Thu **Jun** **8th**	**18th Kuopio Bio-NMR Workshop:** **MRI of Brain Plasticity** **ECMED course / ISMRM Nordic Chapter meeting**
08:30- *09:00*	*Registration*
	Session: fMRI
09:00- 09:15	**Opening of the workshop** Dr. Olli Gröhn, University of Eastern Finland, Finland
09:15- 10:00	**Basics of fMRI in animal models - influence of anesthesia** Dr. Jaakko Paasonen, University of Eastern Finland, Finland
10:00- 10:45	**Functional connectivity in rodent brain – applications to brain plasticity** Dr. Alessandro Gozzi, University of Trento, Italy
10:45- 11:15	**Coffee Break / Posters**
11:15- 12:00	**Optogenetics and fMRI** Dr. Jin Lee, Stanford University, USA
12:00- 12:45	**TMS, magnetogenetics and fMRI** TBA
12:45- 13:30	**Lunch**
	Session Diffusion
13:30- 14:15	**Basics of diffusion MRI** TBA
14:15- 15:30	**Validation of diffusion MRI findings – correlation of diffusion MRI and tissue microstructure in damage induced plasticity** Dr. Alejandra Sierra, University of Eastern Finland, Finland
15:30 *16:00*	**Coffee break**
16:00- *16:45*	**Assessing learning induced brain plasticity using advanced microstructural diffusion MRI** Dr. Yaniv Assaf, Tel Aviv University, Israel
16:45- *17.30*	**Microstructural changes in damaged brain** Dr. Jiangyang Zhang, New York University, USA
17:30- 18:00	Optional laboratory visit – Biomedical Imaging Unit, A.I.Virtanen Institute
19:00-	*Social Program: Dinner*

Fri Jun 9th	18th Kuopio Bio-NMR Workshop: MRI of Brain Plasticity ISMRM Nordic Chapter meeting
	Session: MRS and Hyperpolarized MRI
8:15-8:30	**Opening of the ISMRM Nordic Chapter meeting** Dr. Timo Liimatainen, Kuopio university hospital, Finland
08:30-09:15	**Overview and basics of hyperpolarized MRI and Kuopio Biomedical Imaging Unit** Dr. Mikko Kettunen, University of Eastern Finland, Finland
9:15-10:00	**Clinical Translation of Hyperpolarized Metabolic MR** Dr. Ardenkjaer-Larsen JH, Technical University of Denmark, Denmark
10:00-10:30	**Coffee Break /Posters**
10:30-11:15	**Exploring metabolism with MRS and hyperpolarized MRI,** Dr. Margozia Marjanska, University of Minnesota, USA
11:15-12:00	**Lunch**
	Session: Highlights from Nordic MRI Research
12:00-12:30	**Neurovascular flow at 7T** Dr. Karin Markenroth-Bloch, University of Lund, Sweden
12:30-13:00	**Multidimensional diffusion MRI** Dr. Daniel Topgaard, University of Lund, Sweden
13:00 13:30	**Myelin measurement in the brain using synthetic MRI** Dr. Marcel Warntjes, Linköping University, Sweden
13:30-14:00	**fMRI to uncover the pathophysiology of different clinical conditions in patients** Dr. Asta Håberg Norwegian University of Science and Technology, Norway
14:00-14:30	**Coffee break / Posters**
14:30-15:00	**3 x 10 min Highlights of Kuopio MRI Research fMRI, cardiac/contrast, and clinical MRI**
	Highlights from Submitted Abstracts
15:00-16:00	4 x 15 min Talks selected from submitted abstracts
16:00-16:15	**Closing of 18th Kuopio Bio NMR Workshop and Nordic Chapter for ISMRM meetings** Dr. Olli Gröhn, University of Eastern Finland, Finland