

# Curriculum Vitae

## Personal information

First name(s) / Surname(s) **Daniela Pimponi**  
Address(es)  
Telephone(s) 0039  
E-mail  
Nationality  
Date of birth  
Place of birth  
Gender



## Work Experience

Starting Date: 01 November 2014  
Occupation or position held **Six Months scholarship funded by the ERC Advanced Grant No. 339446, "Cavitation across scales: following Bubbles from Inception to Collapse (BIC)"**  
Employer's name and address Department of Mechanical and Aerospace Engineering, University Sapienza – Roma, Italy  
Type of business or sector University  
Main activities and responsibilities Research activity on sharp models for cavitation.

## Education and training

Date: 01 November 2011 – 30 January 2015  
Title of qualification **Phd in Theoretical and Applied Mechanics**  
Thesis' Title Microscale hydrodynamics of passive and self propelled bodies close to solid-liquid and liquid-air interfaces  
Affiliation Department of Mechanical and Aerospace Engineering, University Sapienza – Rome, Italy  
Other courseworks/seminars

- High Performance Computing – Caspur (Rome)
- GPU Programming – Caspur (Rome)
- Introduction to Fortran90 – Cineca (Rome)
- Blue Gene/Q for users and developers – Cineca (Rome)
- Parallel Computing with MPI and OpenMP – Cineca (Rome)
- Homogenization techniques – (Prof. M. Amar)
- Allen-Cahn and Cahn-Hilliard equations – (Prof. G. Fusco)
- Analytical continuum mechanics – (Prof. Dell'Isola)
- Topics in Fluid Mechanics – Cecam (Prof. H.A. Stone)

Date: 23 May 2011  
Title of qualification **Master's degree in Aeronautical Engineering**  
Final mark: 110/110  
Thesis' title Fluid dynamic study of the motion of micro scaled rigid bodies near a superhydrophobic wall using Boundary Element Methods.  
Principal subjects

- Micro-nano fluidics and micro-nano devices
- Turbulence
- Aeroelasticity

Other courseworks/seminars	<ul style="list-style-type: none"> <li>• Combustion</li> <li>• Computational aerodynamics</li> <li>• Experimental aerodynamics</li> <li>• Gasdynamics</li> <li>• Aeronautical Structures</li> <li>• Aircraft propulsion</li> <li>• Flight Dynamics</li> <li>• Helicopter Flight Dynamics</li> <li>• Linear control of dynamic systems</li> <li>• Air traffic control</li> <li>• Aircraft aerodynamic design</li> </ul> <ul style="list-style-type: none"> <li>• Bio and micro fluidics coursework, Prof. Howard A. Stone</li> <li>• Inertial particles in turbulent flows, Prof. Massimo Cencini</li> </ul>
Name and type of organisation providing education and training	Sapienza University, Rome - Italy
Instrumentation experience	<ul style="list-style-type: none"> <li>• Hot wired anemometry</li> <li>• Laser induced fluorescence (LIF)</li> <li>• Particle image velocimetry (PIV)</li> </ul>
CFD experience	<ul style="list-style-type: none"> <li>• Boundary elements method applied to micro-scale particles in Stokes flows with no slip and free slip conditions (ownwritten codes).</li> <li>• Finite difference methods applied to aerodynamic (ownwritten codes).</li> <li>• Use of NAMD software for molecular dynamics.</li> </ul>
Date	26 February 2009
Title of qualification	<b>Bachelor's Degree in Aerospace engineering</b>
Thesis' title	3D simulation of flow over an helicopter blade
Principal subjects	<ul style="list-style-type: none"> <li>• Aerospace materials</li> <li>• Machines mechanics</li> <li>• Aerodynamics</li> <li>• Flight mechanics</li> <li>• Aerospace propulsion</li> <li>• Aerospace Structures</li> <li>• Computational Fluid Dynamics</li> </ul>
Name and type of organisation providing education and training	Sapienza University, Rome - Italy
CFD experience	<ul style="list-style-type: none"> <li>• 3D computational grids modeling using ICEM software.</li> <li>• CFD ++ software.</li> </ul>
<b>Publications</b>	D. Pimponi, M. Chinappi, P. Gualtieri, C.M. Casciola - Mobility tensor of a sphere moving on a superhydrophobic wall: application to particle separation - Microfluidics and Nanofluidics, Vol. 15, 2013
<b>Schools</b>	22/25 August 2011 – Flow Summer School in Micro and Complex Flow, Linné FLOW Center, KTH, Stockholm, Sweden
<b>Conferences</b>	<p>D. Pimponi, M. Chinappi, P. Gualtieri, C.M. Casciola - Microswimming close to patterned surfaces - 9th Euro FluidMechanics Conference – Rome, Italy, September 9-13 2012</p> <p>D. Pimponi, M. Chinappi, P. Gualtieri, C.M. Casciola – Wall patterning effects on particle mobility: potential application to trajectory passive control, 1<sup>st</sup> International Conference on MICRO AND NANO FLUIDICS Fundamentals and Applications – University of Twente, Netherland, May 18-21 2014</p> <p>D. Pimponi, M. Chinappi, P. Gualtieri, C.M. Casciola – Wall patterning effects on swimming motion, European Fluid Mechanics Conference 10 – Copenhagen, Denmark, September 14-18 2014</p>
<b>Grants</b>	<ul style="list-style-type: none"> <li>• National CINECA Iskra C Grant (1 million core hours for parallel applications on Blue Gene/Q architecture), 2014</li> </ul>

**Languages** Native speaker of Italian.

European level (*)	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
<b>English</b>	B2	C1	B2	B2	C1
<b>French</b>	B1	B2	B1	B1	B1

(\*) *Common European Framework of Reference for Languages*

First Certificate in English (FCE) released by the University of Cambridge (2005).

**Other skills**

Social skills and competences

Many years of activity as volleyball player and volleyball (FIPAV) Referee.

Organisational skills and competences

- Member of Uniracer University Team with an active role in organization of conferences on subjects related to racing cars and aerodynamics and in organization of karting competitions.
- 2 weeks stage in Administration and Marketing areas of Tarkett Corporation in 2005.

Computer skills and competences

- Programming languages: Fortran, Visual Basic
- Other programming languages: C, Matlab, ASP, SQL, COBOL
- Good knowledge of LaTeX, Tecplot, Gnuplot
- Good knowledge of Ansys ICEM and CFD ++ software
- Can work on UNIX and Windows OS
- GPU Programming.