



12th Summer School on **SCIENTIFIC** VISUALIZATION

School Presentation

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SuperComputing Applications and Innovation Department





OUTLINE

- General info's
- Analysis of student background and interests
- School timeline
- Lecturers CV
- Schedule of the day



GENERAL INFO'S

- School schedule
- Lunches
- Other informations



STUDENTS BACKGROUND (<3 minutes each)

- Background
- Interests in Visualization
- Basic Technical Knowledge:
 - Python programming,
 - Qt,
 - VTK,
 - Paraview



OVERVIEW AND SCHOOL TIMELINE

Day	Topics	Lecturer
Monday 10	Python for scientific visualization	Alice Invernizzi
Tuesday 11	VTK	Stefano Perticoni
Wednesday 12	Paraview	Raffaele Ponzini
Thursday 13	Qt; Remote Rendering	Alice Invernizzi; Paolo Ramieri
Friday 14	Scientific Visualization in bio-CFD and External Aerodynamics CFD applications	Raffaele Ponzini; Andrea Penza



LECTURERS CV

- Coordinators & Lecturers: A. Invernizzi; R. Ponzini
- Lecturers (internal): S. Perticoni; P. Ramieri; A. Penza
- Lecturers: D. Gallo - Politecnico di Torino, Italy.



A. Invernizzi



She obtained the Bachelor Degree in Mathematical Engineering from the Politecnico di Milano (2004) and the Master Degree in Mathematical Engineering from the Politecnico di Milano (2007) with specialization in Scientific Computational Method for Engineering. Her main activity at CINECA concerns development, optimization, parallelization of scientific codes and porting on GPU of C/C++ code. Her working domain involves also management and configuration of software on HPC system.

She is also teacher of courses on C/C++ and Python programming, GPU computing, optimization strategies and HPC tools for scientific programming.



R. Ponzini



Raffaele Ponzini has a PhD (cum Laude) and a master's degree in Bioengineering from the Politecnico di Milano.

His research interests include **computational models in hemodynamics**, and **scientific visualization**.

Since 2003 he worked as a member of the **High Performance Computing group of CILEA** for the management of fluid dynamics computational codes. His working domain includes also teaching **C/C++ and Python programming for scientific applications**. Starting from September 2012 he's working at **CINECA** within the **Supercomputing Applications and Innovation Department**.

CINECA SCAI: <http://www.hpc.cineca.it/staff/ponzini-raffaele-0>

Research gate: https://www.researchgate.net/profile/Raffaele_Ponzini/



S. Perticoni



He took his Electronic Engineering Degree, specializing in Optoelectronics, from the "Politecnico di Milano" university in 2001. From early 2002 to early 2007 he worked for **Istituti Ortopedici Rizzoli** as research engineer in developing computer-aided tools for preoperative planning. In 2007 he joined **SCS SuperComputingSolutions** as research engineer and OpenMAF developer.

- portfolio: <http://portfolio.stefanoperticoni.org/>
- linkedin: <http://www.linkedin.com/in/stefanoperticoni>
- blog: <http://www.stefanoperticoni.org>
- email: s.perticoni@scsitaly.com



P. Ramieri



Master degree in Physics (1998) at the University of Turin, with specialization in Physics of the Atmosphere and Meteorology. Supporting the activities of industrial users for the installation, running and optimization of programs on high performance computers.

Responsible of the portal for the access through web services of the CINECA high performance computers and visualization tools. Educational activities: teacher of Fortran, Parallel Computing Techniques and Programming Optimization Techniques (SCAI courses).



A. Penza



B.Sc. in Aerospace Engineering at Politecnico di Milano, Italy.

M.Sc. in Aeronautical Engineering at Politecnico di Milano, Italy.

Specialization in Aerodynamics.

Scholarship holder at CINECA on “Hydrodynamics Engineer for Hull Analysis using Open-Source CFD codes”.





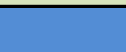




D. Gallo



Diego Gallo is a post-doctoral fellow at the Politecnico di Torino, Italy. He obtained his B.S., M.S., and Ph.D. degrees in Biomedical Engineering from Politecnico di Torino, Italy. He has been a visiting student at the Biomedical Simulation Laboratory of the University of Toronto (ON, Canada) in 2011. Dr. Gallo's research interests are in the areas of cardiovascular fluid dynamics. His work focuses on the use of computational fluid dynamics models to improve the understanding, diagnosis and treatment of vascular diseases.



SCHEDULE OF THE DAY

10.00-11.15		Introduction to scientific Visualization
11.15-11.30		coffe-Break
11.30-12.30		Introduction to Python Language
12.30-13.00		Tutorial
13.00-14.30		launch-break
14.30-16.00		Basic tools for scientific visualization in Python
16.00-17.00		Tutorial