

Past, present, and future of neuroimaging research

An international scientific meeting to celebrate 10 years of NeuroSpin



NeuroSpin amphitheater, February 16th, 2018

Limited seating; please confirm your participation to maryline.hevin@cea.fr

8 h 00 Welcome coffee

8 h 30 Vincent Berger (CEA) : Welcome words

8 h 45 Denis Le Bihan (CEA Neurospin) : A short summary of 10 years at NeuroSpin

9 h 00 – 10 h 30 - **The promise of ultra-high-field MRI**

- 9:00 Kamil Ugurbil (Minneapolis) : Neuroimaging from ultra to extreme high fields
- 9:30 Cécile Lerman (CEA NeuroSpin) and Lionel Quettier (CEA Irfu) : NeuroSpin's 11.7T human MRI scanner
- 9:45 Nicolas Boulant (CEA NeuroSpin) and Philippe Ciuciu (INRIA, CEA NeuroSpin) : Towards fMRI at 0.5 mm isotropic resolution at 11.7T
- 10:00 Rainer Goebel (Maastricht) : Imaging activity in cortical layers and columnar-like clusters at 7+ Tesla: New possibilities to investigate neural correlates of human perception and cognition

10 h 30 --- Coffee Break

11 h 00 – 13 h 00 - **Modelling and theorizing the brain**

- 11:00 Stephen Smith (Oxford) : Big Data neuroimaging studies.
- 11:30 Bertrand Thirion (INRIA, CEA NeuroSpin) : From machine learning to brain activity decoding, and vice versa
- 11:45 Virginie van Wassenhove (CEA NeuroSpin, INSERM) : Making sense of time in the human brain
- 12:00 Tim Behrens (Oxford) : Storing and updating models of the world for behavioral control
- 12:30 Anne-Lise Giraud (Geneva): The spatio-temporal geometry of speech processing

13 h 00 --- Buffet lunch in the galleria

14 h 00 – 16 h 00 - **Understanding structure-function relationships**

- 14:00 Jürgen Hennig (Freiburg) : New Windows to the Brain: Challenges and Opportunities for Neuroimaging
- 14:30 Jean-François Mangin (CEA NeuroSpin) : Deciphering the cortical folding pattern
- 14:45 Cyril Poupon (CEA NeuroSpin) : Diffusion, fiber tracking, and laminar cortical organization
- 15:00 Petra Hüppi (Genève) : MRI-a window into the developing brain
- 15:30 Lucie Hertz Pannier (CEA NeuroSpin, INSERM) : Clinical imaging (title to be announced)
- 15:45 Ghislaine Dehaene-Lambertz (CNRS, INSERM, CEA NeuroSpin) : Brain imaging to understand human cognitive development

16 h 00 --- Coffee break

16 h 30 – 18 h 30 - **New challenges for neuroimaging research**

- 16:30 Karla Miller (Oxford) : Challenges of scale in neuroimaging
- 17:00 Luisa Ciobanu (CEA NeuroSpin) : Exploring Brain Biophysics with UHF and Microscopy MRI
- 17:15 Benoit Larrat (CEA NeuroSpin) : Ultrasound to open the blood-brain barrier and beyond
- 17:30 Wim Vanduffel (Leuven) : High resolution monkey imaging
- 18:00 Bechir Jarraya (Université Paris Saclay, CEA NeuroSpin, Inserm) : Imaging consciousness in the monkey brain
- 18:15 Stanislas Dehaene (Collège de France, INSERM, CEA NeuroSpin) : The literate brain

18 h 30 --- Close