



Davide Cortinovis

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● EDUCATION AND TRAINING

01/11/2021 – CURRENT Trento, Italy

PH.D. CANDIDATE, PHD PROGRAMME IN "COGNITIVE AND BRAIN SCIENCES" University of Trento

During my PhD I investigate the ability of Convolutional Neural Networks to capture visual cortex representations, with the aim to fill the gap between biological and artificial systems in performing object recognition.

Website <https://www.unitn.it/drcimec/> | **Field of study** Cognitive Neuroscience

15/04/2024 – CURRENT Giessen, Germany

PHD VISITING PERIOD Justus Liebig University, Giessen

I spent three months in Martin Hebart's lab as a visiting PhD student, where I analysed an fMRI dataset and compared it with a series of artificial neural networks.

Website <https://www.uni-giessen.de/de>

22/09/2019 – 13/10/2021 Trento, Italy

MASTER OF SCIENCE University of Trento

Courses: Foundations of Cognitive Neuroscience; Advanced Cognitive Neuroscience, Hands on fMRI; Hands on MEG; Programming (MATLAB); Research Design and Statistics; Motor Neuroscience; Machine Learning; Brain Imaging; Neuroanatomy.

Internship: Investigating dimensions underlying object space in human visual cortex.

During the internship I conducted multivariate analyses on previously collected fMRI data. I also analyzed with representational similarity analysis the representations of a series of convolutional neural networks using MATLAB. The results of the analyses will be further extended in my thesis project. Moreover, they will be compared with representations in the human inferotemporal cortex. Please see the attached report of my internship project.

Thesis Project: During my thesis I compared the responses of a series of neural networks, a series of computational models, and behavioural judgments to a series of visual stimuli. The aim is to understand the representations of the networks and of humans regarding body parts of different species. Computational and behavioural data will then be compared with fMRI neural data using representational similarity analysis, to investigate the information contained in the human IT cortex and to test if the neural networks are a good model of the ventral visual stream.

Address via Calepina, 14 , 38122, Trento, Italy | **Website** <https://www.unitn.it/en> |

Field of study Cognitive Neuroscience | **Final grade** 110 with honours | **Type of credits** ECTS |

Number of credits 120 |

Thesis The organization of body-parts representations in Deep Convolutional Neural Networks

17/09/2018 – 24/01/2019 Leeds, United Kingdom

STUDY ABROAD WITH ERASMUS PROJECT University of Leeds

Health Psychology; Cognitive Psychology; Clinical Psychology; Cognitive Neuroscience of Action and Perception.

Address University of Leeds, LS2 9JY, Leeds, United Kingdom | **Website** <https://www.leeds.ac.uk/> |

Field of study Psychology | **Type of credits** ECTS | **Number of credits** 25

30/09/2016 – 24/09/2019 Bergamo, Italy

BACHELOR OF SCIENCE University of Bergamo

Cognitive Psychology; Developmental Psychology; Social Psychology; Occupational Psychology; Clinical Psychology; Cognitive Neuroscience; Anthropology; Pedagogy; Philosophy; Foundations of Computer Science; Research Design & Statistics.

Address Via Salvecchio 19, 24129, Bergamo, Italy | **Website** en.unibg.it | **Field of study** Psychology |

Final grade 110 with honours | **Type of credits** ECTS | **Number of credits** 180 |

Thesis Virtual Reality as a support tool for people with Autism Spectrum Disorder

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1
FRENCH	B1	B1	B1	B1	B1
SPANISH	B2	B2	B1	B1	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

MATLAB&Simulink | Microsoft Office(Microsoft Excel, Microsoft Word, Microsoft Powerpoint, Microsoft Access)

● **CONFERENCES AND SEMINARS**

19/05/2023 – 24/05/2023 St. Pete Beach - Florida - USA

Vision Sciences Society

Poster presentation: The role of action-related properties in shaping the object space in the biological and artificial brain

Link <https://www.visionsciences.org/>

04/05/2023 – 06/05/2023 Rovereto, Italy

Concepts, Actions, Objects - CAOS

Poster Presentation: The role of action-related properties in shaping the object space in the biological and artificial brain

Link <https://event.unitn.it/cimec-caos/>

28/08/2022 – 01/09/2022 Nijmegen - Netherlands

European Conference on Visual Perception

Poster presentation: The role of action-related properties in shaping the object space in the biological and artificial brain

Link <https://2022.ecvp.eu/>

24/09/2023 – 25/09/2023 Osnabrueck - Germany

Neuro-AI-Talks (NEAT)

Poster Presentation: Unveiling the Dimensions of Action Object Space: Insights from fMRI and DCNNs

Link <https://www.kietzmannlab.org/neat2023/>

22/08/2021 – 27/08/2021 Online conference

European Conference on Visual Perception

Poster presentation: The organization of body-parts representations in Deep Convolutional Neural Networks

Link <https://ecvp2021.org/>

09/05/2024 – 11/05/2024 Rovereto, Italy

Concepts, Actions, Objects - CAOS

Poster presentation: The action and animacy feature spaces reveal a functional dissociation between lateral and ventral occipitotemporal cortex

17/03/2024 – 20/03/2024 Regensburg, Germany

TeaP

Oral presentation: Category-selectivity, again: Hand-selective clusters in visual cortex support action-related behavioural goals

● **WORK EXPERIENCE**

16/03/2023 – 12/07/2023 Rovereto, Italy

CLASSROOM TUTOR UNIVERSITY OF TRENTO

I was the assistant for a professor teaching statistics at University of Trento.

The lectures involved teaching how to use MATLAB programming language to perform statistical analysis on a variety of data, including neural (fMRI and EEG) and behavioural data.

The activities I conducted included: 1) helping the teacher preparing the lecture material; 2) explaining and helping students with their exercises and assignments; 3) correcting and evaluating the final exams.