

Programme – ESMRMB School of MRI Advanced Neuro Imaging Diffusion, Perfusion, Spectroscopy June 3-5, 2010

Thursday June 3

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| 08.00-08.45 | Registration |
| 08.45-09.00 | Opening
A. Bjørnerud, Oslo/NO
E.-M. Larsson, Uppsala/SE |
| 09.00-09.50 | Topic 1: Diffusion MRI
S. Brockstedt, Lund/SE <ul style="list-style-type: none">• Mechanisms of diffusion, ADC• Pulse sequences and acquisition techniques for DWI• Terminology |
| 10.00-10.50 | Topic 2: Perfusion MRI I
A. Bjørnerud, Oslo/NO <ul style="list-style-type: none">• Acquisition Techniques for perfusion MRI• Pulse Sequences for Dynamic Susceptibility Contrast (DSC) – MRI• Contrast agents for DSC-MRI |
| 11.00-11.30 | Coffee Break |
| 11.30-12.20 | Topic 3: Perfusion Techniques II
L. Østergaard, Århus/DK <ul style="list-style-type: none">• DSC - Modelling• DSC - Implementation• DSC – Pitfalls• ASL |
| 12.30-13.30 | Lunch |

- 13.30-14.20** **Topic 4: Diffusion and Perfusion, Applications I**
S. Sunaert, Leuven/BE
- Stroke
- 14.30-17.30** **Repetition of topics 1, 2+3 and 4 in seminar groups**
- Coffee available during repetitions.**
- 19.30** **Welcome Dinner: all participants and faculty members are invited**

Friday June 4

- 08.00-08.50** **Topic 5: Diffusion and Perfusion, Applications II**
J. Hald, Oslo/NO
- Tumor
- 09.00-09.50** **Topic 6: Diffusion and Perfusion, Applications III**
E.-M. Larsson, Uppsala/SE
- Infection/inflammation
 - Dementia
 - Trauma
 - Epilepsy
- 10.00-10.30** **Coffee Break**
- 10.30-11.20** **Topic 7 Proton MRS I**
R. Kreis, Bern/CH
- Principles
 - Sequences
 - Postprocessing, quantification
 - Quality control, artefacts
- 11.30-12.20** **Topic 8: Proton MRS II**
E. R. Danielsen, Copenhagen/DK

- Clinical Applications

12.30-13.30 **Lunch**

13.30-17.30 **Repetition of topics 5, 6, 7 and 8 in seminar groups**

Coffee available during repetitions.

Saturday June 5

08.00-08.50

**Topic 9: DTI
M. Koch, Hamburg/DE**

- Introduction to Diffusion Tensor Imaging
- Axonal fibre tracking
- q –space imaging

09.00-09.50

**Topic 10: Diffusion tensor imaging (DTI) - clinical
applications
S. Sunaert, Leuven/BE**

10.00-10.30

Coffee Break

10.30-12.30

Repetition of topics 9 and 10 in seminar groups

12.30-13.30

Examination (Optional)