PERSONAL INFORMATION

Luca Tornatore

INAF - Osservatorio Astronomico di Trieste, via G.B. Tiepolo, 11, 34131, Trieste

omissis

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luca.tornatore@inaf.it

Sex omissis | *Date of birth* omissis | *Nationality* omissis

Enterprise	University	EPR
☐ Management Level	☐ Full professor	☐ Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
☐ Mid-Management Level	☐ Associate Professor	☒ Level III Researcher and Technologist
☐ Employee / worker level	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	☐ Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

Since Sept. 2018

Staff researcher and technologist

INAF, Trieste

- Research in Theoretical and Numerical Cosmology and Astrophysics, parallel algorithms and implementations of codes for numerical cosmology, HPC in the frame of European Projects

Research

Since 2017

Appointed professor in HPC

Master in High Performance Computing (https://mhpc.sissa.it), SISSA and ICTP, Trieste
Master Degree in Data Science and Scientific Computing (https://dssc.units.it), University of Trieste

Teaching

2016-2018

Fixed-term researcher

INAF, Trieste

- Development of advanced parallelism and features for prototypes of exa-scale codes in European HPC project ExaNest

Research

2014-2016

Post-Doc

INAF, Trieste

- Code development and optimization for the European Satellite Euclid

Research

2012-2013

Post-Doc

SISSA; Condensed matter sector

- Collaboration on infrastructure for QE code

Research

2012-2013

Fixed-term researcher

Physics Department, University of Trieste

- Developing features and infrastructures of code ecosystem for Cosmological numerical simulations; designing and running simulations campaign on cutting-edge scientific topics

Research

2008-2010

Post-Doc

Physics Department, University of Trieste

- Developing features and infrastructures of code ecosystem for Cosmological numerical simulations; designing and running simulations campaign on cutting-edge scientific topics

Research

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV

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2006, July

Visiting Scientist at MPA

MPA, Munich

- Collaboration in developing parallel codes for cosmological numerical simulations

Research

2006-2007

Post-Doc

SISSA, Astrophysics Sector, Trieste

- Developing physical modules in a parallel code for Numerical cosmological simulations, carrying on simulations and process and analyze produced data.

Research

EDUCATION AND TRAINING

From 2005 to today

Several courses and training in parallel computing and paradigms

Replace with EQF (or other) level if relevant

CINECA, HLRS, LRZ, EPCC, BCC

- Advanced parallel programming, parallel paradigms and algorithms

2005

Ph.D. in Physics (advisor Prof. S. Borgani)

Replace with EQF (or other) level if relevant

University of Trieste

- Theoretical Cosmology and Astrophysics
- Numerical Cosmology and Astrophysics, and related algorithms, practices and data analysis
- Advanced parallel programming

1999

Graduation in Physics (advisor Prof. O. Pantano and Dr. C. Gheller)

Replace with EQF (or other) level if relevant

University of Padova

- Theoretical Cosmology and Astrophysics
- Numerical Cosmology and Astrophysics, and related algorithms, practices and data analysis
- Parallel programming

PERSONAL SKILLS

Mother tongue(s): Italian

Other language(s): English, B2/C1

French, B1

Job-related skills: Deep and sophisticated knowledge and mastering of HPC field.
Complete knowledge and practice of advanced MPI, OpenMP and code design and optimizations on modern architectures.
Very good knowledge of best practices and algorithms design in parallel computing, including NUMA awareness and acceleration.
Excellent knowledge and practice of C in all aspects.
Good knowledge of C++.
Good knowledge of python.
Excellent in learning and acquiring new concepts and competences in HPC field.

Digital skills: Professional level and high proficiency in every aspect related to the usage of digital devices and packages.
Professional level and high proficiency in document/paper editing and data processing with a large variety of tools.
Professional level and high proficiency in using *niX environment, good knowledge in sys-admin *niX environments.

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Other - Participant in 10+ ISCRA-B projects @ CINECA
- Large experience in simulation campaign on several Tier-0 European facilities in the frame of international collaborations
- Participant as INAF responsible in European H2020 FET-HPC project EUPEX, "European Pilot for ExaScale"
- Participant, task and deliverable leader in European Horizon2020 FET-HPC project ExaNeSt , "European Exascale System Interconnect and Storage", http://exanest.eu
- Participant, task and deliverable leader in European Horizon2020 FET-HPC project EuroExa, http://euroexa.eu

Author of 80+ refereed publications, *h-index 30*

Tuesday, February 4, 2022

Luca Tornatore

L'originale compilato e sottoscritto è depositato presso gli Uffici dell'Ente

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