

Plenary Session

KEYNOTE LECTURE:

„Moving the Limits: Advancements in Magnetic Sensors and Instruments for Industry and Physics Laboratories“

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Abstract: SENIS's proprietary high-resolution horizontal and vertical Hall-effect elements enable the development of 3D Hall magnetic sensors with the World's smallest field-sensitive volume. This sensor technology finds diverse applications in positioning sensors, current sensors, and magnetometry. Exemplary applications include enhanced adhesion control in inspection robots and precise Tesla meters for tuning magnets in accelerators used for proton therapy in cancer treatment. Additionally, advancements in magnetic field mapping systems, such as the SENIS 3D Mapper and Pure 3D Magnetic Camera, offer unparalleled capabilities for precise measurement and inspection of magnetic fields in objects with complex geometries and high field gradients, applied in automotive and consumer electronics. Particularly, the 3D magnetic camera, featuring over 16,000 magnetic pixels and a tiny field-sensitive volume size of $27 \times 9 \times 4 \mu\text{m}^3$, provides exceptional resolution and accuracy. SENIS sensors and instruments represent invaluable tools for a wide range of industries and research laboratories.

Short Bio:



Dr. Dragana Popovic Renella received a Master of Science degree in Electrical Engineering from ETH Zurich and a PhD in Technology Management from the University of Novi Sad. She completed executive courses in Marketing Management at SDA Bocconi, Milan. Dragana is the COO of SENIS AG, Switzerland. SENIS provides smart sensors and instruments for magnetic field and electric current measurements, for test & measurement, automotive, robotics, and other industrial applications. Before co-founding SENIS she worked for ETH Zurich, Sentron (acquired by Melexis), and Credit Suisse. Dragana is a Swiss member of the technical committee of IMEKO.