

Psychology Master- & PhD-students course:**FMRI DATA AND ANALYSIS (with FSL)**

(<http://www.studiegids.leidenuniv.nl/index.php3?c=17&t=3&q=aWQ9MjExMjY=&v=&k=21126>)

Starts February 3rd. Seven weeks on Tuesdays 9.00-13.00 hrs.

For first and second year (research) master students psychology with interest in FMRI data analysis. PhD students and post docs with a current or anticipated LIBC affiliation can also attend the lectures. For the practical sessions, a limited number of seats is available.

Usually a number of seats are available for PhD students and post docs, depending on the number of registered master students.

Instructors: Dr. Meike Grol, Dr. Serge Rombouts

Coordinator: Dr. Serge Rombouts (s.a.r.b.rombouts@lumc.nl)

The course will follow the Oxford FSL-course: see <http://www.fmrib.ox.ac.uk/fslcourse/>.

Course book: *Functional MRI : An Introduction to Methods*, P Jezzard, PM Matthews, SM Smith, Oxford University Press, ISBN 0192630717, <http://www.fmrib.ox.ac.uk/book>

Location:

All Lectures in Room 5A29, FSW Building

All Practical Sessions in Room 1A30, FSW building

Registration for Master students psychology: U-Twist.

Registration for others who need ECTS points registered: U-Twist

Registration for others: Email Jacqueline Vreriks, secretary psychology, section 'Methoden en Technieken': jvreriks@fsw.leidenuniv.nl

Other information: s.a.r.b.rombouts@lumc.nl

Program:Day 1 - February 3 - Introduction of Practical Session

11.00 - 13.00 Wellcome: *Dr. Serge Rombouts*

Introduction practical sessions and Unix: *Ilya Veer*

Read Book Chapter 1

Day 2 - February 10 - Introduction

9.00 – 11.00 Why FMRI in Psychology + examples design

Prof. Dr. Bernhard Hommel

Chapters 10 and 17

11.15 – 13.00 Introduction MRI and FMRI

Dr. Thijs van Osch

Read chapter 3 (until 3.4.4) and 3.5.1, ch. 7 and ch. 8.1 and 8.2

Day 3 – February 17 – Preprocessing 1

9.00 - 10.00 Overview FMRI data analysis

Dr. Meike Grol

Chapter 11

10.00 -11.00 Preprocessing: Basic principles of MRI and fMRI image analysis
Dr. Julien Milles
Chapters 12 and 13

11.00 – 13.00 Practical session 2 – preprocessing in FSL
Ilya Veer en Dietsje Jolles

Day 4 – Feb 24 – fMRI Single subject analysis

9.00 – 11.00 Statistical analysis of single subject fMRI-data (GLM)
Dr. Erno Hermans
Chapter 14

11.00 – 13.00 Practical session 3 – single subject analysis in FSL
Wouter vd Bos en Dietsje Jolles

Day 5 –March 3 - Advanced single-subject analysis

9.00 – 11.00 Advanced data-analysis and experimental design
Dr. Rogier Mars
Chapter 9

11.00 – 13.00 Practical session 4 – single subject analysis, part 2
Ilya Veer en Dr. Sophie van Rijn

Day 6 – March 10 -: Second Level Analysis (Groups)

9.00 - 11.00 Group analysis in fMRI
Dr. Mischa de Rover

11.00-13.00 Practical session 5 –group analysis and finish previous analyses
Sophie van Rijn en Ilya Veer

Day 7 –March 17 – Summary

9.00 - 11.00 Course summary, opportunities to ask questions about previous lectures
Serge Rombouts

Teachers:

Wouter vd Bos, LIBC, Psychology, WBos@FSW.leidenuniv.nl
Meike Grol, LIBC, Radiology LUMC, Psychology, M.J.Grol@lumc.nl
Erno Hermans, FC Donders Centre, erno.hermans@donders.ru.nl
Prof. Dr. Bernhard Hommel, LIBC, Psychology, hommel@fsw.leidenuniv.nl
Dietsje Jolles, LIBC, Radiology LUMC, Psychology, D.D.Jolles@lumc.nl
Rogier Mars, Oxford University, rogier.mars@psy.ox.ac.uk
Julien Milles, Radiology LUMC, J.R.Milles@lumc.nl
Thijs van Osch, LIBC, Radiology LUMC, M.J.P.van_Osch@lumc.nl
Sophie van Rijn, LIBC, Clinical Child and Adolescent Studies, srijn@fsw.leidenuniv.nl
Serge Rombouts, LIBC, Radiology LUMC, Psychology, s.a.r.b.rombouts@lumc.nl
Mischa de Rover, LIBC, Psychology, rovermde@fsw.leidenuniv.nl
Ilya Veer, LIBC, Radiology LUMC, Psychology, i.m.veer@lumc.nl