

# FILIPPO SALMOIRAGHI

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- Born in Milano (Italy), February 23, 1989
- Nationality: Italian
- Driving License B, Boating License



## Education

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<b>June 2015</b>	<b>Dobbio Summer School</b> , Italy. Topic: Innovative concepts for complexity reduction in numerical PDEs: nonlinear approximation, sparsity, adaptivity, model reduction.	
<b>Sept 2011 – April 2014</b>	<b>Msc. Aeronautical Engineering, Politecnico di Milano</b> , Italy: Thesis: Reduced-order models for potential flows past parametrized NACA airfoils based on an Isogeometric boundary element method. Specializing in : Numerical Modeling , Aerothermodynamics, Vibration Structures.	<b>110/110</b>
<b>Sept 2013 – Dec 2013</b>	<b>ICTP</b> , Trieste, pilot course of the Master in High Performance Computing: <b>Scientific Programming Environment</b> and <b>Object Oriented Programming</b> courses.	
<b>Sept 2008 – Sept 2011</b>	<b>Bsc. Aerospace Engineering, Politecnico di Milano</b> , Italy: Specializing in: Fluid Dynamics, Structures, Heat Transfer.	<b>110/110</b>
<b>June 2008</b>	<b>P. Frisi Scientific High School</b> , Monza, Italy:	<b>96/100</b>

## Professional experience

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<b>Sept 2014 – ongoing</b>	<b>Research fellow, SISSA mathLab</b> , Trieste: I work on the project <b>Underwater Blue Efficiency (UBE)</b> in collaboration with Monte Carlo Yachts, Cergol Engineering Consultancy, OPTIMAD Engineering and University of Udine. Goal: define the <b>optimal geometries</b> of the exhaust manifold with respect to <b>emissions efficiency and vibration reduction</b> through <b>numerical simulations</b> .	
<b>Sept 2013 – April 2014</b>	<b>SISSA mathLab</b> , Trieste: I spent 8 months working on the Msc. Thesis. Main topics: <b>shape parametrization, reduced-basis method, proper orthogonal decomposition, empirical interpolation method, isogeometric analysis</b> .	
<b>2006 – 2013 (Summer)</b>	<b>Vento di Mare Sailing School</b> , Sestri Levante, Genova: I spent several summers <b>teaching</b> sailing to <b>children</b> and <b>adults</b> , repairing boats and sails, renting out boats. Experience gained: <b>dealing with</b> both Italian and <b>foreign people; sense of responsibility</b> .	
<b>2007</b>	<b>Baboo Srl</b> , Besnate, Varese: steward in several conventions.	

## Publications, Conferences and other Professional Activities

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<b>Jan 2016 – Dec 2016</b>	Participating in <b>INDAM GNCS (Istituto Nazionale Di Alta Matematica, Gruppo Nazionale per il Calcolo Scientifico)</b> project in collaboration with Politecnico di Milano, Università di Padova and Università di Pavia. Title: Tecniche di riduzione della complessità computazionale per le scienze applicate.	
<b>November 2015</b>	Publication on <b>scienceOPEN.com</b> journal. Article title: Isogeometric analysis based reduced order modelling for incompressible viscous flows in parametrized shapes: applications to underwater shape design.	
<b>Jan 2015 – Dec 2015</b>	Participating in <b>INDAM GNCS (Istituto Nazionale Di Alta Matematica, Gruppo Nazionale per il Calcolo Scientifico)</b> project in collaboration with Politecnico di Torino, Università degli Studi di Brescia and Università di Pavia. Title: Computational reduction techniques for fluid dynamics and fluid-structures	

interaction problems.

- January 2015** Publication on **Computer methods in applied mechanics and engineering** journal. Article title: Reduced Basis Isogeometric Methods (RB-IGA) for the real-time simulation of potential flows about parametrized NACA airfoils.
- October 2014** Presentation during **INDAM Young Scientists Seminars Series on Reduced Order Modeling**, Trieste.  
Topic: Reduced Basis Isogeometric Boundary Element Methods for the real-time simulation of flows around parametrized NACA airfoils.

### Other experiences

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- 2007 – 2008** **Member of Uruccu sailing team.**  
Experience gained: **team building** and **team working**.
- 2003 – 2008** **Member of “Dagli otto agli anta” amateur theater group:** participated in different musicals in Monza, Milano and Napoli. Experience gained: **managing stress**.
- 2008 – 2012** **Private tutor of mathematics and physics** to both high school and undergraduate students. Experience gained: **communication skills, student evaluation**.

### Languages

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- Italian:** mother tongue.  
**English:** **C1 level: TOEIC** certificate: 895/990 in 2011.  
**Spanish:** **B1 level** in writing, speaking and reading.

### Computer skills

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- Operating Systems:** Windows, Ubuntu  
**Programming Languages:** Matlab (advanced), Python (advanced), Fortran90 (school-level), C++ (good)  
**Specific software:** Latex (advanced), OpenOffice (good), Microsoft Office (good);  
Inventor (good), SolidEdge (good), SolidWorks (good), Salomè (good);  
deal.ii (good), FreeFem++ (good), OpenFoam (good).

### Personal interests

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- Home brewing
- Sailing
- Traveling
- Beach volleyball, running, skiing, swimming

*I hereby grant my consent for the processing of the above personal data under the provisions of Legislative Decree 196/03.*