6th Summer School on INtelligent signal processing for FrontlEr Research and Industry



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IMAGING and NEUROLOGICAL DISEASES

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NeuroSpin, directed by Stanislas Dehaene, is a research centre for the innovation of brain imaging. Activities carried out includes biomedical imaging and diagnostic and therapeutic innovation.

At NeuroSpin Department, physicists, mathematicians and neuroscientists join forces to jointly develop tools and models that will enable a better understanding normal and pathological brain function, before or after treatment. Focused on neuroimaging, research concerns several topics:

- Technological and methodological development (acquisition and processing of data),
- Cognitive neuroscience,
- Preclinical and clinical neuroscience.

NeuroSpin includes 5 Research Entities: MRI and Spectroscopy Unit (UNIRS); Analysis and Information Processing Unit (UNATI), Cognitive Neuroimaging Unit (UNICOG), a Mixed Research Unity (U992), belonging to CEA, Paris-Sud University and Inserm; Translational and Applicative Neuroimaging Research Unit (UNIACT), belonging to UMR 1129; and Neurofunctional Imaging Group (GIN) in Bordeaux who is integrated in the Institute of Neurodegenerative Diseases (UMR 5296, belonging to CNRS and Bordeaux University).

In 2010, Cyril Poupon took the position of Director of the laboratory of MRI and Spectroscopy of Neurospin, co-leading the two following transverse research programs: "Pushing the limits of MRI" targeting the development with his team of ultra-high field imaging methods and "Multiscale Human Brain Architecture" modeling the human brain at various scales, and developing, in particular, methods to map the human brain structural connectome and tissue microstructure. Since 2017, he has become the Deputy Director of Neurospin in charge of the MRI platform.

Presenter: Dr POUPON, Cyril (CEA, Frederic Joliot Institute for Life Sciences, NEUROSPIN)

Session Classification: MORNING SESSION 5, PLENARY LECTURES