

Mario Dagrada

Scientific software developer & manager

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The Netherlands

* 24 July 1989

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Relevant Skills

- **Core competencies:** software architecture and development, cloud computing, scientific machine learning, engineers management and recruitment, tech leadership
- **Programming:** Python (5 years), C and C++17 (6 years), Java (1 year), Julia, Typescript, Lua, Bash
- **Technologies:** AWS (3 years), Docker and Kubernetes (3 years), Terraform and IaC (3 years), FastAPI, Django, gRPC, MPI, OpenMP, PSQ, Elasticsearch, Azure cloud (basics), Kafka, RabbitMQ, REST APIs, React
- **Machine learning:** Scientific ML, time series analysis, graph ML, PyTorch, scikit-learn, Jax
- **Soft skills:** autonomy and organization, popularization of technical topics, project and people management, curiosity and continuous learning spirit

Experience

2020-now **Engineering Lead, PASQAL**, Amsterdam (The Netherlands)

- Released the first company cloud software product for quantum chemistry
- Designed and led the integration of the libraries with cloud services in a hybrid HPC and cloud environment
- Led and contributed to the development of several internal quantum libraries now used by 30+ scientists and clients
- Scaled the quantum solutions team from 2 to 12 people

Technology stack: Python, FastAPI, Elasticsearch, PSQ, scikit-learn, PyTorch, Jax, Julia, AWS, Docker & Kubernetes, Terraform, Slurm

2018-2020 **Senior R&D Software Engineer, Forescout Technologies**, Eindhoven (The Netherlands)

- developed MVP for a new product line for threat investigation now used in production
- redesigned distributed cloud architecture for product core components
- managed the product innovation pipeline for the industrial business unit
- managed technical work packages for two European research projects

Technology stack: Python, Flask, Java, PSQ, React, Typescript, AWS, Docker, gRPC, scikit-learn

- 2016–2018 **R&D Software Engineer**, *Atos Bull*, Grenoble (France)
- development and optimization of distributed applications for physics simulations
 - contributed to the OpenMPI communication library for the BXL interconnect project
 - Scrum master for a team of 8 developers

Technology stack: C, C++, MPI and OpenMP, Python

- 2013–2016 **Research Scientist**, *Université Pierre et Marie Curie*, Paris (France)

- developed a distributed software for material simulations
- numerical simulations and data analysis for material science

Technology stack: Fortran, C++, Python, MPI and OpenMP

Education

- 2013–2016 **Ph.D in Computational Physics**, *Université Pierre et Marie Curie*, Paris (France)

- 2011–2013 **International Master program in Physics of Complex Systems**, *Politecnico di Torino*, Turin (Italy), *Université de Paris Sud-Orsay* and *École Normale Supérieure de Cachan*, Paris (France), 110/110 with honors

- 2009–2011 **Bachelor in Physical Engineering**, *Politecnico di Torino*, Turin (Italy), 110/110 with honors

Languages

English	Advanced	<i>Level C1</i>
French	Advanced	<i>Level C1</i>
Spanish	Advanced	<i>Level B2</i>
Dutch	Basic	<i>Level A2</i>
Italian	Mother tongue	

Outside work

- Languages
- Competitive tennis
- Currently working toward private plane piloting license