

PSYCGN24: Introduction to Neuroscientific Methods: Vanessa Puetz

View Online



MSc Developmental Neuroscience & Psychopathology :
Yr 1. This module is the first course in your Neuroscience series and presents an introduction to a range of methods for studying the brain and cognitive and affective processing, including: structural and functional MRI, brain connectivity, animal models, EEG and neuroendocrine assessments. The goal of this course is to provide an introduction to the most commonly used methods as well as their applications to different samples (e.g. adults and children) and focus on making an informed selection based on the research question one wishes to investigate.

Amaro E and Barker GJ, 'Study Design in fMRI: Basic Principles' (2006) 60 Brain and Cognition 220

Anticevic et al. A, 'The Role of Default Network Deactivation in Cognition and Disease' (2012) 16 Trends in Cognitive Sciences 584

Arul-Anandam AP and Loo C, 'Transcranial Direct Current Stimulation: A New Tool for the Treatment of Depression?' (2009) 117 Journal of Affective Disorders 137

Babiloni F and Astolfi L, 'Social Neuroscience and Hyperscanning Techniques: Past, Present and Future' (2014) 44 Neuroscience & Biobehavioral Reviews 76

Chen et al. NTM, 'Attentional Bias Modification Facilitates Attentional Control Mechanisms: Evidence from Eye Tracking' (2015) 104 Biological Psychology 139

Cohen et al. MM, 'Early-Life Stress Has Persistent Effects on Amygdala Function and Development in Mice and Humans' (2013) 110 Proceedings of the National Academy of Sciences 18274

Friston K, 'Ten Ironic Rules for Non-Statistical Reviewers' (2012) 61 NeuroImage 1300

Gockenbach MS, 'A Practical Introduction to Matlab (Updated for Matlab 5). [Online Tutorial].' <<http://www.math.mtu.edu/~msgocken/intro/intro.html>>

Grayton HM and others, 'Altered Social Behaviours in Neurexin 1 α Knockout Mice Resemble Core Symptoms in Neurodevelopmental Disorders' (2013) 8 PLoS ONE

Hamilton A, 'Matlab for Psychologists [Online Tutorial].' (2004)

<<http://www.antoniahamilton.com/matlab.html>>

Hayhoe M and Ballard D, 'Eye Movements in Natural Behavior' (2005) 9 Trends in Cognitive Sciences 188

Illes J and Bird SJ, 'Neuroethics: A Modern Context for Ethics in Neuroscience' (2006) 29 Trends in Neurosciences 511

Kas et al. MJH, 'Genetics of Behavioural Domains across the Neuropsychiatric Spectrum; of Mice and Men' (2007) 12 Molecular Psychiatry 324

Koss et al. KJ, 'Early Adversity, Hypocortisolism, and Behavior Problems at School Entry: A Study of Internationally Adopted Children' (2016) 66 Psychoneuroendocrinology 31

Luck SJ, 'An Introduction to Event-Related Potentials and Their Neural Origins', An introduction to the event-related potential technique (MIT Press 2005)
<<https://contentstore.cla.co.uk/secure/link?id=81a608c5-8832-e811-80cd-005056af4099>>

Lupien et al. SJ, 'Can Poverty Get under Your Skin? Basal Cortisol Levels and Cognitive Function in Children from Low and High Socioeconomic Status' (2001) 13 Development and Psychopathology 653
<<http://journals.cambridge.org.libproxy.ucl.ac.uk/action/displayAbstract?fromPage=online&aid=82088&fulltextType=RA&fileId=S0954579401003133>>

Mayberg et al. HS, 'Deep Brain Stimulation for Treatment-Resistant Depression' (2005) 45 Neuron 651

Menon V, 'Large-Scale Brain Networks and Psychopathology: A Unifying Triple Network Model' (2011) 15 Trends in Cognitive Sciences 483

Miller G, 'Neuroimaging: Growing Pains for fMRI' (2008) 320 Science 1412

MRC Cognition and Brain Sciences Unit, 'Introduction to Scientific Computing and Matlab: [Workshops Schedule]. [Wiki].'
<<http://imaging.mrc-cbu.cam.ac.uk/methods/MatlabLecturesSchedule>>

Panksepp J, 'Neurodynamics: The Electrical Languages of the Brain', Affective neuroscience (Oxford University Press 2004)
<<https://www.dawsonera-com.libproxy.ucl.ac.uk/abstract/9780198025672>>

Panksepp J and Solms M, 'What Is Neuropsychanalysis? Clinically Relevant Studies of the Minded Brain' (2012) 16 Trends in Cognitive Sciences 6

Poldrack R, 'Can Cognitive Processes Be Inferred from Neuroimaging Data?' (2006) 10 Trends in Cognitive Sciences 59

Posner MI and DiGirolamo GJ, 'Cognitive Neuroscience: Origins and Promise.' (2000) 126 Psychological Bulletin 873

Reuter M and Montag C, 'Neuroeconomics - an Introduction' in M. Reuter and C Montag

(eds), Neuroeconomics (Springer 2016)

<https://www.amazon.co.uk/Neuroeconomics-Neuroscience-Psychology-Behavioral-Economics/dp/3642359221/ref=sr_1_4?s=books&ie=UTF8&qid=1502447074&sr=1-4&keywords=neuroeconomics>

Taylor MJ and Baldeweg T, 'Application of EEG, ERP and Intracranial Recordings to the Investigation of Cognitive Functions in Children' (2002) 5 Developmental Science 318

Ward J, 'Introducing Cognitive Neuroscience', The student's guide to cognitive neuroscience (3rd ed, Psychology Press 2015)

<<https://ebookcentral.proquest.com/lib/ucl/reader.action?docID=1974273&ppg=14>>

Wass et al. SV, 'Shorter Spontaneous Fixation Durations in Infants with Later Emerging Autism' (2015) 5 Scientific Reports

Weaver et al. ICG, 'Epigenetic Programming by Maternal Behavior' (2004) 7 Nature Neuroscience 847

Yarkoni et al. T, 'Cognitive Neuroscience 2.0: Building a Cumulative Science of Human Brain Function' (2010) 14 Trends in Cognitive Sciences 489