Filippo Moro

Research Scientist

Postdoctoral researcher at the UZH/ETH with 5+ years of experience at the intersection of machine learning, neuromorphic engineering, and efficient AI systems. Passionate about designing scalable, powerful, efficient brain-inspired models for real-world applications.

- Zürich, Switzerland
- filippomoro.it@gmail.com
- +39 340 21 56 770

EXPERIENCE

- **2023 - Present: POSTDOC**, Institute of Neuroinformatics (UZH and ETH), Zürich (CH)
  - Designed resource-efficient neural networks and **algorithms** for edge **machine learning**
  - **Mentored** 2 master's students, and shared projects with multiple Ph.D. students in the Lab
  - Designed and **led the tapeout** of a neuromorphic analog chip with non-volatile memory
  - **Lectured** in graduate-level courses on neuromorphic engineering at ETH

- **2019 - 2023: Ph.D Student**, CEA Leti, Grenoble (FR)
  - Adapted machine learning algorithms for execution on **non-volatile memory-based hardware**
  - **Developed complete edge ML systems** integrating embedded sensors and processing units
  - **Designed** and tested crossbar arrays of non-volatile memory for ML applications
  - **Mentored** 2 master's students and **collaborated** with startups and external Professors (Prof. Giacomo Indiveri and Prof. Melika Payvand)

- **2019 : Thesis Project**, Institute of Neuroinformatics (UZH and ETH), Zürich (CH)
  - Designed a biologically plausible recurrent neural network with local plasticity mechanisms
  - Adapted the network to a hardware implementation based on non-volatile memory

EDUCATION

- **2019-2023: Ph.D. Degree** in Electronic Engineering - Université Grenoble Alpes, France
- **2017-2019: Master of Science** in Nanotechnologies for ICTs - Politecnico di Torino, Italy
- **2014-2017: Bachelor's Degree** in Physical Engineering - Politecnico di Torino, Italy

TECHNICAL EXPERTISE

Programming languages: **Python** (proficient), C (basic), Matlab (basic)
ML Frameworks: **PyTorch, JAX,** Numpy, Scikit-learn
Tools: Git, Linux, HPC clusters
Hardware: Cadence Virtuoso, non-volatile memory, analog chip design (intermediate)

LANGUAGES

English (proficient), **Italian** (native), **French** (fluent), **German** (basic)