

Research Master- & PhD-students course fMRI data analysis with FSL

Starts 19 februari. The course takes place during 8 weeks on Tuesdays 9.00-13.00. Suitable for first and second years students from the Cognitive Psychology Research master and other master and PhD students with specific interest in fMRI data analysis.

This course will be given for the first time and will be repeated next year if successful. If you have remarks or ideas how we could organize it better, please let us know. The course will follow the FSL-course as given in Oxford: see <http://www.fmrib.ox.ac.uk/fslcourse/>.

Day 1 - Februari 19 - Introduction

- 9.00 - 9.30 Welcome and practicalities
(Ab Mooijaart, Psychology)
- 9.30 – 10.15 Why fMRI?
(Bernhard Hommel)
- 10.30 – 13.00 General introduction MRI and overview of FMRI data analysis
(Serge Rombouts, LIBC)

Day 2 – February 26 – Preprocessing 1

- 9:00 – 11.00 Preprocessing I: basic principles of MRI image analysis
(Julien Milles, Radiology LUMC, LKEB)
- 11.00 – 13.00 Practical session 1 – introduction to FSL
(Ilya Veer, Henk Steenbergen)

Day 3 – March 4 – Preprocessing 2

- 9:00 – 11.00 Preprocessing 2: preprocessing of fMRI data
(Pieter Buur, F. C. Donders Centre, Nijmegen)
- 11.00 – 13.00 practical session 2 – preprocessing in FSL (BET, FLIRT, FUGUE)
(Ilya Veer, Henk Steenbergen)

Day 4 – March 11 - Single-subject analysis

9:00 – 11.00 Statistical analysis of single subject fMRI-data
(Erno Hermans, F. C. Donders Centre)

11.00 – 13.00 practical session 3 – single subject analysis (FEAT 1)
(Dietsje Jolles, Wouter van den Bos)

Day 5 – March 18 - Advanced single-subject analysis:

9:00 – 11.00 Advanced data-analysis and experimental design
(Rogier Mars, Oxford)

11.00-13.00 practical session 4 – single subject analysis (FEAT 2)
(Dietsje Jolles, Wouter van den Bos)

Day 6 – March 25 – practical sessions

9.00-13.0 practical sessions to finish the analyses and ask questions
(Ilya Veer en Dietsje Jolles)

For those who have finished quickly, practical session ICA: Melodic
(Evelinda Baerends)

Day 7 – April 1 – Group analysis

9:00 – 11:00 Group analysis
(Roel Willems, F. C. Donders Centre)

11.00 - 13.00 practical session 5 –group analysis ()

Dag 8 – April 8 – Conclusions and novel developments

9.00 – 9.30 Course Summary
(Meike Grol, LIBC)

9.45 – 10.30 Functional and Effective Connectivity
(Meike Grol, LIBC)

11.00 – 12.00 Invited lecture e.g. other methods (...)