

# TIC International Seminar

Wednesday, February 18<sup>th</sup>, 16:00

Location: Auditorium O2.211, sitem-insel, Freiburgstrasse 3, Bern  
Broadcast on zoom: <https://unibe-ch.zoom.us/j/61079804322>

*The seminar is followed by an Apéro to continue discussions*

## Coke & Ultra-High Field 7-Tesla MRI Research on a Coal Mine

Prof. Dr. Harald H. Quick

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The Erwin L. Hahn Institute for MRI was founded in 2005 by the University of Duisburg Essen and the Radboud University Nijmegen and is located on historic grounds. Home of the strongest magnet in the entire Ruhr Area is the former coal mine and coking plant Zeche Zollverein, today UNESCO World Heritage site. In 2006 the first 7-Tesla whole-body human MRI system was installed. After 15 years of intensive 7-Tesla MRI research with many pioneering studies in Brain and Body UHF MRI at the interface of basic research and early clinical application, the 7T MRI system was replaced by a state-of-the-art Siemens Terra 7T MRI system. Currently, nine principal investigator (PI) groups conduct MRI research in UHF MRI of the human Brain and Body at the ELH. This encompasses a broad spectrum from hardware developments such as local transmit/receive radiofrequency (RF) coils for various body regions, RF signal homogenization, but also in-depth methods development for advanced neuroimaging, layer fMRI and the realization of larger fMRI studies. This talk will briefly introduce the inspiring historic location of the Erwin L. Hahn Institute and will then present research highlights of the first 20 years of 7T UHF MRI Brain and Body research, specifically touching hardware developments and early clinical applications.



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