SEMINAR ANNOUNCEMENT

Tuesday February 4th, 2025
at 11:30 am
Room "Sala Seminari" - Abacus Building (U14)

Engineering biomedical brain images quantitative analysis of Magnetic Resonance Imaging data

Speaker
Denis Peruzzo

Chief of the Neuroimaging Lab - Scientific Institute IRCCS "Eugenio Medea"

Abstract

Magnetic Resonance Imaging (MRI) is a cornerstone of modern neuroscience, providing unparalleled insights into brain structure and function. In this seminar, I will share an overview of my academic and professional journey in the quantitative analysis of MRI data. I will discuss the application of diffusion-weighted MRI in characterizing malformative aspects of white matter in rare genetic diseases, as well as the use of functional MRI to investigate the etiology of common learning disabilities, such as developmental dyslexia. Furthermore, I will address the unique challenges of working within the pediatric context and examine the pitfalls that hinder the translation of research findings into clinical practice, with the goal of bridging the gap between innovation and real-world application.

Short Bio

Denis Peruzzo is an electronic engineer and MRI scientist with extensive experience in neuroimaging research and biomedical data analysis. He currently serves as the Chief of the Neuroimaging Lab at the Scientific Institute IRCCS "Eugenio Medea" in Italy, where he leads cutting-edge research on neurodevelopmental disorders and rare genetic diseases through the quantitative analysis of advanced MRI sequences. With a PhD in Information Engineering from the University of Padova, Denis has contributed to over 50 peer-reviewed publications and several research projects funded by the Italian Ministry of Health. His expertise spans advanced imaging methods, machine learning applications in neuroimaging, and personalized medicine.

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