

# ACADEMICAL ACTIVITIES LUCA SCARBOLLO

## • General Information

Date and Place of birth: August 25, 1985; Palmanova (Udine, Italy);  
Citizenship: Italian;  
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## • Education

2011-present: Ph.D., Chemical and Energy technology, University of Udine, Italy  
2005-2010: BS - MS, Mechanical Engineering, University of Udine, Italy.

## • Honors and Awards

2010: HPC-Europa2 fellowship, Dept. Physics, Technische Universiteit Eindhoven, Eindhoven (NL).  
2007: Erasmus fellowship, Dept. Mechanical Engineering, Imperial College of London, London (UK)

## • Research

### RESEARCH ACTIVITY

10/2012-05/2013: Visitor PhD at The Energy Institute of CUNY,  
City University of New York, New York City (USA),  
Advisor: Prof. Sanjoy Banerjee.  
09/2010-01/2011: HPC-Europa2 visitor at Department of Physics,  
Technische Universiteit Eindhoven (TUE), Eindhoven (NL),  
Advisor: Prof. Federico Toschi.  
09/2007-01/2008: Erasmus visitor at Department of Mechanical Engineering,  
Imperial college of London, London (UK),  
Advisor: Prof. Yannis Hardalupas.

### RESEARCH TOPICS

- Multiphase and Multicomponent turbulent flows.

## • Referred Journal Publications

- J1 **L., Scarbollo**, and A., Soldati, Turbulence modulation through the interface of a large deformable droplet *J. Turb*, Submitted.
- J2 **L., Scarbollo**, D., Molin, P., Perlerkar, M., Sbragaglia, A., Soldati and F., Toschi, Unified framework for a side-by-side comparison of different multicomponent algorithms: lattice Boltzmann vs. phase field model *J. Comp. Phys*, 234 (3013) pp. 263-279

## • Referred Conference Contributions

- C10 **L., Scarbolo.**<sup>†</sup>, and A. Soldati, (2013) Turbulence modulation through the interface of a deformable droplet. *Particles in turbulence*, Eindhoven (The Netherlands), July 1-5, 2013.
- C9 **L., Scarbolo.**, A. Soldati<sup>†</sup>, (2013) Turbulence modulation through the interface of a deformable droplet. *ICMF 2013*, Jeju (South Korea), May 26-31, 2013.
- C8 **L., Scarbolo.**<sup>†</sup>, D., Molin and A. Soldati, (2012) Turbulence modulation through the interface of a deformable droplet. *65<sup>th</sup> APS-DFD Annual Meeting*, San Diego (CA, USA), November 19-21, 2012.
- C7 **L., Scarbolo.**<sup>†</sup>, D., Molin and A. Soldati, (2012) Turbulence modulation through the interface of a deformable droplet. *9<sup>th</sup> European Fluid Mechanics Conference*, Roma (Italy), September 9-13, 2012.
- C6 **L., Scarbolo.**<sup>†</sup>, D., Molin and A. Soldati, (2012) Turbulence modulation through the interface of a deformable droplet. *50<sup>th</sup> European Two Phase Flows Meeting*, Udine (Italy), May 16-18, 2012.
- C5 **L., Scarbolo.**<sup>†</sup>, D., Molin and A. Soldati, (2011) Phase field model simulation of droplet deformation and breakup in wall bounded turbulence. *64<sup>th</sup> APS-DFD Annual Meeting*, Baltimore (MA, USA), November 19-22, 2011.
- C4 **L., Scarbolo.**<sup>†</sup>, D., Molin and A. Soldati, (2011) Phase field model simulation of droplet deformation and breakup in wall bounded turbulence. *64<sup>th</sup> APS-DFD Annual Meeting*, Baltimore (MA, USA), November 19-22, 2011.
- C3 **L., Scarbolo.**<sup>†</sup>, D., Molin and A. Soldati, (2011) Phase-Field Model of Droplet Breakup in Turbulence, *XX AIMETA Conference*, Bologna (Italy), September 12-15, 2011.
- C2 **L., Scarbolo.** <sup>†</sup>(2011), Numerical analysis of drop deformation and breakup under shear flows *HPC-Europa2 TAM-Workshop*, Barcellona (Spain), July 8-9, 2011.
- C1 A. Soldati, **L., Scarbolo.**, D., Molin, P., Perlerkar, and F. Toschi, (2010) Droplet deformation in shear flow: a direct comparison between multicomponent Lattice-Boltzmann method (LBM) and Phase field method (PFM) *63<sup>rd</sup> APS-DFD Annual Meeting*, Long Beach (CA, USA), November 21-23, 2010.

<sup>†</sup> Speaker.

## • Advanced Courses

1. Non-spherical particles and aggregates in fluid flows, CISM, Udine (Italy), June 17-21, 2013. Coordinated by: C. Marchioli (University of Udine, Italy) and F. Toschi (Eindhoven University of Technology, The Netherlands).
2. Analysis, modeling and simulation of collective dynamics from bacteria to crowds, CISM, Udine (Italy), June 9-13, 2012. Coordinated by: A. Muntean (Eindhoven University of Technology, The Netherlands) and F. Toschi (Eindhoven University of Technology, The Netherlands).
3. Stochastic Methods in Fluid Mechanics, CISM, Udine (Italy), July 2-6, 2012. Coordinated by: S. Chibbaro (University Pierre et Marie Curie, Paris, France) and J. P. Minier (R&D EDF, Chatou, France).
4. 2012 XSEDE Europe-US Summer School on HPC Challenges in Computational Sciences, Dublin (Ireland), 22-29 June 2012. Coordinated by: PRACE - XSEDE
5. 2011 GRICU PhD National School, S. Margherita di Pula, Cagliari (Italy), 26-29 September 2011. Coordinated by: P. Perego (University of Genoa, Italy)
6. FLOW Summer school in Micro and Complex flow, KTH Royal Institute of Technology, Stockholm (Sweden), 22-25 August 2011. Coordinated by: F. Lundell (KTH Royal Institute of Technology, Sweden)

7. Noise sources in turbulent Shear Flow, CISM, Udine (Italy), April 18-22, 2011. Coordinated by: R. Camusso (University of Rome “Roma Tre”, Italy).
8. Dynamics of non Spherical Particles in fluid Turbulence, CISM, Udine (Italy), April 6-8, 2011. Coordinated by: H. I. Andersson (Norwegian University of Science and Technology, Norway) and A. Soldati (University of Udine, Italy).
9. Multiphase Microfluidics - The diffuse Interface Model, CISM, Udine (Italy), June 15-19, 2009. Coordinated by: R. Mauri (University of Pisa, Italy).