

Jacopo CANTON

PERSONAL INFORMATION

PLACE AND DATE OF BIRTH: Merate (LC), Italy — 1 March 1989
ADDRESS: Seestrasse 311, 8038, Zürich, Switzerland
PHONE: +41 78 781 4142
EMAIL: jacopo.canton@gmail.com



PROFILE

Detail oriented researcher with a passion for complex physics simulations, nonlinear chaotic systems, and machine learning. Well-versed in writing clean and maintainable code. Seeking to take a career step in the R&D engineering industry.

EMPLOYMENT AND EDUCATION

ETH Zürich (CH) 3/2020 - current
Post-doc with ETHZ [fellowship](#) at [IAC](#).

- Developed numerical analysis tools to investigate the resolution-dependent feedback between thermodynamical processes and clouds structure and evolution, directly interfacing with the [COSMO](#) model.

ETH Zürich (CH) 8/2018 - 2/2020
Post-doc with ETHZ [fellowship](#) at [CSE-lab](#).

- Developed a Machine Learning model to improve fluid simulation performance on coarse grids. Employed Reinforcement- and Supervised Learning to develop the model. Coupled in-house C++ reinforcement learning software with Fortran CFD codes.
- Teaching assistant for HPC.

KTH Stockholm (SWE) 3/2014 - 6/2018
PhD student at the [FLOW](#) institute.

- [Thesis](#) on the numerical study of Transitional and Turbulent Flow in bent pipes. Expanded the Spectral Elements simulation codes (Fortran & Python), collected and analysed the results, leading to eight journal articles and sixteen conference presentations.
- Won the GKN aerospace award in mechanics.
- Awarded two travel scholarships.
- Collaborated with Tetra Pak R&D.
- Teaching assistant for CFD.
- Co-supervisor of three Masters theses.

Argonne National Laboratories (USA) 6-7/2016
Visiting scholar researcher.

- Participated in the implementation of nonlinear adjoints in Nek5000 (Fortran Spectral Element CFD code).

MSc Aerospace Engineering 9/2008 - 12/2013
Politecnico di Milano (IT) 106/110.

- Thesis on the development of a Finite Element C & Fortran simulation code for flow stability analysis, leading to one journal article.

Nettronix (IT) 1-3/2012
Internship: data analysis and optics design.

- Development of a software for monitoring TV satellites and enabling automated design inputs.

OTHER PROJECTS

pymech ([on GitHub](#))

Python package for manipulating meshes and data fields of CFD codes. Ongoing development in collaboration with fellow PhD students, started in 2017.

Mech thesis ([on GitHub](#))

L^AT_EX class and template for PhD theses. Developed in collaboration with a fellow PhD student in 2016. Used by all following PhDs at the Mech. department of KTH.

RL with MuJoCo

Hands-on Reinforcement Learning tutorial in Python using PyTorch and MuJoCo. Co-developed with CSE-lab colleagues.

SKILLS

Programming languages & software

Proficient: Python, Fortran, Git, VisIt, ParaView, COSMO, Nek5000. *Intermediate:* C++, OpenFOAM, MPI, OpenMP, bash. *Prior experience:* Comsol.

Languages

Native: Italian. *Proficient:* English. *Basic:* French, Swedish, German.

Soft skills

Expert in analysing and breaking down complex problems and designing effective, robust solutions. Excellent learner and teacher, able to explain complex subjects to a non-technical audience. Capable communicator, experienced in listening carefully to feedback from coworkers and adapting my strategy.

ONLINE PROFILES

[Website](#) [Google Scholar](#) [GitHub](#) [LinkedIn](#)