Francesca Simonelli

EDUCATION

2017 – Current **PhD in Cognitive and Cultural Systems - Cognitive, Computational and Social Neuroscience track**

IMT – School for Advanced Studies, Lucca, Italy

Project: Investigating the functional organization of action representation using functional imaging data. The aim of the project is to expand upon how the brain encodes and represents different features of actions, by measuring representational geometries during observation of transitive and intransitive gestures and testing hypothetical models describing how these geometries are organized.

Supervisor: Pietro Pietrini.

2013 – 2016 **MSc in Cognitive Neuroscience and Clinical Neuropsychology**

Università degli studi di Padova, Padua, Italy

Thesis title: "A kinematic analysis of motor correction in individuals with high and low trait impulsivity". 110/110 cum laude
Supervisors: Giuseppe Sartori, Umberto Castiello

2010– 2013 **BSc in Psychology**

Università La Sapienza di Roma, Rome, Italy

Thesis title: "Odour-evoked autobiographical memory". 108/110
Supervisor: Clelia Rossi-Arnaud

2004– 2009 **Diploma**

Liceo ginnasio Dante, Florence, Italy
100/100

RESEARCH EXPERIENCE

03/2021 – 06/2021 **Visiting Research Student**
03/2020 – 09/2020

School of Biological and Health Systems Engineering,
Arizona State University, Tempe, AZ, USA.

Project: Development and validation of an experimental and analytical approach aimed at exploring the link between action, perception and decision-making from a motor, psychophysical and neurophysiological standpoint. The main characteristic of such an experimental approach is the establishment of an

action continuum from interaction with the stimulus to decision-making processes to response completion: the continuous tracking of motor and physiological variables (e.g., kinematics, grip force, EMG) throughout the interaction time allows to correlate them with psychophysical measures (i.e., perceptual behaviour) and to explore the influence of motor components on perceptual decision formation over time.

10/2010 – 08/2014 **Erasmus+ for traineeship**

Sackler Centre for Consciousness Science,
Sussex University, Brighton, UK

Training for the basic design and implementation of behavioural experiments, including programming of experimental tasks, EEG recording and data collection. Collaboration in experiments investigating human time perception, with particular focus on the relationship between time perception and interoception, e.g., heartbeat perception.

LANGUAGES

Mother tongue: **Italian**

Other languages: **English**
listening: C1, reading: C2, speaking: B2, writing: C1

TECHNICAL SKILLS

Matlab, Python, Psychtoolbox

Statistical computing: R and SPSS

fMRI data analysis: AFNI, FSL, SPM

Motion tracking systems and kinematic analysis: SMART-DX [BTS]

PUBLICATIONS

"**Voxel Sensitivity to Kinematic and Object-related Features During Action Observation**"

Simonelli F., Handjaras G., Benuzzi F., Bernarni G., Leo A., Duzzi D. …& Ricciardi E.

In preparation

"**Action-perception continuum: A novel approach for investigating the interplay between action, perception and decision-making.**"

Toma S.*, Simonelli F.*, Delis I. & Santello M.

In preparation

CONFERENCES

06/2020 **OHBM – Organization for Human Brain Mapping**

virtual edition

Poster presentation: “Voxel Sensitivity to Kinematic and Object-related Features During Action Observation”.

11/2019 **SIPF – Società Italiana di Psicofisiologia & Neuroscienze Cognitive**

Ferrara, Italy

Poster presentation: “Interaction of transitivity and meaning during action observation Poster presentation”.

06/2019 **OHBM – Organization for Human Brain Mapping**

Rome, Italy

Poster presentation: “Interaction of transitivity and meaning during action observation Poster presentation”.