
Matteo De Matola

Education & Training

- January 2022 - ongoing

IRCCS Istituto Centro San Giovanni di Dio - Fatebenefratelli

Research intern at [Neurophysiology Lab](#)

Supervisor: Agnese Zazio, PhD

Fields of Ongoing Training:

- ◆ Electromyography (EMG)
 - ◆ Electroencephalography (EEG)
 - ◆ Transcranial magnetic stimulation (TMS)
 - * TMS-EEG to study cortical connectivity and plasticity
 - * rTMS as experimental treatment for Alzheimer's disease
 - ◆ Signal processing with Matlab
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- November 2021

University of Padova

Master's degree in [Cognitive Neuroscience & Clinical Neuropsychology](#)

Final grade: 110/110

- April 2021 - June 2021

University of Padova

Research intern at Department of General Psychology

Supervisor: Alberto Testolin, PhD

During this internship, I investigated the biological plausibility of deep learning-based artificial intelligence and ways to increase it using neurophysiological constraints. That was part of a larger, one-year effort that culminated in my master's thesis, "*A study of spiking neural networks for biologically plausible deep learning*".

- October 2017 - June 2018

During this academic year I took supplementary courses in quantitative subjects. I had a strong interest in computational neuroscience and artificial intelligence, but my previous education had not provided me with a skillset to tackle their study. Thus, I decided to take the time to lay some mathematical foundations.

Courses taken:

- ◆ Calculus 1
Computer Engineering curriculum, University of Padova
- ◆ Linear Algebra and Geometry
Computer Engineering curriculum, University of Padova
- ◆ Biological Physics with Complementary Mathematics
Molecular Biology curriculum, University of Padova

- September 2017

University of Padova

Bachelor's degree in [Cognitive Psychology & Psychobiology](#)

Final grade: 109/110

- October 2016 - April 2017

University of Padova

Research intern at [Comparative Cognition Lab](#)

Supervisor: prof. Lucia Regolin

I took part in a research project investigating the effects of early exposure to visual sequences on the development of statistical learning and generalization abilities in newborn domestic chicks. The result was my bachelor's thesis, titled "*Effects of visual imprinting on generalization of regularities in newborn chicks (Gallus gallus)*"

- September 2015 - February 2016

University of Liverpool (UK)

Erasmus+ student

Programming Languages & Skills

▪ Python

- ◆ Scientific computing & data science libraries:
 1. [NumPy](#)
 2. [pandas](#)
 3. [scikit-learn](#)
 4. [Matplotlib](#)

- ◆ Deep learning libraries:
 1. [PyTorch](#)
 2. [skorch](#)
 3. [SpykeTorch](#)

- ◆ Completed computer vision and control projects using:
 1. Multilayer perceptrons
 2. Convolutional neural networks
 3. Spiking convolutional neural networks
 4. Deterministic & variational autoencoders
 5. Deep reinforcement learning
 - * Q-learning
 - * Double duelling Q networks
 - * Prioritized experience replay

▪ R

- ◆ Data wrangling
- ◆ Linear models

Other Computing Skills

- LaTeX
- Microsoft Office
- Cloud computing platforms:
 - ◆ Google Colab
 - ◆ Google Cloud Computing

Other Academic Experience

- From November 2018 to August 2020 I have served as *ad interim* student representative for my master's program. It was my responsibility to monitor the flow and quality of student experience, make proposals towards their improvement, detect anomalies and collaborate with the administration to correct them.
- I am a co-organizer of Padova Open Neuroscience Symposium (PONS), an international symposium on psychology and neuroscience. The first edition took place from 7-9 October 2021 at the University of Padova's School of Psychology. It was funded by the same University as a meritorious cultural initiative of students. Speakers included senior scholars and young researchers from seven European institutions. Beside co-inventing the event, my responsibilities included inviting speakers, writing a successful grant application, interacting with the University for logistics and administration, setting up and managing the event's website and registration system, advertising the event, and mastering ceremonies. All information about PONS (including talk and workshop materials) are available at the [event's website](#).

Language Skills

- **Italian:** Native
- **English:** IELTS-certified

Assessment Date	Score
17 April 2021	8.0 (C1)

Last update: 31 January 2022