

# Federica Mauro

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## EDUCATION

- Sapienza University of Rome Rome, Italy**
  - ***Ph.D. in Cognitive Psychology, Psychophysiology and Personality*** **Sept. 2014**  
Thesis: "Perceptual consequences of brain oscillations"  
Tutor: Prof. Antonino Raffone  
Co-Tutor: Prof. Marta Olivetti Belardinelli, Prof. Valerio Santangelo
- Sapienza University of Rome Rome, Italy**
  - ***M.Sc. in Diagnosis and Rehabilitation of Cognitive Disorders*** **2010**  
Thesis: "EEG sleep oscillations and dream recall"  
Tutor: Prof. Luigi De Gennaro  
Co-Tutor: Prof. Laura Petrosini
- Sapienza University of Rome Rome, Italy**
  - ***B.Sc. in Psychological Sciences and Technics for the Analysis of Normal and Pathological Cognitive Processes*** **2008**  
Thesis: "Sleep fragmentation indexes after total sleep deprivation"  
Tutor: Prof. Luigi De Gennaro

## RESEARCH EXPERIENCE

### **Centre de Recherche Cerveu & Cognition Toulouse, France**

**Ph.D Research , 2013 - 2014**

**Project:** Examining the perceptual consequences of brain oscillations

**Tutor:** Prof. Rufin VanRullen

**Results:** we were able to show that the link between neuronal oscillations and geometric patterns is bidirectional: flicker stimulation induces frequency-specific geometric hallucinations, and the same statically presented geometric shapes selectively enhance the same brain oscillatory frequencies.

### **Sapienza University of Rome Rome, Italy**

**Ph.D Research , 2010 - 2012**

**Project:** Examining the effects of intensive Vipassana meditation practice on the Wagon Wheel Illusion.

**Tutor:** Prof. Antonino Raffone, in collaboration with Prof. Henk Barendregt (Radboud University) and Prof. Rufin VanRunllen (CerCo)

**Results:** we attempted to investigate the effects of intensive (attentional) meditation training over the wagon wheel stimulus temporal resolution, associated with the perception of the illusion (VanRullen et al., 2005b).

## M.Sc. Research, 2010

**Project:** Investigating EEG correlates of dream recall from REM and NREM sleep

**Tutor:** Prof. Luigi De Gennaro

**Results:** we were able show that recalling dreams after awakening from non-rapid eye movement and rapid eye movement sleep is associated with different brain oscillations, namely frontal 5-7 Hz (theta) activity during REM and lower 8-12 Hz (alpha) during stage 2 NREM. Such results suggest that the encoding and recall of episodic memories during sleep are similar to those of the awake brain.

## TRAINING SCHOOLS

- ECHARP - Ecole d'Hiver d'Apprentissage à la Recherche dans les Pyrénées (29th Jan. - 1st Feb. 2013)
- ESCOP Summer School on Dynamic of Consciousness (20<sup>th</sup> - 28<sup>th</sup> July 2012; Zakopane, Kiry, Poland)
- AIP Summer School on Statistical Methodology - Monte Carlo and Bootstrap methods in Multivariate Analysis (2<sup>nd</sup> - 7<sup>th</sup> July 2012; Bertinoro, Italy)

## PROFESSIONAL EXPERIENCE

- **Since Sept. 2014:** Co-instructor for the Mindfulness Based Stress Reduction Protocol at Sapienza University of Rome, Department of Psychology - Rome, Italy.
- **2014:** Member of the organizing committee of the 6<sup>th</sup> International Conference on Spatial Cognition (Sapienza University of Rome, Department of Psychology - Rome, Italy).
- **Since 2014:** Reviewer for Cognitive Processing.
- **Since 2014:** Teaching fellow for the Master in “Mindfulness: Practice, Clinics and Neuroscience” (Sapienza University of Rome, Department of Psychology - Rome, Italy).
- **2013:** Member of the organizing committee of the 1<sup>st</sup> International Conference on Mindfulness (Sapienza University of Rome, Department of Psychology - Rome, Italy) <https://www.ahwinstitute.com/first-international-conference-on-mindfulness>
- **2012:** Member of the organizing committee of the 5<sup>th</sup> International Conference on Spatial Cognition (Sapienza University of Rome, Department of Psychology - Rome, Italy) <http://w3.uniroma1.it/icsc/2012/>
- **Since 2011:** Teaching fellow in Cognitive Psychology and General Psychology at Sapienza University of Rome (Italy).

## PUBLICATIONS

Moroni F., Marzano C., **Mauro F.**, Curcio G., Ferrara M., De Gennaro L. (2010). “Theta and alpha oscillations during sleep predict subsequent dream recall”. *Journal of Sleep Research* 19 (suppl. 1) P364.

Marzano C., Ferrara M., **Mauro F.**, Moroni F., Gorgoni M., Tempesta D., Cipolli C., De Gennaro L. (2011). “Recalling and forgetting dreams: theta and alpha oscillations during sleep predict subsequent dream recall”. *J Neurosci*; 31:6674-6683.

**Mauro F.**, Raffone A. and VanRullen R. (2014). “A bidirectional link between neuronal oscillations and geometrical patterns”. *Journal of Vision*; 14(10): 53-53.

## OTHER EXPERIENCES

- **2014:** Scientific Explainer for Genoa Science Festival (Genoa, Italy).
- **2012:** Qualified as Instructor for MBSR (Mindfulness Based Stress Reduction protocols; Kabat Zinn, 1992) - Italian Center for Mindfulness Studies (Rome, Italy).
- **2011:** Master in Human Resources - Forma Mentis (Rome, Italy).
- **2009 - 2010:** Scientific Explainer for Genoa Science Festival (Genoa, Italy).
- **2009:** EASE - European Academy for Scientific Explainers, Genoa Science Festival (Cornigliano Ligure, Genoa, Italy).

## SKILLS

- **Experimental skills:** EEG (Biosemi, BrainAmp); Psychophysics.
- **Computer skills:** Matlab (PsychToolbox, EEGLab); PsychoPy; Statistica; R; StatView; SPSS.
- **Languages:** Italian (native); English (fluent); French (scholar).