

## **Provisional Programme Advanced Imaging for Physicists**

Budapest, Hungary, 18-22 September 2011

### **Sunday, September 18, 2011**

- 09.00 – 09.50 Welcome and introduction (Uulke van der Heide, NL)  
09.50 – 10.40 MRI Physics: basic principles (Dag Rune Olsen, NO)  
**10.40 – 11.00** *Coffee break*  
11.00 – 11.50 MRI physics: contrast formation (Dag Rune Olsen, NO)  
11.50 – 12.40 MRI physics: space encoding (Gary Liney, UK)  
**12.40 – 13.40** *Lunch*  
13.40 – 14.30 MRI Physics: equipment (Gary Liney, UK)  
14.30 – 15.10 PET physics: basic principles (Daniela Thorwarth, DE)  
**15.10 – 15.40** *Coffee break*  
15.40 – 17.00 Case studies: MRI contrast formation (Division into 3 groups)

### **Monday, September 19, 2011**

- 09.00 – 09.50 MRI geometrical artifacts, theory (Uulke van der Heide, NL)  
09.50 – 10.40 MRI geometrical artifacts, experimental procedures (Uulke van der Heide, NL)  
**10.40 – 11.00** *Coffee break*  
11.00 – 11.50 PET physics: image reconstruction, contouring (Daniela Thorwarth, DE)  
11.50 – 12.40 Applications: MRI in brain (Piet Dirix)  
**12.40 – 13.40** *Lunch*  
13.40 – 14.30 Functional imaging MRI: DCE (Gary Liney, UK)  
14.30 – 15.10 Applications: MRI in gynaecology RT (Piet Dirix, BE)  
**15.10 – 15.40** *Coffee break*  
15.40 – 17.00 Case studies: MRI artifacts (Division into 3 groups)

### **Tuesday, September 20, 2011**

- 09.00 – 09.50 PET tracers and applications (Daniela Thorwarth, DE)  
09.50 – 10.40 MRI physics: fast scanning, volume sequences (Gary Liney, UK)  
**10.40 – 11.00** *Coffee break*  
11.00 – 11.50 Applications: MRI in prostate (Marco van Vulpen, NL)  
11.50 – 12.40 Applications: MRI-guided radiotherapy for head-neck cancer (Piet Dirix, BE)

*Free afternoon*

### **Wednesday, September 21, 2011**

- 09.00 – 09.50 CT physics and advanced applications (Koos Geleijns, NL)  
09.50 – 10.40 CT physics 3D and 4D imaging (Koos Geleijns, NL)  
**10.40 – 11.00** *Coffee break*  
11.00 – 11.50 MRI interventions: technical issues (Marco van Vulpen, NL)  
11.50 – 12.40 interventions: applications (Marco van Vulpen, NL)  
**12.40 – 13.40** *Lunch*  
13.40 – 14.30 Applications: CT and PET for radiotherapy of lung cancer (Uulke van der Heide, NL)  
14.30 – 15.10 Functional imaging MRI: spectroscopy (Gary Liney, UK)  
**15.10 – 15.40** *Coffee break*  
15.40 – 17.00 Case studies: QA CT? (Division into 3 groups)

**Thursday, September 22, 2011**

09.00 – 09.50 Functional imaging MRI: DWI (Dag Rune Olsen, NO)

09.50 – 10.40 In-room imaging with cone-beam CT and MRI (Uulke van der Heide, NL)

**10.40 – 11.00 *Coffee break***

11.00 – 12.40 Discussion session, remaining questions; QA CT, PET and MRI

12.40 – 12:50 Short evaluation of the course and closing