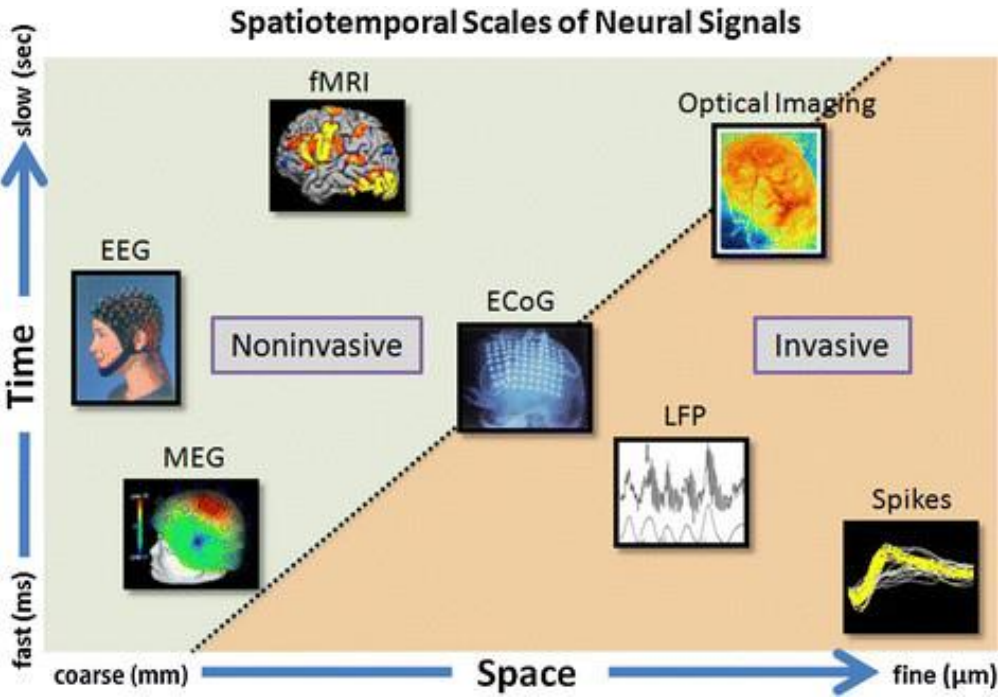
MEG Introduction

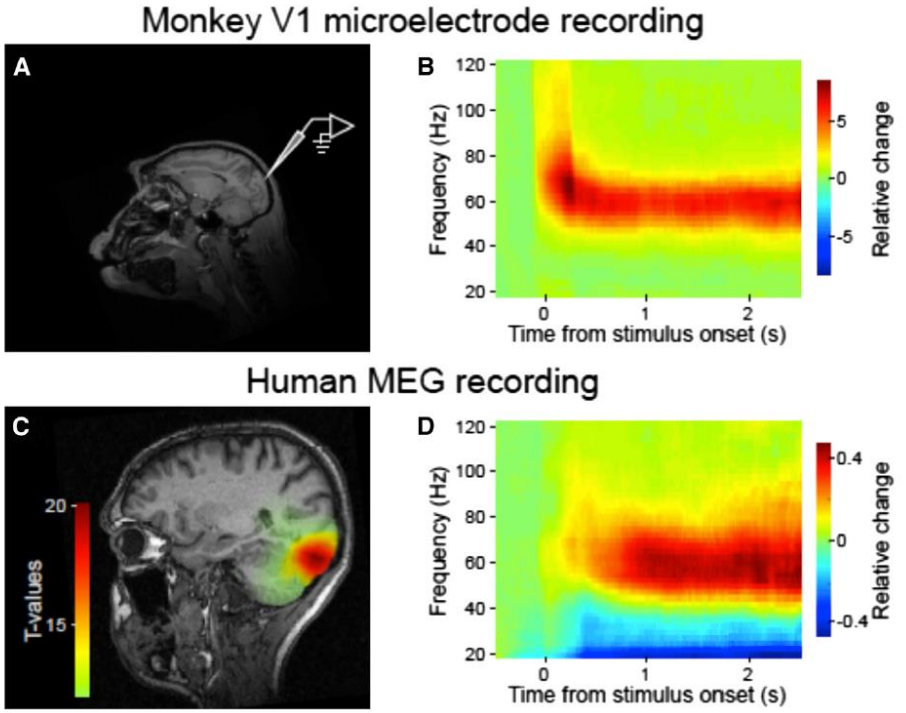
Why use magnetoencephalography (MEG)?

MEG – Why?

- Capture cognitive dynamic in the time frame

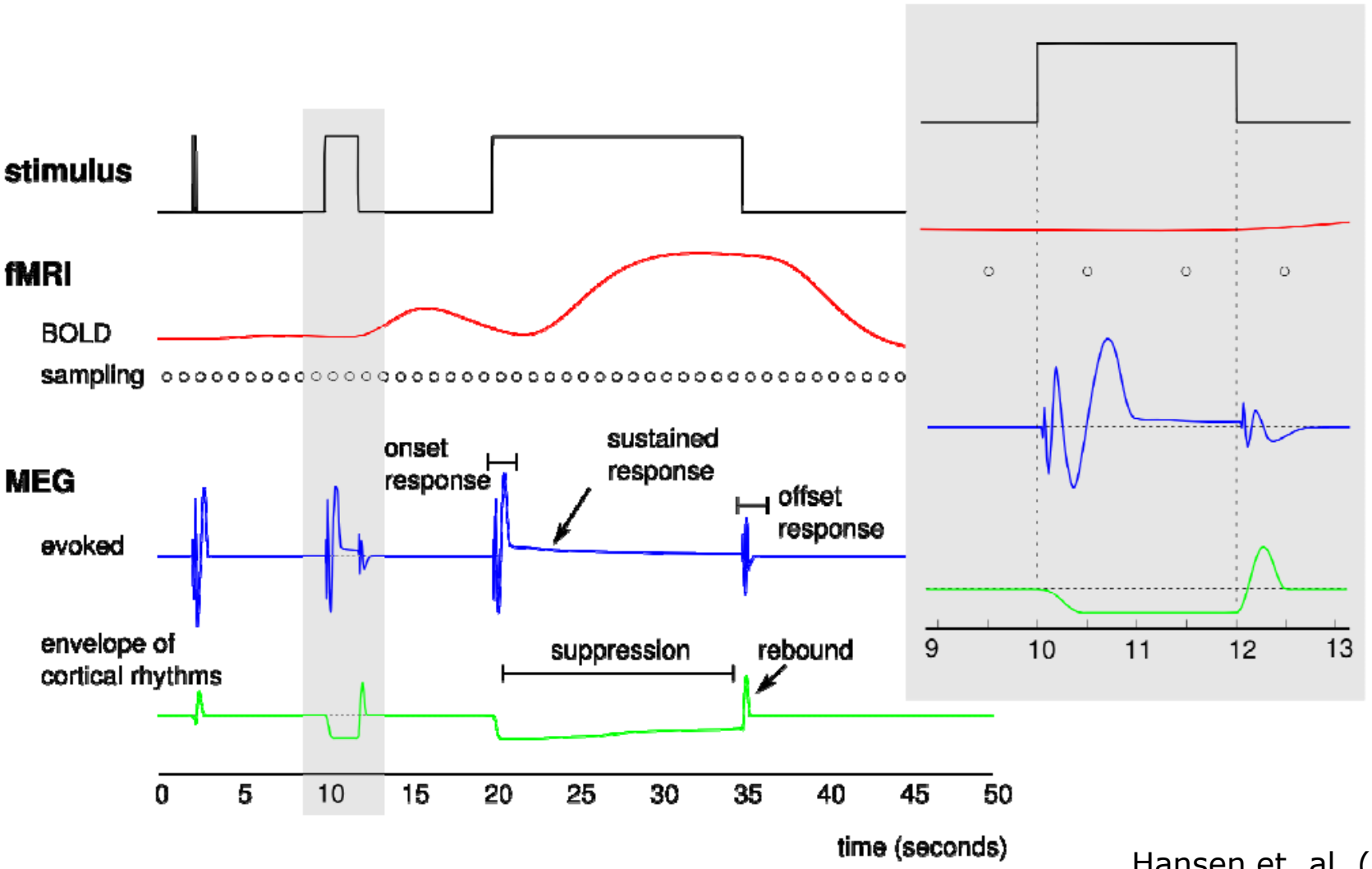


- Measure genuine neural activity



da Silva (2013)

MEG vs fMRI: distinct nature of the signals



Hansen et. al. (2010)

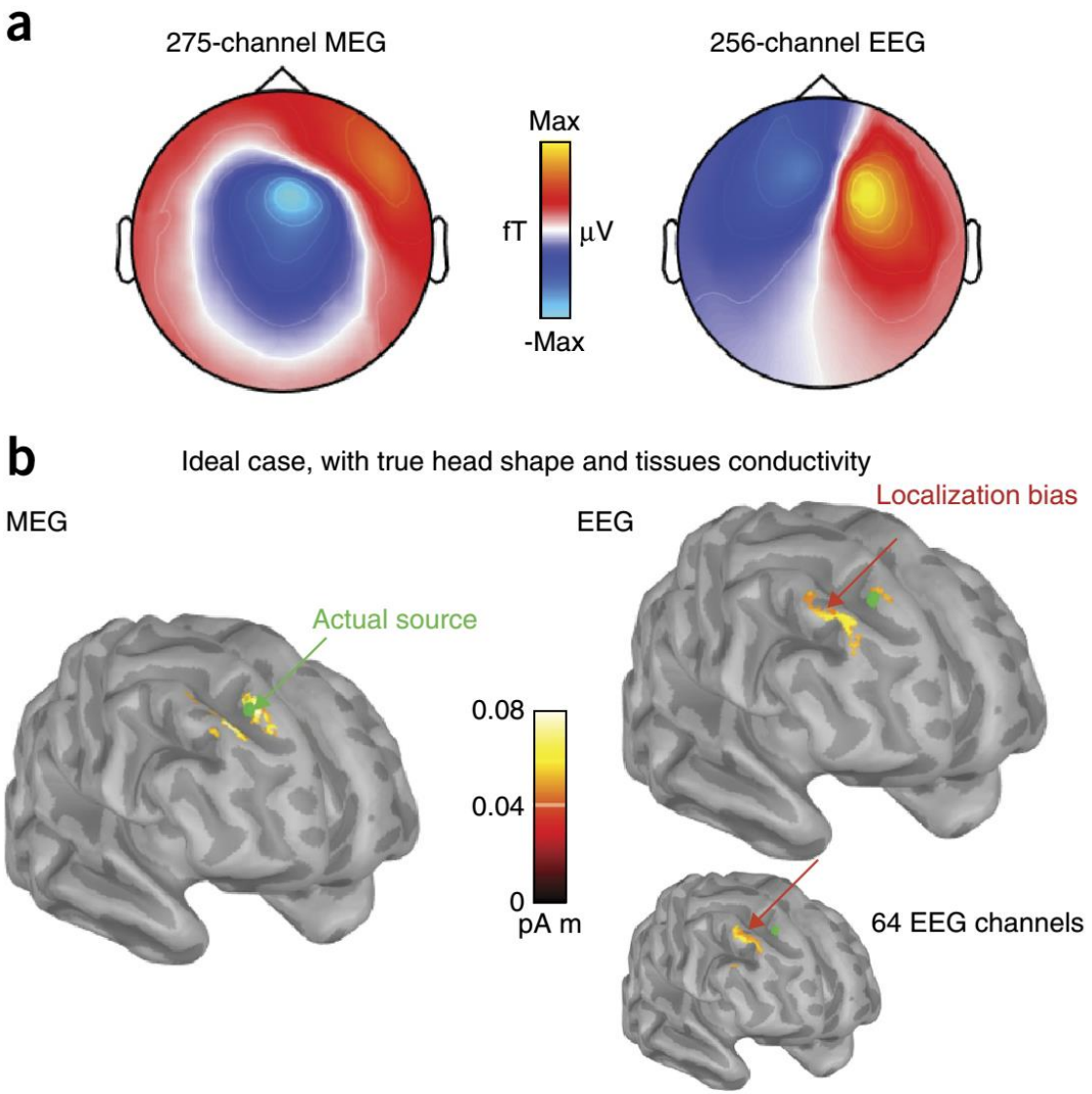
MEG vs EEG

Exogenous factors: 1. less preparation time
2. less ambient noise

Endogenous factors: magnetic activity VS electric activity

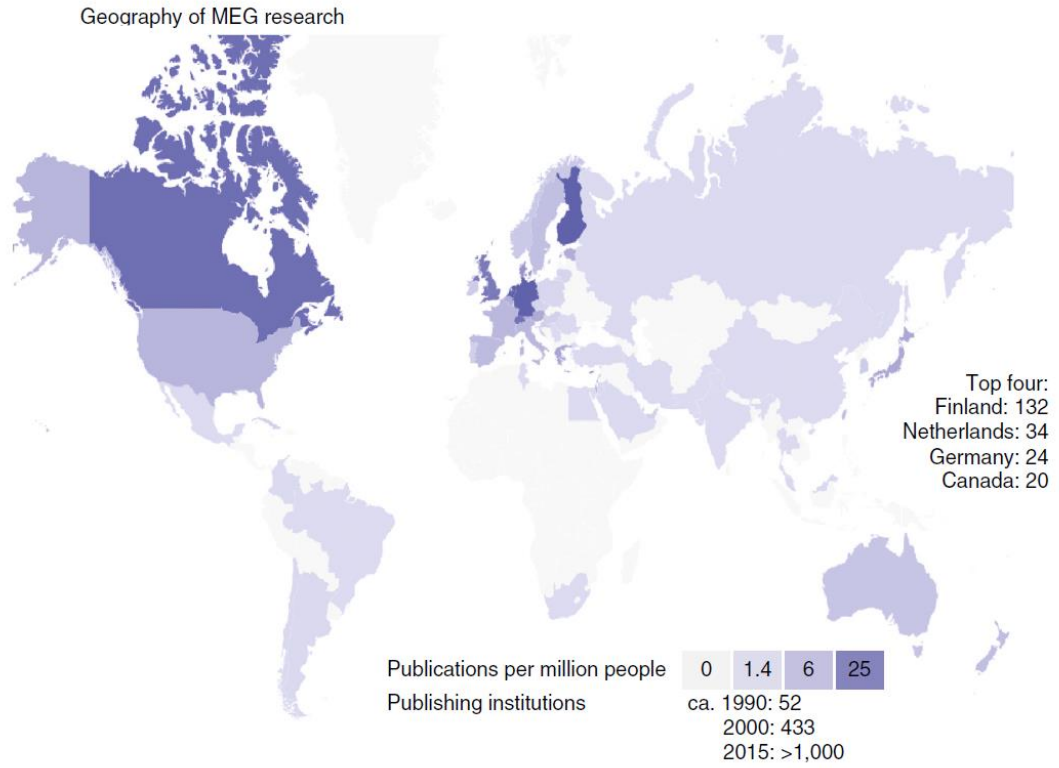
- sensitive to tangential sources
- no reference electrode (better single-to-noise ratio, minor common input problems)
- better at detecting high-frequency activity
- better spatial resolution/topology

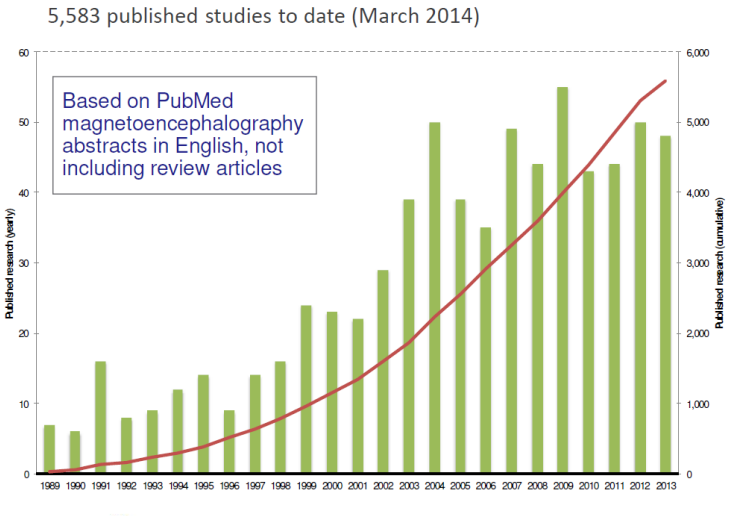
MEG vs EEG

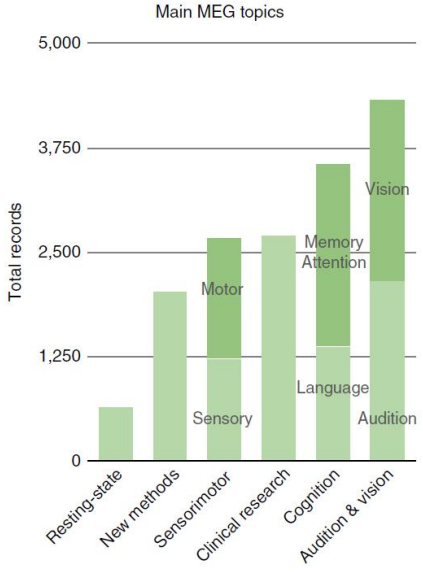


Baillet (2017)

MEG – Current trend





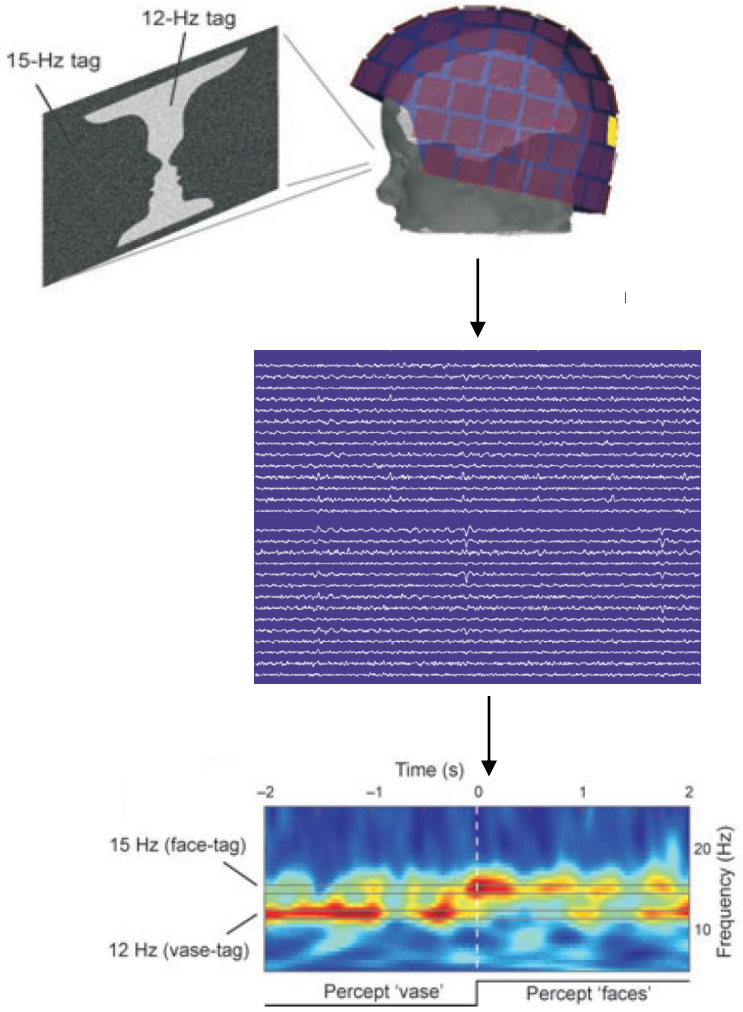


Baillet (2017)

MEG Introduction

How to perform an experiment using MEG ?

Magnetoencephalography (MEG)-Overview



MEG – Tour

MEG Introduction

How does MEG work?

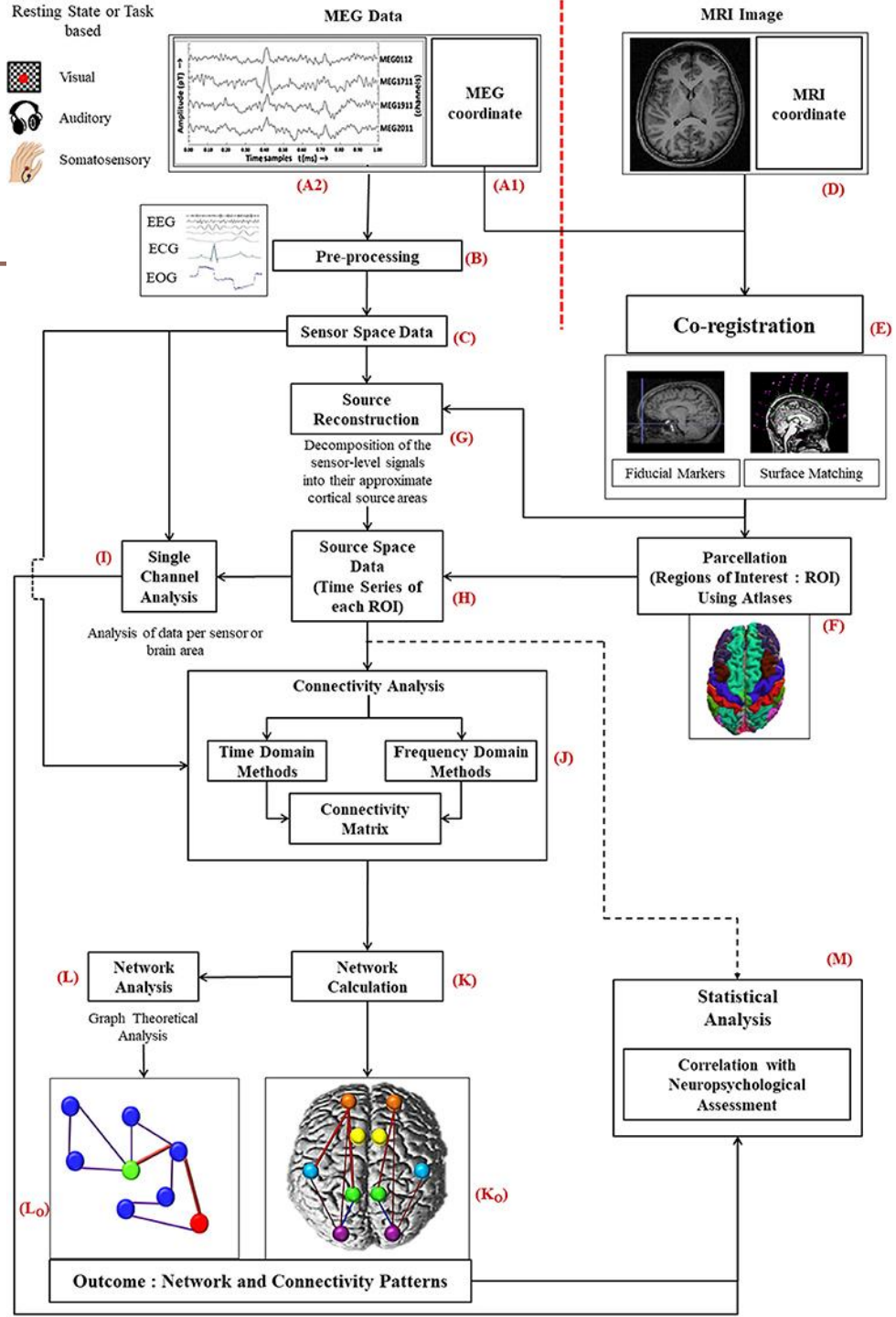
MEG – Basics

MEG – Advance (04:50, 08:05, 12:54)

MEG Introduction

How to analyze MEG data?

MEG – analysis pipeline



MEG – software

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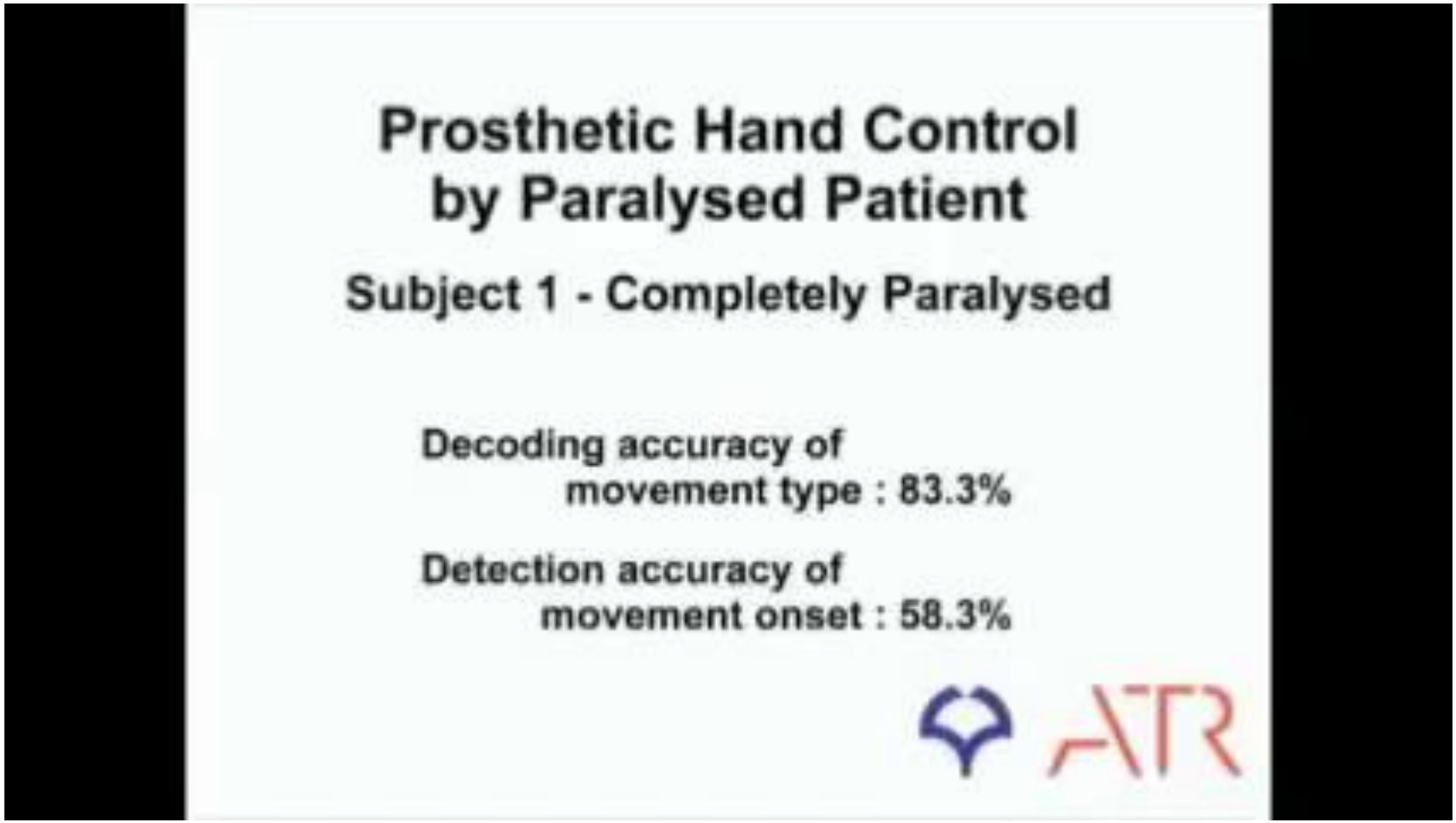
Computational Intelligence and Neuroscience
Volume 2011, Article ID 972050, 4 pages
doi:10.1155/2011/972050

Editorial

Academic Software Applications for Electromagnetic Brain Mapping Using MEG and EEG

Sylvain Baillet,[1] Karl Friston,[2] and Robert Oostenveld[3]

MEG – real-time analysis



Fukuma et. al. (2016)

MEG – the application of real-time analysis (01:45)