

# Curriculum Vitae

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## PERSONAL DATA

Name **Dr. Diego FASOLI (Ph.D. in Informatics)**  
Website <https://neuroinformatics.it>  
Email [diego.fasoli@neuroinformatics.it](mailto:diego.fasoli@neuroinformatics.it)

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## EXPERTISE

Areas of competence **Computational Neuroscience** (13 years, 10 papers published in peer-reviewed journals ([link](#)) + 2 papers in preparation), **Artificial Intelligence, GPUs, Python.**

Collaborations **7 international projects** on neural networks (e.g. [HBP](#)).

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## HARD SKILLS

Language Italian (native), English (fluent), French (intermediate).

Script Coding Since 2010, I have been writing algorithms in **Python** for:

- **machine/deep learning** (TensorFlow, Scikit-Learn)
- **natural large processing** (Bard-API, NLTK, Hugging Face)
- **computer vision** (OpenCV, YOLO, DeepFace, MediaPipe, etc.)
- **hardware acceleration through GPUs** (Numba)
- **data analysis/visualization** (Pandas, Numpy, Scipy, Matplotlib, etc.)

Mathematical Background **Machine/deep learning theory, biological & artificial neural network models**, probability theory, dynamical systems, bifurcation theory, graph theory, etc.

Data Analysis **Classification, clustering & community detection**, regression, dimensional reduction, model fitting, statistical analysis of fMRI data, spectral analysis of time series, etc.

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## SOFT SKILLS

Self-learning capability, ability to work as a team and independently, excellent presentation skills and ability to explain sophisticated scientific concepts to non-specialists.

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## WORK HISTORY

01/2022 – Present Freelance software developer (Italy (01/2022 - 07/2022) and **Hong Kong (08/2022 - Present)**). In my work I combine artificial intelligence, data science, and hardware acceleration through GPUs, to solve real-world problems in industry, business, and scientific research.

10/2013 – 12/2021 Postdoctoral researcher at the Laboratory of Neural Computation of the Italian Institute of Technology ([IIT](#)) in Rovereto, Italy, led at the time by [Dr. Stefano Panzeri](#).

07/2016 – 07/2017 Visiting postdoctoral researcher at the [Computational and Theoretical Neuroscience Group](#) of the Pompeu Fabra University ([UPF](#)) in Barcelona, Spain, led by [Dr. Gustavo Deco](#).

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## **EDUCATION**

01/2010 – 09/2013 Ph.D. in Informatics at the University of Nice-Sophia Antipolis in France, under the supervision of [Dr. Olivier Faugeras](#). My Ph.D. was funded by the French Institute for Research in Computer Science and Automation ([INRIA](#)), with a **Marie Curie FACETS-ITN fellowship** (FP7-PEOPLE-ITN-2008 under the Grant #237955).

*FINAL MARK: Très Honorable* (the highest distinction in the French academic system).

01/2005 – 01/2007 Master's Degree in Physics at the Catholic University of the Sacred Heart ([UCSC](#)) in Brescia (Italy).

*FINAL MARK: magna cum laude* (110/110 e lode). I was also granted a **special mention** by the board of trustees of UCSC ([link](#)).

*AVERAGE EXAM GRADE: 30.875 out of 30* (a 30 "cum laude" is awarded the value of 31).

09/2001 – 12/2004 Bachelor's Degree in Physics at the Catholic University of the Sacred Heart ([UCSC](#)) in Brescia (Italy).

*FINAL MARK: magna cum laude* (110/110 e lode).

09/1996 – 06/2001 Diploma in Electronics and Telecommunications at the Technical Institute Luigi Cerebotani in Lonato del Garda (Italy).

*FINAL MARK: 100/100.*

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## **SUPERVISED STUDENTS & TEACHING ACTIVITY**

05/2023 – Present I have been working on a series of videos to teach Neuroscience and Artificial Intelligence (see [this link to the trailer video](#)).

10/2013 – 12/2021 Journal clubs, progress reports, and presentations to colleagues and **Ph.D. students** at [IIT](#) in Rovereto (Italy).

10/2018 – 03/2019 M. Ranjan (**master's student at the University of Trento**), research project at [IIT](#) in Rovereto (Italy).

05/2014 – 12/2014 D. Corti, *Oscillatory behavior in asymmetric Hopfield networks*, **Politecnico di Milano, Master's Thesis**.

06/2008 – 06/2009 Private lessons of mathematics and physics to **high school, bachelor's, and master's students** (at least 3 hours/day).

09/2007 – 11/2007 High school teacher of mathematics, physics and informatics at Scuola Bottega Artigiani-c.f.a. in San Polo, Brescia (Italy).