PERSONAL INFORMATION	**Mirko Cestari**

in https://www.linkedin.com/in/mirkocestari/

WORK EXPERIENCE

Aug 2018–Present

Team Leader

CINECA, www.cineca.it
via Magnanelli 6/3, 40033 Casalecchio di Reno (Italy)

– Coordination of the "HPC and Cloud Technologies" team.
– Guiding the HPC infrastructure evolution, with focus on computing, cloud and data management solutions.
– Member of the team to propose CINECA as hosting entity for EuroHPC pre-exascale system (EUROHPC-2019-CEI-PE-01).
– Technical representative for the definition of Leonardo requirements, Italian world-class pre-exascale system co-funded by EC under Horizon 2020.
– Technical representative in H2020 projects aiming to procure innovative solutions for High-Performance Computing, PPI4HPC (funded under H2020-EU.1.4.1.3.) and ICEI (funded under H2020-Eu.1.4.)
– Technology scouting.

– Coordination of the "High Level Support" team.
– High level support on different scientific domains.
– Consultancy and teaching on state-of-the-art HPC hardware technologies and computing methodologies.
– Code development and modernization of applications.
– Working in synergy with the system management team in deploying the main supercomputing systems and prototypes.

Business or sector Information and communication

May 2010–Jul 2018

IT Support - Programmer Analyst

CINECA, www.cineca.it
via Magnanelli 6/3, 40033 Casalecchio di Reno (Italy)

– High-level support for industrial and academic users.
– Design, development and maintenance of a python HPC application for a major Italian assurance company.
– Analysis of highly scalable applications for D.E.M. simulations in collaboration with a major Italian pharmaceutical company.
– Teaching (feedback score: 8.98/10

Business or sector Information and communication

2009–2010

Biology teacher secondary school

Istituto Tecnico Severi, Padova (Italy)

EDUCATION AND TRAINING

2006–2009   PhD - Research on Material Chemistry, Thesis Title: 'Atomistic modelling of liquid crystal materials properties: a theoretical and computational methodology'

University of Padua, Padova (Italy)

- Computer programming.
- High Performance Computing.
- Material chemistry modeling.
- Computer simulations.
- Writing scientific reports and peer-reviewed papers.

2007–2008   Visiting Scientist

University of Southampton, Southampton (United Kingdom)

- Computer programming.
- Research in the Liquid Crystal field.
- Project coordination with experimentalists.

2004–2005   Research Grant (INSTM, National Interuniversity Consortium of Materials Science and Technology)

University of Padua, Padova (Italy)

- Development of a stochastic model for 5CB dielectric decay.
- Extensive use of Mathematica symbolic calculation.
- Fortran 90 and Python programming.

1998–2003   M.Sc. Chemistry

Univeristy of Ferrara, Ferrara (Italy)

- Physical Chemistry
- Theoretical Chemistry
- Thesis "Application of a modern multi-reference perturbation theory to electronic spectroscopy of heterocyclic aromatic molecules."

PERSONAL SKILLS

Mother tongue(s)   Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	A2	A2	A2	A2	A2

Communication skills

- Good mediation skills learned by interacting with industrial and academic users.
- Good communication skills improved with multiple teaching courses and presentations.

– Inspirational and motivational skills gained as a team leader

Organisational / managerial skills

– Currently responsible for a team of 12 staff members
– Coordinating activities as a work package leader and task leader in European projects.
– Technical coordinator of internal projects and Italian projects

Digital skills

– Proficient in office IT tools.
– 20+ experience with Linux/Unix.
– Programming languages: Python, C, Fortran.
– Parallel programming paradigms: MPI, OpenMP.
– Optimization and debugging techniques.
– Mastering main tools and best practices for collaborative development and continuous integration.

Driving licence   B

ADDITIONAL INFORMATION

Publications

- **Investigation of particle dynamics and classification mechanism in a spiral jet mill through computational fluid dynamics and discrete element methods**
  Bnà, Simone; Ponzini, Raffaele; Cestari, Mirko; Cavazzoni, Carlo; Cottini, Ciro; Benassi, Andrea
  Powder Technology, 364, 746 (2020).

- **Archival Data Repository Services to Enable HPC and Cloud Workflows in a Federated Research**
  e-Infrastructure
  Alam, Sadaf R; Bartolome, Javier; Bassini, Sanzio; Carpene, Michele; Cestari, Mirko; Combeau, Frederic; Girona, Sergi; Gorini, Stefano; Fiameni, Giuseppe; Hagemeier, Björn;
  2020 IEEE/ACM International Workshop on Interoperability of Supercomputing and Cloud Technologies (SuperCompCloud), 39-44 (2020).

- **ELIXIR-IT HPC@ CINECA: high performance computing resources for the bioinformatics community**
  Castrignanò, Tiziana; Gioiosa, Silvia; Flati, Tiziano; Cestari, Mirko; Picardi, Ernesto; Chiara, Matteo; Fratelli, Maddalena; Amente, Stefano; Cirilli, Marco; Tangaro, Marco Antonio
  BMC bioinformatics, 21, 1 (2020).

- **Phase behavior and properties of the liquid-crystal dimer 1″, 7″-bis (4-cyanobiphenyl-4′-yl) heptane: a twist-bend nematic liquid crystal**
  Cestari, M; Diez-Berart, S; Dunmur, DA; Ferrarini, A; de La Fuente, MR; Jackson, DJB; Lopez, DO; Luckhurst, GR; Perez-Jubindo, MA; Richardson, RM and others.
  Physical Review E, 84, 031704 (2011).

- **Crucial role of molecular curvature for the bend elastic and flexoelectric properties of liquid crystals: mesogenic dimers as a case study**
  Cestari, Mirko; Frezza, Elisa; Ferrarini, Alberta; Luckhurst, Geoffrey R.
  Journal of Materials Chemistry, 21, 12303 (2011).

- **Molecular field theory with atomistic modeling for the curvature elasticity of nematic liquid crystals**
  Cestari, Mirko; Bosco, Alessandro; Ferrarini, Alberta.
  The Journal of chemical physics, 131, 054104 (2009).

- **Curvature elasticity of nematic liquid crystals: simply a matter of molecular shape? Insights from atomistic modeling**
  Cestari, Mirko; Ferrarini, Alberta.
  Soft Matter, 5, 3879 (2009).

- **A multireference n-electron Valence State Perturbation Theory study of the electronic**

spectrum of s-tetrazine
Angeli, Celestino; Cimiraglia, Renzo; Cestari, Mirko.
Theoretical Chemistry Accounts, 123, 287 (2009).

- **Atomistic modelling of liquid crystal materials properties: a theoretical and computational methodology**
Cestari, Mirko
PhD Thesis (2009)

- Developments in the n-electron valence state perturbation theory
Angeli, Celestino; Borini, Stefano; Cavallini, Alex; Cestari, Mirko; Cimiraglia Renzo; Ferrighi, Lara; Sparta, Manuel.
International journal of quantum chemistry, 106, 686 (2006).

- **A quasidegenerate formulation of the second order n-electron valence state perturbation theory approach**
Angeli, Celestino; Borini, Stefano; Cestari, Mirko; Cimiraglia, Renzo.
The Journal of chemical physics, 121, 4043 (2004).