

# New concepts in structural and functional neuroimaging



**MIT** Portugal

**Location: IBILI-Faculdade de Medicina, Anfiteatro I  
18-20th July 2008**

**Topics covered:**

- 1. Basic and Clinical Neuroscience**
- 2. New methodological approaches in Neuroimaging**

**Day 1 – 18th July 2008**

**Morning**

**9h 30m**

**Bruce Rosen**

**Clinical applications of neuroimaging**

Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Massachusetts Institute of Technology, Harvard Medical School, Boston, Massachusetts, USA.

**10h 15m**

**Rainer Goebel**

**fMRI neurofeedback – From basic research to clinical applications**

Department of Cognitive Neuroscience, Faculty of Psychology, University of Maastricht, Maastricht, Netherlands.

**11h 00m coffee-break**

**11h 30m**

**Roger Tootell**

**From monkeys to humans: what do we now know about brain homologies**

Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Massachusetts Institute of Technology, Harvard Medical School, Boston, Massachusetts, USA.

## **12 h 30m Lunch**

### **Afternoon**

**14h 00m**

**Pawan Sinha**

**From Fragments to Objects: Mechanisms of Visual Integration**

Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA.

**14h 45m**

**Miguel Castelo-Branco**

**From mechanisms of motion perception to neurodevelopmental models of visual impairment**

Visual Neuroscience Laboratory, IBILI-Faculdade de Medicina, Universidade de Coimbra, Coimbra, Portugal.

**15h 30m**

**Van Wedeen**

**Mapping human whole-brain structural networks with diffusion MRI.**

Harvard Medical School, Boston, Massachusetts, USA.

## **16h 15m coffee break**

**16h 30m**

**Mário Forjaz Secca**

**SWI brain vein changes coincident with fMRI activation**

Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Lisboa, Portugal.

**17h 15m**

**Nicolás Lori**

**White matter fiber tracking and BOLD fMRI integration**

Visual Neuroscience Laboratory, IBILI-Faculdade de Medicina, Universidade de Coimbra, Coimbra, Portugal.

## **Day 2 – 19th of July**

### **Morning**

**9h 30m**

**Patrícia Figueiredo**

**Functional Reorganization of Memory Systems in Epilepsy.**

Instituto Superior Técnico, Lisbon, Portugal

**10h 15m**

**Lucia Maria Vaina**

**Plasticity and Reorganization in the Visual System after stroke.**

Brain and Vision Research Laboratory, Boston University, Massachusetts General Hospital, Harvard Medical School, CBCL-Department of Cognitive Science, Massachusetts Institute of Technology, Cambridge, Massachusetts, USA.

**11h 00m coffee-break**

**11h 30m**

**Durval Campos Costa**

**Molecular imaging of neurotransmission.**

IBILI & CTNAS, University of Coimbra, Coimbra, Portugal.

**12h 15m**

**Marieke Van Asselen**

**Neural correlates of spatial memory**

Visual Neuroscience Laboratory, IBILI-Faculdade de Medicina, Universidade de Coimbra, Coimbra, Portugal.

**13h 00m Lunch**

**Afternoon**

**14h 30m**

**Moshe Bar**

**Top-down predictions in visual cognition**

Athinoula A. Martinos Center for Biomedical Imaging, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA.

**15h 15m**

**Sara Cavaco**

**Clinical models of basal ganglia function**

Hospital de Santo António, Porto, Portugal.

**16h 00m coffee break**

**16h 30m**

**Elia Formisano**

**Brain reading approaches in fMRI**

Department of Cognitive Neuroscience, Faculty of Psychology, University of Maastricht, Maastricht, Netherlands.

**17h 15m**

**João Paulo Cunha**

**A Grid framework for non-linear brain FMRI analysis**

IEETA & Dep. of Electronics, Telecommunications and Informatics, University of Aveiro, Portugal.

## **Day 3 – 20th of July**

### **Morning**

**9h 30m**

**Anastasia Yendiki**

#### **Anatomically constrained white-matter tractography**

Athinoula A. Martinos Center, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts, USA.

**10h 15m**

**Alberto Leal**

#### **BOLD effect associated with spikes in simultaneous EEG/fMRI recordings in occipital lobe epilepsy**

Department of Neurophysiology, Hospital Júlio de Matos, Lisbon, Portugal.

**11h 00m coffee-break**

**11h 30m**

**Alexandre Andrade**

#### **Functional connectivity approaches in fMRI, EEG and MEG**

Institute of Biophysics and Biomedical Engineering, University of Lisbon, Lisbon, Portugal

**12h 30m Lunch**

### **Afternoon**

**14h 30m**

**Marta Shenton**

#### **MRI and DTI Findings in Schizophrenia**

Harvard Medical School, Boston, Massachusetts, USA.

**15h 15m**

#### **Williams Syndrome and the Brain: evidence from MRI studies**

**Adriana Sampaio, Nuno Sousa & Óscar Gonçalves**

Department of Psychology & Life and Health Sciences Research Institute, University of Minho, Braga, Portugal.

**16h 00m**

**Tiago B. Rodrigues**

NMR spectroscopy as a new tool to study mechanisms of neurotransmission  
Institute of Biomedical Research "Alberto Sols", CSIC-UAM, Madrid, Spain

**16h 45m**

**Closing Remarks**