

2024 Departmental Seminar

Thursday, 1 February 2024

2 pm

E16 (Rātā Bldg)

Electrical Impedance Tomography: Past, Present and Future

Prof Knut Moeller, PhD

Medical Informatics at Furtwangen University, Villingen-Schwenningen, Germany

Abstract:

Electrical Impedance Tomography is a radiation free, non-harming image modality that allows to monitor tissue and organ dynamics in real-time at about 50 Hz. Though image resolution is coarse, it can provide useful information for clinicians in diverse applications. This talk will mainly use ventilation and perfusion monitoring as application field to visualize and demonstrate the advantages and pitfalls of the technology.

The talk will cover basic principles and involved mathematical representations, current problems and future developments.

Bio Sketch:

Knut Moeller received the M.S. and Ph.D. degrees in computer science, and the M.D. degree in human medicine from the University of Bonn, Bonn, Germany, in 1986, 1991, and 1996, respectively.

From 1991 to 1997, he was an Assistant Professor in the Department of Computer Science, Bonn University, Bonn, Germany, where he was involved in the fields of machine learning, robotics, and image processing. In 1998, he became a Professor of Medical Informatics at Furtwangen University, Villingen-Schwenningen, Germany, where he currently is the Director of the Institute of Technical Medicine (ITeM). He is an associated Professor at the University of Freiburg, Germany and Adjunct Professor at the University of Canterbury, NZ.



His research interests include medical decision support systems, modeling, and intelligent monitoring in diverse medical applications.

All are welcome!