Statistical Parametric Mapping for fMRI and MRI/VBM

Thursday 25th October 2018 – Saturday 27th October 2018

UCL Institute of Neurology
University College London, WC1N 3BG
Course outline

The course will present instruction on the analysis and characterisation of neuroimaging data, including Magnetic Resonance Imaging (MRI) and functional MRI (fMRI). The three-day course will be divided into theoretical sessions covering experimental design and statistical inference and practical sessions in which SPM will be used to analyse exemplar data sets. This course is suitable for beginners and more advanced users. We advise students to gain at least some minimal familiarity with the methodology, for example, from reading introductory articles available from the SPM website (https://www.fil.ion.ucl.ac.uk/spm/doc/intro/).
Wellcome Centre for Human Neuroimaging, UCL Queen Square Institute of Neurology

- John Ashburner
- Mikael Brudfors
- Ian Clark
- Nadège Corbin
- Guillaume Flandin
- Karl Friston
- Tobias Hauser
- Amirhossein Jafarian
- Christian Lambert
- Peter Zeidman

External Faculty Team
- Mona Garvert - Max Planck Institute for Cognitive and Brain Sciences, Leipzig
- Andreas Lidstrom – University of East Anglia
- Chris Mathys - University of Trento
- Rosalyn Moran - King’s College London
- Tom Nichols – Oxford Big Data Institute
- Valeria Oliva – University of Bristol
- Will Penny – University of East Anglia
- Christophe Phillips - Université de Liège
- Christian Ruff - University of Zurich
Day 1: Thursday 25th October  
Lecture Theatre, 33 Queen Square

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<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>09:00 - 09:30</td>
<td>Registration and Coffee</td>
<td>Ground floor</td>
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<tr>
<td>09:30 - 10:00</td>
<td>Introduction and Overview</td>
<td>Guillaume Flandin</td>
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<tr>
<td>10:00 - 11:00</td>
<td>Spatial Preprocessing</td>
<td>John Ashburner</td>
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**Coffee**

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<tr>
<td>11:30 - 12:00</td>
<td>The General Linear Model</td>
<td>Nadège Corbin</td>
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<tr>
<td>12:00 - 12:45</td>
<td>Contrasts and Classical Inference</td>
<td>Christophe Phillips</td>
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**Lunch**

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<th>Time</th>
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<tr>
<td>13:45 - 14:15</td>
<td>Group analysis</td>
<td>Tobias Hauser</td>
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<td>14:15 - 15:00</td>
<td>Random Field Theory</td>
<td>Tom Nichols</td>
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**Coffee**

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<tr>
<td>15:30 - 16:15</td>
<td>Voxel-Based Morphometry</td>
<td>Christian Lambert</td>
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<td>16:15 - 17:00</td>
<td>Demo: Spatial Preprocessing and VBM</td>
<td>Mikael Brudfors</td>
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<td>17:00 - 18:00</td>
<td>“Questions and Answers” Clinic</td>
<td>Karl Friston</td>
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Day 2: Friday 26th October
Lecture Theatre, 33 Queen Square

09:30 - 10:15  Experimental Design  Mona Garvert
10:15 - 11:00  Event-related fMRI  Christian Ruff

Coffee
11:30 - 12:15  Demo: Event-related fMRI  Ian Clark
12:15 - 13:00  Bayesian Inference  Chris Mathys

Lunch
14:00 - 15:00  Dynamic Causal Modelling for fMRI  Peter Zeidman
15:00 - 15:45  Demo: DCM for fMRI  Amirhossein Jafarian

Coffee
16:15 - 17:15  DCM for fMRI (Applications)  Rosalyn Moran
17:15 - 18:00  “Questions & Answers” Clinic  Karl Friston
18:30 -  

The Marquis Cornwallis, 31 Marchmont Street, London, Greater London, WC1N 1AP
Day 3: Practical Workshops

4th floor Seminar Room, 12 Queen Square
Saturday 27th October

09:30 - 10:00  Introduction, Allocation of groups

10:00 - 15:30 Parallel session in small groups covering:
# fMRI analyses (several levels)
# Voxel-Based Morphometry (VBM)
# Dynamic Causal Modelling (DCM)

Coffee  Ground floor, Conservatory

16:00 - 17:00 Workshop feedback presentations