

Riccardo MILANI | RESUME

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PhD, Mathematical Engineer

»»» Education

- 2017 - 2020 **PhD in Applied Mathematics** [École des Ponts ParisTech, INRIA, and EDF R&D](#)
- » *Compatible Discrete Operator* schemes for the unsteady incompressible Navier–Stokes equations. Advisors: Ern Alexandre (ENPC, INRIA) and Bonelle Jérôme (EDF R&D)
 - » Peer-reviewed article: *Milani, Bonelle, Ern; Artificial compressibility methods for the incompressible Navier–Stokes equations using lowest-order face-based schemes on polytopal meshes*, 2022, CMAM, 22(1), 133–154
- 2013 - 2017 **Cycle of Polytechnicien Engineer** [École polytechnique](#)
- » Education cycle equivalent to BSc and MSc
 - » Specialization: Applied Mathematics - PDEs
- 2010 - 2017 **BSc and MSc in Mathematical Engineering** [Politecnico di Milano](#)
- » *Laurea Triennale* and *Magistrale* in Mathematical Engineering. Specialization: Applied Mathematics & Computer Sciences
 - » Score: 110 and honors/110 (BSc and MSc). Awarded "Best freshman" (2010) after the results of the entry test and first semester exams

»»» Experience

- 01/'21-04/'22 **Postdoctoral researcher** [CEREA - École des Ponts ParisTech](#)
- » SCIENCES²⁰²⁴, the physics of sports. Archery: training support and performance optimization
 - » CFD simulations of arrow flights in real-life conditions, statistical analysis, computer vision
- 09/'16-02/'17 **Research Internship, 6 months** [EDF R&D, Chatou](#)
- » Development and numerical analysis of a 3D HHO method for anisotropic diffusion
 - » Integration within the industrial code *Code_Saturne* (C); parallelization by OpenMP
- 03-08/2015 **Research Internship, 5 months** [US ESI R&D, San Diego](#)
- » First steps into the development of a new method for a fast computation of the vibro-acoustic response of a system
 - » Validations against software simulations
- 08/2014 **Summer Internship** [VTB Bank, Irkutsk](#)
- » Foreign Exchange Control Group
 - » Support in the preparation and final validation of files about international contracts, records management

»»» Programming skills

- » **Good knowledge:** C/C++, OpenMP, MPI, \LaTeX , Unix systems, MATLAB, Git/SVN, python, *Code_Saturne*, shell scripting, Office
- » **Basic knowledge:** Fortran, OpenCV, R, SALOME, FreeFem++, Java

»»» Languages

- » **Italian:** Native
- » **English:** Fluent, FCE certificate, B2
- » **French:** Fluent, TCF certificate, C1
- » **Russian:** Conversational level

»»» Extracurricular activities

- » Google FooBar Challenge invitation
- » Head of a 40-student dormitory ('15)
- » General-treasurer of AIM ('16)
- » PhD-students representative for EDF-MFEE ('18-'20)
- » Running (Paris marathon '19)

»»» Volunteering and other Interests

- » Summer work camps (Kenya '10, '11; Rwanda '17)
- » Member of Smileland, which backs an orphans village in Congo ('15-'22)
- » Italian classes for refugees ('15)