

PAOLO VIVIANI

Research Engineer

📅 June 14th, 1989 @ pviviani@unito.it ☎ +39 329 1865014 📍 Torino, ITALY

EDUCATION

B.Sc. in Physics

University of Torino, 104/110

📅 2011 📍 Collegio Universitario "R. Einaudi", Torino

Scholarship winner: "Piano Lauree Scientifiche", granted by Società Italiana di Fisica.

M.Sc. in Theoretical physics

University of Torino, 104/110

📅 2015 📍 Collegio Universitario "R. Einaudi", Torino

Ph.D. in Computer Science

University of Torino, Computer Science Dept.

📅 2015 - Ongoing 📍 Torino, IT

Supervisor: Marco Aldinucci. Supported by Noesis Solutions.

EXPERIENCE

Noesis Solutions

Research Engineer

📅 April 2015 - Ongoing 📍 Novara, IT

- Development of deep learning-derived methodologies for engineering.
- Re-definition of the internal development and deployment toolstack for numerical computations, with focus on performance and maintainability. Focus on C++ and Python linear algebra tools.
- Investigation of cloud and container technologies for the deployment of engineering workflows.
- Technical point of contact for several European research projects.

Research Projects

MACH

ITEA2 project

📅 April 2015 - December 2016 🌐 www.mach-project.org

Fortissimo 2

Horizon 2020-FoF project

📅 February 2016 - Ongoing 🌐 www.fortissimo-project.eu

CloudFlow

FP7-I4MS project

📅 March 2016 - May 2017 🌐 www.eu-cloudflow.eu

Blockchain for online Service Security (BoSS)

IMEC-ICON flemish project

📅 March 2018 - ongoing

FIELDS OF INTEREST

📄 High Performance Computing

📈 Systems for Deep learning

☁ Containers and Cloud deployment

SKILLS

Fields

Parallel Computing ●●●●●●
GPU Computing ●●●●●●
Cloud technologies ●●●●●●
Machine Learning ●●●●●●

Programming

C++ ●●●●●●
Python ●●●●●●
Parallel programming tools ●●●●●●
CUDA ●●●●●●
Numerical Libraries ●●●●●●

Other software: Keras, CNTK, MxNet, Apache Spark, Mathematica, Git, Latex.

Systems and Networks

LINUX ●●●●●●
TCP/IP ●●●●●●
Openstack ●●●●●●
Docker ●●●●●●

CISCO CCNA course completed in 2008.

Soft

Presentations ●●●●●●
Factorization of problems ●●●●●●
Effort planning ●●●●●●
Workaround ●●●●●●

LANGUAGES

Italian ●●●●●●

English ●●●●●●

French ●●●●●●

ACADEMIC

Publications

- Aldinucci, Marco et al. (May 2018). "HPC4AI, an AI-on-demand federated platform endeavour". In: *ACM Computing Frontiers*. Ischia, Italy.
- Tordini, Fabio et al. (2018). "Scientific Workflows on Clouds with Heterogeneous and Preemptible Instances". In: *Proc. of the Intl. Conference on Parallel Computing, ParCo 2017, 12-15 September 2017, Bologna, Italy*. Advances in Parallel Computing. IOS Press.
- Viviani, P. et al. (2018). "A Flexible Numerical Framework for Engineering—A Response Surface Modelling Application". In: *Improved Performance of Materials: Design and Experimental Approaches*. Cham: Springer International Publishing, pp. 93–106.
- Viviani, Paolo, Maurizio Drocco, and Marco Aldinucci (2018). "Scaling Dense Linear Algebra on Multicore and Beyond: a Survey". In: *Proc. of 26th Euromicro Intl. Conference on Parallel Distributed and network-based Processing (PDP)*. Cambridge, United Kingdom: IEEE.
- Viviani, Paolo, Massimo Torquati, et al. (Apr. 2017). "Multiple back-end support for the Armadillo linear algebra interface". In: *In proc. of the 32nd ACM Symposium on Applied Computing (SAC)*. Marrakesh, Morocco, pp. 1566–1573.
- Viviani, Paolo, Marco Aldinucci, and Roberto d'Ippolito (July 2016). "An hybrid linear algebra framework for engineering". In: *Advanced Computer Architecture and Compilation for High-Performance and Embedded Systems (ACACES) - Poster Abstracts*. Fiuggi, Italy.
- Viviani, Paolo, Marco Aldinucci, Roberto d'Ippolito, et al. (2016). "A flexible numerical framework for engineering - a Response Surface Modelling application". In: *10th Intl. Conference on Advanced Computational Engineering and Experimenting (ACE-X)*.

Other

- Program Committee member, *16th IEEE International Conference on Scalable Computing and Communications (ScalCom 2016)*
- Program Committee member and session chair, *Euromicro International Conference on Paralle, Distributed, and Network-based Processing (PDP2018)*
- Program Committee member, *Parallel Numerical Methods and Libraries for Heterogeneous Multi/Manycores (Special Session of PDP2018)*
- Program Committee member, *Artifact Evaluation, Euro-Par 2018 Conference*

OTHER EXPERIENCES

Photographer

[OASIS Project](#)

 2008 – 2011  Kharga, Egypt

Archaeological expedition funded by Fondazione Collegio delle Università Milanesi and American University in Cairo.

Photographer

[Collegio Universitario "R. Einaudi"](#)

 2012 – 2014  Torino, Italy

Exchange student

[Tauranga Boy's College](#)

 2006  Tauranga, New Zealand

Scuba Diver

[PADI Advanced Open Water Diver](#)

 From 2004

Track and Field

[Regional and National competitions](#)

 1997 – 2012
