Invited Talk

KEMAI Research Training Group GRK 3012/1

KEMAI

PD Dr. med. Judith Herrmann, University Hospital Tübingen

Artificial Intelligence in Radiology: A game-changer for sustainable medicine or just a hype?

Abstract. Artificial intelligence (AI) is increasingly being integrated into radiological workflows, offering significant potential for improving both efficiency and image quality. Its applications are diverse, ranging from automated image acquisition and interpretation to workflow optimization and predictive analytics. A particularly promising area lies in AI-based reconstruction for magnetic resonance imaging (MRI). Deep learning (DL) algorithms enable the reconstruction of high-quality images from highly undersampled raw data, thereby substantially reducing scan times. This acceleration not only enhances patient comfort and increases scanner throughput but also contributes to a reduction in energy consumption per examination. As such, AI-driven MRI reconstruction represents a concrete example of how technological innovation can simultaneously advance diagnostic performance and promote environmental sustainability in medical imaging. This presentation will place particular emphasis on this application, examining its potential as a key driver of energy efficiency and sustainable radiology practice.

Speaker Bio. PD Dr. med. Judith Herrmann is a board-certified radiologist at the University Hospital in Tübingen, Germany, where she has been working since 2019. She completed her medical studies at the University of Tübingen and began her career in radiology under the mentorship of Prof. Nikolaou. PD Dr. med. Judith Herrmann is a board member of the working group on information technology and a board member of the Young Radiologist Forum within the German Radiological Society. Her research primarily focuses on the application of artificial intelligence in MRI image reconstruction, with a particular interest in its potential to improve efficiency and sustainability in MRI examinations.

Time & Place.

Wednesday, July 23, 2025
13:00 – 13:45
Reisensburg Castle

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