The 2012 Bristol MR Summer School

(unit code PSYCM0013 as part of the MSc in Neuropsychology curriculum)

Bristol, March 26 – 29, 2012
Biological Sciences Building
Lecture Room B75
Woodland Avenue
Bristol BS8 1UG

Module Director: Professor Risto Kauppinen
School of Experimental Psychology
CRICBristol
University of Bristol
psrak@bristol.ac.uk
<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>TOPIC</th>
<th>TEACHER</th>
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<tbody>
<tr>
<td>Mar-26</td>
<td>9.00 – 9.50</td>
<td>Basic NMR and MRI</td>
<td>Risto Kauppinen</td>
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<td></td>
<td>9.50 – 10.40</td>
<td>Structural MRI</td>
<td>Mark Jenkinson</td>
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<td>11.00-11.50</td>
<td>Image analysis</td>
<td>Mark Jenkinson</td>
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<td>11.50 – 1.00</td>
<td>Lunch break</td>
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<td>1.00 – 1.50</td>
<td>BOLD signal</td>
<td>Risto Kauppinen</td>
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<td></td>
<td>1.50 – 2.40</td>
<td>BOLD Physiology and fMRI</td>
<td>Richard Wise</td>
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<td>3.00 – 3.50</td>
<td>fMRI analysis</td>
<td>Jonathan Brooks</td>
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<td>3.50 -4.40</td>
<td>Brain-computer interface and MR</td>
<td>David Linden</td>
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<td>5.00 – 5.50</td>
<td>ASL and CBV MRI</td>
<td>David Thomas</td>
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<td>27-Mar</td>
<td>9.00 – 9.50</td>
<td>Diffusion MRI</td>
<td>Derek Jones</td>
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<td>9.50 – 10.40</td>
<td>Combined fMRI and EEG</td>
<td>Andy Bagshaw</td>
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<td>11.00 – 11.50</td>
<td>Spontaneous BOLD fluctuations</td>
<td>Risto Kauppinen</td>
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<td>1.00 – 1.50</td>
<td>Neurodevelopment</td>
<td>Frances Cowan</td>
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<td>1.50 – 2.40</td>
<td>Cognitive neuroscience applications</td>
<td>Pascal Belin</td>
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<td>3.00 – 3.50</td>
<td>fMRI and computer modelling</td>
<td>Paul Howard-Jones</td>
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<td>3.50 – 4.40</td>
<td>MR spectroscopy</td>
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<td>Risto Kauppinen</td>
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<td>28-Mar</td>
<td>9.00 – 9.50</td>
<td>Neuroimaging of Pain</td>
<td>Jonathan Brooks</td>
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<td>9.50 – 10.40</td>
<td>MR of brain disorders in neonates</td>
<td>Axel Heep</td>
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<td>Neurodegeneration by MR</td>
<td>Liz Coulthard</td>
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<td>Lunch break</td>
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<td>1.00 – 1.50</td>
<td>Neuro-vascular diseases by MR</td>
<td>Rose Bosnell</td>
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<td>Neuropsychiatry and MR</td>
<td>Steve Williams</td>
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<td>Neuroinflammatory disorders by MR</td>
<td>Mara Cercignani</td>
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<td>3.50 – 4.40</td>
<td>MRS analysis</td>
<td>Martin Wilson</td>
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<td>Neuro-oncology by MR</td>
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<td>29-Mar</td>
<td>9.00-11.45</td>
<td>Demo at CRICBristol</td>
<td>Group I (Students 1-16)</td>
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<td>12.15 -3.00</td>
<td>Demo at CRICBristol</td>
<td>Group II (Students 17-33)</td>
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</table>
Dr. Andy Bagshaw
University of Birmingham

**Lecture title:** Combined fMRI and EEG

**Relevant publications**


Professor Pascal Belin

University of Glasgow

**Lecture title:** Cognitive Neuroscience Applications for fMRI

**Relevant publications:**


Dr. Rose Bosnell
University of Bristol

Lecture title: Neuro-Vascular Diseases by Magnetic Resonance

Relevant publications:


Dr. Jonathan Brooks  
University of Bristol  

**Lecture title:** fMRI Analysis:  

**Relevant publications**  


(2) Jezzard, Matthews, Smith "Functional MRI" Oxford University Press (2001)  

(3) [http://imaging.mrc-cbu.cam.ac.uk/imaging/PrinciplesStatistics](http://imaging.mrc-cbu.cam.ac.uk/imaging/PrinciplesStatistics)  

Lecture title: Neuroimaging of Pain

Relevant publications


Lecture title: Neuroinflammatory Diseases by Magnetic Resonance

Relevant publications


Dr. Elizabeth Coulthard  
Frenchay Hospital, Bristol

**Lecture title:** Neurodegenerative Diseases by Magnetic Resonance

**Relevant publications**


Dr. Frances Cowan
Imperial College London

**Lecture title:** Neonatal brain imaged by MRI

**Relevant publications:**


Dr. Paul Howard-Jones  
University of Bristol  

**Lecture title:** fMRI and Computer Modelling  

**Relevant publications**  


Dr. Mark Jenkinson
University of Oxford

Lecture title: Image Analysis

Relevant publications

S.M. Smith BET: Brain Extraction Tool FMRIB technical Report TR00SMS2b
http://www.fmrib.ox.ac.uk/analysis/research/bet/bet.pdf

http://www.fmrib.ox.ac.uk/analysis/techrep/tr07ja2/tr07ja2.pdf


Stephen M. Smith , Nicola De Stefano , Mark Jenkinson and Paul M. Matthews Measurement of Brain Change Over Time FMRIB Technical Report TR00SMS1
http://www.fmrib.ox.ac.uk/analysis/research/siena/siena.pdf

Lecture title: Diffusion Magnetic Resonance Imaging

Relevant publications


Lecture title: Spontaneous BOLD fluctuations

Relevant publications


Professor Risto Kauppinen

University of Bristol

Lecture title: Magnetic Resonance Spectroscopy

Relevant publications


Professor Risto Kauppinen

University of Bristol

Lecture title: BOLD signal

Relevant publications


Professor David Linden
University of Cardiff

**Lecture title:** Brain-Computer Interface and Magnetic Resonance

**Relevant publications**


Dr. David Thomas
University College London

**Lecture topic:** Arterial Spin Labelling Flow Imaging

Relevant publications


Professor Stephen Williams

King’s College London

**Lecture title:** Neuropsychiatry and Magnetic Resonance

Relevant publications:


Relevant publications


Professor Richard Wise
University of Cardiff

**Lecture title:** BOLD Physiology

**Relevant literature**

