

# Curriculum Vitae

## **1. Academic Qualifications**

**Bachelor of Science in Psychology - Specialization: Experimental and Theoretical Psychology** (2010 – 2013)

- Succeeded with great distinction

**Master of Science in Experimental and Theoretical Psychology** (2013 – 2016)

- Succeeded with greatest distinction

**Credits in Ethics** (2014)

**Credits in Bayesian Statistics** (2015)

**Current education:** Master of Statistical Data Analysis (2018 - ...)

## **2. Academic Employment and Fellowships**

**Full-time PhD student in Department of Data Analysis** (Ghent University; 2016 – 2020)

Title project: ‘The secrets of cognitive aging: Investigating neural information flows underlying cognitive performance in elderly’

**PhD Fellowship:** Special Research Fund (BOF; Ghent University; 2016-2020)

## **3. Research Interests**

My main interests are advanced analyses of functional brain data (e.g., fMRI, EEG), and the application of these methods to elderly and patients with Alzheimer’s Disease. These methods include, amongst others, analysis of directed (functional) connectivity, analysis of structural connectivity, and analysis of resting state data. In addition I have specific interests in reproducibility and big data analyses.

## **4. Publications**

**Peer-reviewed A1 publications (published)**

**Almgren, H.**, Van de Steen, F., Kühn, S., Razi, A., Friston, K., & Marinazzo, D. (2018). Variability and reliability of effective connectivity within the core default mode network: A multi-site longitudinal spectral DCM study. *NeuroImage*, 183, 757-768.

### **Preprints (full text)**

Van de Steen, F., **Almgren, H.**, Razi, A., Friston, K. J., & Marinazzo, D. (2018). Dynamic causal modelling of fluctuating connectivity in resting-state EEG. *bioRxiv*:303933.

### **Conference proceedings (peer-reviewed; full text)**

Bombeke, K., van Dongen, A., Durnez, W., Anzolin, A., **Almgren, H.**, All, A., Van Looy, J., et al. (2018). Do Not Disturb: Psychophysiological correlates of boredom, flow and frustration during VR gaming. *HCI International 2018 Conference Proceedings*.

### **Conference Abstracts (published online)**

**Almgren, H.**, Van de Steen, F., Razi, A., & Marinazzo, D. (2017). New (spectral) dynamic causal modeling scheme improves effective connectivity estimation within resting state networks in longitudinal data. Presented at the 26th Annual Computational Neuroscience Meeting (CNS\*2017): Part 3.

**Almgren, H.**, Van De Steen, F., Siugzdaite, R., & Marinazzo, D. (2015). The challenge of successive dynamic causal models. *Frontiers in Neuroinformatics Conference Abstract: Second Belgian Neuroinformatics Congress*. doi: 10.3389/conf.fninf.2015.19.00034. [peer-reviewed]

**Almgren, H.**, Van De Steen, F., Kühn, S., Razi, A., & Marinazzo, D. (2017). Within and between subjects variability of effective connectivity in (small) resting state networks: A spectral dynamic causal modeling study. *Frontiers in Neuroscience Event Abstract: 12<sup>th</sup> National Congress of Belgian Society for Neuroscience*. doi: 10.3389/conf.fnins.2017.94.00010. [peer-reviewed]

Van Den Bossche, S., Colenbier, N, Van De Steen, F., **Almgren, H.**, & Marinazzo, D. (2017). Is the transfer function between neural and hemodynamic activity at rest modulated by body-specific activity? The case of Handedness. *Frontiers in Neuroscience Event Abstract: 12<sup>th</sup> National Congress of Belgian Society for Neuroscience*. doi: 10.3389/conf.fnins.2017.94.00002. [peer-reviewed]