the design, manufacture, testing, qualification and research of MR technology and magnetic systems who wish to enhance their knowledge are invited to participate.

More information:  
[xmr-symposium.com](http://xmr-symposium.com)

#### The conference covers subjects like:

- New XMR technologies & sensor concepts
- Condition monitoring
- Sensors in harsh environments
- Innovative applications
- Magnets and magnetic properties
- Market requirements for XMR sensors

Registration will open in early December 2024 at [www.xmr-symposium.com](http://www.xmr-symposium.com).

#### MR-WORKSHOP

Prior to the XMR-Symposium on 11 March 2025, Sensitec GmbH is organising a one-day hands-on workshop on the basics of XMR sensors.

The workshop will take place in Gießen and will be held in German. The number of participants is limited.

If you are interested, please visit our website: [www.xmr-symposium.com/mr-workshop](http://www.xmr-symposium.com/mr-workshop) or contact: [christiane.eckhardt@sensitec.com](mailto:christiane.eckhardt@sensitec.com).

Time	Topic	Speaker
<b>Wednesday, 12 March 2025</b>		
10.00 - 10.15	<b>Welcome and introduction</b>	Jianguo Wang, Sensitec, Germany
10.15 - 10.45	(1) <b>Balancing Precision and Efficiency: The Coexistence of Hall Effect and TMR Sensors</b>	Philip Beran, Fraunhofer Institute for Integrated Circuits IIS, Germany
10.45 - 11.15	(2) <b>Pushing the limit of detection of TMR sensors with amorphous and soft-magnetic sensing layers</b>	Mahmoud Rasly, Technical University of Eindhoven, The Netherlands
11.15 - 11.45	(3) <b>Robust, accurate and stray-field immune angle detection with Absolute Magnetics Encoder Technology</b>	Cornel Frigoli, Absolute Magnetics, Switzerland
<b>11:45 - 13.30 Lunch</b>		
13.30 - 14.00	(4) <b>3D local magnetoresistive probe for magnetic imaging diagnostics</b>	Aurélien Solignac, CEA Université Paris-Saclay, France
14.00 - 14.30	(5) <b>AMR sensor with monolithically integrated NdFeB bias magnets</b>	Björn Gojdka, Fraunhofer-Institute for Silicon Technology IST, Germany
14.30 - 15.00	(6) <b>Extending the limits for exchange-bias materials for improved reference layers in TMR sensors</b>	Paulo P. Freitas, INESC MN, Portugal
<b>15.00 - 15.45 Coffee break</b>		
15.45 - 16.15	(7) <b>Technological advances in Infineon's TMR sensors</b>	Giovanni Masciocchi, Infineon Technology AG, Germany
16.15 - 16.45	(8) <b>New directions, mechanisms and materials in magnetoresistive technology</b>	Gerhard Jakob, Institute of Physics Johannes Gutenberg University, Germany
16.45 - 17.15	(9) <b>Functional Packaging for Magnetic Sensors</b>	Matthias Salewski, Neways Electronics, The Netherlands
<b>19.00 - 22.00 Conference dinner and evening show in town hall. Please indicate your participation when registration.</b>		

Time	Topic	Speaker
<b>Thursday, 13 March 2025</b>		
8.30 - 9.00	(10) <b>Radiation Resistance Test of XMR Angular Sensors</b>	Marc Röthlisberger, maxon motor AG, Switzerland
9.00 - 9.30	(11) <b>Achievable positioning accuracies with MR-based encoder systems in machine tool applications</b>	Stefan Schneider, Lenord, Bauer & Co. GmbH, Germany
9.30 - 10.00	(12) <b>Flexible anisotropic magnetoresistive sensors for novel magnetic flux leakage testing capabilities</b>	Alberto Nicolicea, BAM   Helmholtz-Zentrum Dresden- Rossendorf e.V., Germany
<b>10.00 - 10.45 Coffee break</b>		
10.45 - 11.15	(13) <b>Halbach-Systems for homogenous magnetic field and angle measurement Applications</b>	Iulian Teliban, Magnetfabrik Bonn GmbH, Germany
11.15 - 11.45	(14) <b>The impact of runout in magnetic encoder systems</b>	Michael Ortner, Silicon Austria Labs, Austria
11.45 - 12.15	(15) <b>Investigation and Assessment of the Magnetization Accuracy for different Magnetization Technologies for long Magnetic Scales</b>	Heiko Knoll, ITK Precisioning GmbH, Germany
<b>12.15 - 13.30 Lunch</b>		

Time	Topic	Speaker
<b>Thursday, 13 March 2025</b>		
13.30 - 14.00	(16) <b>Realization of an axial encoder by using a new type of TMR length sensor</b>	Elke Guthörl, Sensitec GmbH, Germany
14.00 - 14.30	(17) <b>Printing of MR Sensors Enabling of flexibility, large-area sensor arrays and sustainability</b>	Clemens Voigt, Fraunhofer Institut for Ceramic Technologies and Systems IKTS, Germany
14.30 - 15.00	(18) <b>Machine Learning based Approach to include Production-Related Variations in the Simulation of Magnetic Sensor</b>	Hagen Schmidt, Tim Becker RPTU Kaiserslautern Institute for measurement and sensor technology, Germany
<b>15.00 - 15.45 Coffee break</b>		
15.45 - 16.15	(19) <b>BMM350, a TMR 3-axis Magnetometer for consumer electronics applications</b>	Tsung-I Yin, Bosch Sensortec GmbH, Germany
16.15 - 16.45	(20) <b>Magnetic Biosensing for Multiple Biomarker Classes</b>	Moritz Leuthner, Technical University of Munich, Germany
<b>16.45-17.00 Closing Remarks</b>		

**Preliminary programme.**

We reserve the right to make changes without prior notice

# REGISTRATION

## HOW TO REGISTER

Please register by **5 March 2025** at [xmr-symposium.com](http://xmr-symposium.com)  
If you cancel your participation after **26 February 2025** a refund of the fee is not possible.

## Fee

### For the Symposium

With early bird discount until  
14 Feb. 2025: Euro 630 plus VAT  
After 14 February 2025: Euro 750 plus VAT  
Student fee: Euro 250 plus VAT.

### For the MR-Workshop

MR-Workshop only: EUR 720 plus VAT  
MR-Workshop combined with  
XMR Symposium: EUR 610 plus VAT

## Important information

After your registration you will receive the confirmation and invoice. Therefore, please provide us with a billing address if this is required for your billing purposes.

The fees are due and payable without any deductions immediately. The conference ticket will be sent to you as soon as we have received your payment. Please note that payment by credit card or cash at the event is not possible.

The fee includes conference proceedings, lunch and refreshments on both days as well as dinner incl. special evening-programme.

## YOUR CONTACT

Sensitec GmbH is the organizer of the international XMR-Symposium ([www.sensitec.com](http://www.sensitec.com)).

## Organisation

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## Technical matters

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## Location

Stadthalle Wetzlar (Town hall)  
Kongress- und Kulturzentrum  
Brühlsbachstraße 2b  
35578 Wetzlar

## Hotel

Please make your own hotel reservation.  
We can recommend:

### [Hotel Wöllbacher Tor](#)

Phone +49 6441-47030

### [Ernst Leitz Hotel](#)

Phone +49 6441 30990

### [B&B Hotel](#)

Phone +49 6441 309970

### [TRIP INN Conference Hotel](#)

Phone +49 6441 870990

## Dinner and special programme

On **12 March 2025** we invite you to join us for dinner and special event in the evening.  
As this is an option, please indicate your participation on the registration form accordingly.