

# Methods in cognitive and clinical neurosciences Lab

Lecturers: Nicola Canessa, Eleonora Catricalà

H: 48

Credits: 5

Semester: II

Advanced course: C

The course aims to provide a general introduction to different stages of a typical research project in cognitive and clinical neuroscience, with an emphasis on a) the collection and analysis of neuroimaging data based on functional and structural magnetic resonance imaging (MRI); b) the correlation between neuroimaging metrics and cognitive performance resulting from neuropsychological assessments. After a preliminary overview of the standard experimental procedures for MRI studies, the main steps of the analysis of functional and structural MRI data will be reviewed through a practical hands-on approach based on real data.

Suggested resources:

1)

SPM (Statistical Parametric Mapping) website

<https://www.fil.ion.ucl.ac.uk/spm/>

and particularly the Documentation section

<https://www.fil.ion.ucl.ac.uk/spm/doc/>

and the email-list section

<https://www.fil.ion.ucl.ac.uk/spm/support/>

2) CONN toolbox

<https://www.nitrc.org/projects/conn>

<https://web.conn-toolbox.org/tutorials>

and its email-list section

[https://www.nitrc.org/forum/forum.php?forum\\_id=1144](https://www.nitrc.org/forum/forum.php?forum_id=1144)

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## Calendar

May 14, ~~21~~, 24, 28 – 9:00 -13:00

June 4, 18, 25 – 9:00 -13:00

July 2, 9, 16 – 9:00 -13:00

September 10, 17 – 9:00 -13:00

Room 1-15