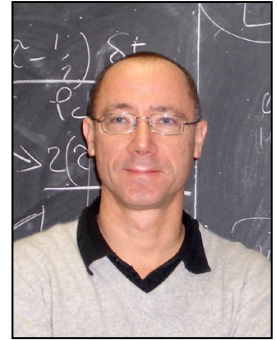


Curriculum Vitae

Prof. Luca Biferale

Born August 12, 1965, in Imperia (Italy)
Unmarried, two children (born 1996 and 2000)
Italian citizenship
Professional Address:
Dept. Physics and CAST (Centre for Applications of Calculus to
Science and Technology); University of Rome "Tor Vergata", Italy.
email: biferale@roma2.infn.it;
webpage: <http://www.fisica.uniroma2.it/~biferale/>
Spoken and written Languages: Italian, English, French



Education

Mar. 1989 Master degree in Physics, *University of Rome "Tor Vergata"*, 110/110 *cum laudem*. Subject: Renormalization group study of XY and Heisenberg models in 2D.
Oct. 1993 PhD. *University of Rome "La Sapienza"*. Subject: Anomalous scaling laws in fully developed turbulence.

Professional Experience

Mar. 1989 - Dec. 1989 Fellow of European Centre for Scientific and Engineering Computing (IBM, Italy)
Mar. 1993 - Dec. 1994 Postdoctoral Research Fellow "Henri Poincaré" and "Marie Curie". **Observatory of Nice** (France).
Jan. 1995 - Dec. 2004 Researcher. Dept. of Physics, **University of Rome "Tor Vergata"** (Italy).
Jan. 2005-present Associate Professor of Theoretical Physics, Mathematical and numerical modelling
Dept. Physics, **University of Rome "Tor Vergata"** (Italy).
June/Jul. 2006 Visiting Professor at the "**Johns Hopkins University**" (Baltimore, USA).
Jul. 2008 Visiting Scientist at "**University of Chicago**" (USA).
Jun. 2011 & Jul. 2012 Visiting Professor at the "**Observatory of Nice**" (France).
Jan. 2011 - Dec. 2011 Visiting Professor at "**Technische University Eindhoven**" (The Netherlands).

Honours and Awards

1986/87/88/89 Distinguished undergraduate student of Rome Universities. "*Enrico Persico Prize*" awarded by Accademia Nazionale dei Lincei (Italy).
2008 **Elected Fellow**. APS, division of "Statistical and Nonlinear Physics"
2010 **Elected Fellow**. EUROMECH Society, division of "Fluid Dynamics"

National and International memberships

INFN (Italian National Institute of Nuclear Physics)
CNISM (Italian National Interuniversity Consortium for the Physical Sciences and Matter)
EUROMECH (European Mechanics Society)
APS (American Physical Society)
ICTR (International Centre for Turbulence Research)

Key numbers about scientific impact

Number of published papers: more than 170
Hirsch-index: $H = 34$ (Google Scholar); **M-index = $H/(\# \text{ of years after PhD}) = 1.7$**
i10-index = # publications with more than 10 citations: 80 (Google Scholar)
Citations: 3900 (Google Scholar)

Expertise in the field of science and technology

Disciplines: Physics, Applied Mathematics, Mechanical Engineering, Energy, Geophysics and Environment, Information theory.

Applications: Fluid Mechanics (turbulence, microfluidics, nanoflows, biofluids), heat-transfer, porous media, emulsions, colloids, kinetic methods, statistical physics, complex systems, stochastic processes, mathematical modelling, information theory, chaos, quantum physics, computational fluid mechanics, Lattice Boltzmann methods, molecular dynamics.

Most significant ten publications of last 10 years (not the ten most cited)

- [1] Multifractal statistics of Lagrangian velocity and acceleration in turbulence.
L. Biferale, G. Boffetta, A. Celani, B. Devenish, A.S. Lanotte & F. Toschi
Phys. Rev. Lett. **93**, 064502, 2004. **Times Cited 127**
- [2] Shell Models of energy cascade in turbulence.
L. Biferale
Ann. Rev. Fluid. Mech. **35**, 441, 2003. **Times Cited 123**
- [3] Heavy particle concentration in turbulence at dissipative and inertial scales.
J. Bec, **L. Biferale**, G. Boffetta, M. Cencini, S. Musacchio, & F. Toschi
Phys. Rev. Lett. **98**, 084502, 2007. **Times Cited 112**
- [4] Anisotropy in turbulent flows and in turbulent transport.
L. Biferale & I. Procaccia
Phys. Rep. **414**, 43, 2005. **Times Cited 110**
- [5] Particle trapping in three dimensional fully developed turbulence.
L. Biferale, G. Boffetta, A. Celani, A.S. Lanotte & F. Toschi
Phys. Fluids **17**, 021701, 2005. **Times Cited 109**
- [6] Acceleration statistics of heavy particles in turbulence.
J. Bec, **L. Biferale**, G. Boffetta, A. Celani, M. Cencini, A. S. Lanotte, S. Musacchio & F. Toschi
J. Fluid Mech. **550**, 349, 2006. **Times Cited 107**
- [7] Mesoscopic modeling of two-phase flow in presence of boundaries: the contact angle.
R. Benzi, **L. Biferale**, M. Sbragaglia, S. Succi & F. Toschi
Phys. Rev. E **74**, 021509, 2006. **Times Cited 80**
- [8] Universal intermittent properties of particle trajectories in highly turbulent flows.
A. Arneodo, R. Benzi, J. Berg, **L. Biferale**, E. Bodenschatz, A. Busse, E. Calzavarini, B. Castaing, M. Cencini, L. Chevillard, R.T. Fisher, R. Grauer, H. Homann, D. Lamb, A.S. Lanotte, E. Leveque, B. Luthi, J. Mann, N. Mordant, W.-C. Muller, S. Ott, N.T. Ouellette J.-F. Pinton, S.B. Pope, S.G. Roux, F. Toschi, H. Xu & P. K. Yeung
Phys. Rev. Lett. **100**, 254504, 2008. **Times Cited 49**
- [9] Modeling the pressure Hessian and viscous Laplacian in turbulence: comparison with DNS and implications on velocity gradients dynamics.
L. Chevillard, C. Meneveau, **L. Biferale** & F. Toschi
Phys. Fluids **20**, 101504, 2008. **Times Cited 29**
- [10] Intermittency and universality in fully-developed inviscid and weakly-compressible turbulence.
R. Benzi, **L. Biferale**, R.T. Fisher, L. Kadanoff, D. Lamb & F. Toschi.
Phys. Rev. Lett. **100**, 234503, 2008. **Times Cited 33**

People management (last 10 years)

Number of Master students supervised in the last 10 years: **17**; Number of PhD students supervised in the last 10 years: **6**

Funding and Research Management

- 1998-2001 Head of division, project: "Development, benchmark and validation of innovative systems to observe and model the dynamics of the Mediterranean basin" (SIOMED), ENEA (Italy)
- 1998-2000 Head of division, Advanced Research Project "Turbulence and dynamical systems" INFM (Italy)
- 2000-2004 Head of Subdivision, Network "Non ideal Turbulence" FP5. Funded by EU.
- 2002-2004 "National Project on Complex Systems". Funded by MIUR (Italy).
- 2004- PI, Research Initiative "Particles and Fields in Complex Flows". Funded by INFN (Italy).
- 2006 PI, Advanced Project "Viscoelastic flows at micro-, nano-scales". Funded by CNISM (Italy).
- 2006-2008 "National Project on Complex Systems". Funded by MIUR (Italy).
- 2006-2008 Head of Subdivision, STREP "Microfluidic Technologies for active Control on unconventional fluids" (INFLUS). Funded by FP6 (EU).
- 2006 PI, Galileo Project "Transport and dispersion of particles in turbulence". Funded by French-Italian University (Italy & France).
- 2009-2011 "National Project on Complex Systems". Funded by MIUR (Italy).
- 2013- Head of division "European High Performance Infrastructures in Turbulence". Funded by EU under the program "Combination of Collaborative Projects and Coordination and Support Actions for Integrating Activities"

High Performance Computing (only major Grants)

- PI Key-project: *Lagrangian turbulence*, (400 Khours, Cineca-IT, 2004).
co-PI DEISA Extreme Computing Initiative: *Heavy particles in turbulence*, (400 Khours, 2006).
- PI Italian Supercomputing Resources Allocation (ISCRA): *Turbulence from point source*, (1 Mhours, Cineca-IT, 2009).
- PI DEISA Extreme Computing Initiative: *Boiling*, (5 Mhours, FP7, 2010).
- PI *Thermal Lattice Boltzmann Methods*, (100 Khours, Caspur-IT, 2010).
- co-PI ISCRA: *Numerical simulations of non ideal multicomponent turbulent convection*, (800 Khours, Cineca-IT, 2010).
- co-PI ISCRA: *Small drops interactions with the flow in shallow cumulus clouds*, (300 Khours, Cineca-IT, 2012).
- co-PI *Fractal Turbulence* (22 Mhours, PRACE, 2012).
- PI *Monte-Carlo methods for intense events in Turbulence* (13 Mhours, INFN, 2012).

Editorial and Scientific Boards

- 2007-present Divisional Associate Editor of **Physical Review Letters** (Division: Fluid Mechanics)
- 2004-present Associate Editor **Journal of Turbulence**
- 2011-present Editorial Board of **European Journal of Physics E** (EPJE)
- 2004-2009 Elected member of the **Euromech** board of the **European Turbulence Conference**
- 2007-2011 Editorial Board of **European Journal of Physics B** (EPJB)

Main Meetings Organization (last 10 years)

- European Science Foundation Exploratory Workshop on Lagrangian Dynamics, CastelGandolfo, Italy, 2005.
- First Italian-French meeting on Turbulence. Bagno Vignoni, Italy, 2006.
- European Science Foundation Exploratory Workshop on Microfluidics: experiments and numerics, Frascati, Italy, 2007.
- Discrete Simulations of Fluid Dynamics 19th, DSFD2010 conference. Rome, Italy, 2010.
- COST Action "Particles in Turbulence" international meeting on "Numerical issues in Lagrangian and Eulerian Turbulence". Rome, Italy 2010.
- COST Action "Particles in Turbulence" international meeting on "Breakup of small aggregates in turbulence". Rome, Italy. 2011.
- Program on "New Directions in Turbulence". Kavli Institute of Theoretical Physics China (KITPC), Beijing, Cina, 2012.
- Organizing committee of the 9th European Fluid Mech. Conference (EFMC9), Rome, Italy. 2012.

Other main Services to the community and science management

2007-2010	Coordinator ERASMUS Project. Dept. Physics Univ. Tor Vergata Rome, Italy.
2005-2008	Member of the Executive Committee. Dept. Physics Univ. Tor Vergata. Rome (Italy)
2010	Doctoral Studies Committee. Dept. Physics Univ. Tor Vergata. Rome (Italy)
2008-2013	Financial Rapporteur and Managing Committee. COST Action "Particles in Turbulence". Funded by ESF
2009	Intern. Advisory Committee "International Symposium on Turbulence" Beijing (China)
2004-present	National PI. Scientific Initiatives "Particles and Fields in Turbulence" INFN (Italy)
2010-present	Managing Committee. HPC facility "TheoPhys". INFN (Italy)
2012-present	Steering Committee "European High Performance Infrastructure in Turbulence" (EU)
2012-present	Scientific Committee High-Performance-Computing CINECA, Bologna (Italy)
2013-present	Member Physical Science Working Group (European Space Agency)

Reviewer for:

Nature, Physical Review Letters, Physical Review E, Europhysics Letters, Physica D, Journal Fluid Mechanics, Physics of Fluids, Journal of Turbulence, New Journal of Physics, Physics Letter A. European Physical Journal B. Journal of Statistical Mechanics.

Proposal evaluation and Project Monitoring for:

Italian Ministry of Research (MIUR), European Science Foundation (ESF), European Research Council (ERC), US-Israel science foundation. Italian Supercomputing Resources Allocations (ISCRA); Partnership for advanced computing in Europe (PRACE). Italian-French University (Italy & France), Estonian Research Council.

Editor of Special Issues

Guest Editor: *Lagrangian Dynamics Special Issue* (Foreword) Journ. Turb. **8**, Issue: 35, 1 (2007); **Guest Editor:** *Discrete simulation of fluid dynamics: applications* (Preface) Phil. Trans. Royal Soc. A **369**, 2384 (2011); **Guest Editor:** *Discrete simulation of fluid dynamics: methods* (Preface) Phil. Trans. Royal Soc. A **369**, 2152 (2011).

Teaching Experience

Undergraduate: **Dept. Physics, U. Rome "Tor Vergata":** Mathematical Methods for Physics; Dynamical Systems; Computational Methods; Turbulence and Complex Fluids, Quantum Mechanics (1996-2012)

Postgraduate: **Fac. Engineering, U. Rome "La Sapienza":** Turbulence (2000);
Royal Institute of Technology Stockholm: Lagrangian and Eulerian Turbulence (2012);
Dept. Physics University Hong Kong: Modern problems in turbulence (2003).

Invited Lectures, tutorials. (last 10 years: more than 30. I list only the 10 most significant)

- Key-Note Speaker: *Boiling convection* "Particles in Turbulence" COST Action MP0806, Leiden (The Netherlands) 2012.
- Plenary: *Droplets and Bubbles in Turbulence*. DSFD. Fargo (USA) 2011.
- Key-Note Speaker: *Turbulent pair dispersion of inertial particles*. International Conference on Turbulence: Fundamentals, Experiments, Numerics and Applications. COST Action MP0806. Potsdam (Germany) 2011.
- *Rayleigh Taylor turbulence in stratified flows*. Turbulence and Mixing, Eilat (Israel) 2010.
- *Caustics and Intermittency in inertial particles velocities in turbulent flows*. International Symposium on Turbulence. Beijing (China) 2009.
- *Lagrangian and Eulerian Statistics with multifractals*. Isaac Newton Inst., Cambridge (UK) 2008.
- *Lagrangian scaling in Turbulence*. Int. Conf. on Non-Linear Physics, IIS Bangalore (India) 2008.
- *Lagrangian Structure Functions in Turbulence*. DFD, Minisymposium APS, Seattle (Usa) 2007.
- Tutorial: *SO(3) applied to Navier-Stokes equations*. ETC XI. Porto (Portugal) 2007.
- Plenary: *Multiphase Lattice Boltzmann for microfluidics*. DSFD, Bannf (Canada) 2007.
- Plenary: *Isotropy and Anisotropies in Turbulence*. ETC IX. Southampton (UK) 2002.

Publications (last 10 years)

Publications last 10 years: **106**

citations of publications last 10 years: **1500** (Google Scholar)

H-index of publications last 10 years: **23** (Google Scholar)

Most significant ten publications of last 10 years (not the ten most cited)

- [1] Multifractal statistics of Lagrangian velocity and acceleration in turbulence.
L. Biferale, G. Boffetta, A. Celani, B. Devenish, A.S. Lanotte & F. Toschi
Phys. Rev. Lett. **93**, 064502, 2004. **Times Cited 127**
- [2] Shell Models of energy cascade in turbulence.
L. Biferale
Ann. Rev. Fluid. Mech. **35**, 441, 2003. **Times Cited 123**
- [3] Heavy particle concentration in turbulence at dissipative and inertial scales.
J. Bec, **L. Biferale**, G. Boffetta, M. Cencini, S. Musacchio, & F. Toschi
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L. Biferale & I. Procaccia
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L. Biferale, G. Boffetta, A. Celani, A.S. Lanotte & F. Toschi
Phys. Fluids **17**, 021701, 2005. **Times Cited 109**
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J. Bec, **L. Biferale**, G. Boffetta, A. Celani, M. Cencini, A. S. Lanotte, S. Musacchio & F. Toschi
J. Fluid Mech. **550**, 349, 2006. **Times Cited 107**
- [7] Mesoscopic modeling of two-phase flow in presence of boundaries: the contact angle.
R. Benzi, **L. Biferale**, M. Sbragaglia, S. Succi & F. Toschi
Phys. Rev. E **74**, 021509, 2006. **Times Cited 80**
- [8] Universal intermittent properties of particle trajectories in highly turbulent flows.
A. Arneodo, R. Benzi, J. Berg, **L. Biferale**, E. Bodenschatz, A. Busse, E. Calzavarini, B. Castaing, M. Cencini, L. Chevillard, R.T. Fisher, R. Grauer, H. Homann, D. Lamb, A.S. Lanotte, E. Leveque, B. Luthi, J. Mann, N. Mordant, W.-C. Muller, S. Ott, N.T. Ouellette J.-F. Pinton, S.B. Pope, S.G. Roux, F. Toschi, H. Xu & P. K. Yeung
Phys. Rev. Lett. **100**, 254504, 2008. **Times Cited 49**
- [9] Modeling the pressure Hessian and viscous Laplacian in turbulence: comparison with DNS and implications on velocity gradients dynamics.
L. Chevillard, C. Meneveau, **L. Biferale** & F. Toschi
Phys. Fluids **20**, 101504, 2008. **Times Cited 29**
- [10] Intermittency and universality in fully-developed inviscid and weakly-compressible turbulence.
R. Benzi, **L. Biferale**, R.T. Fisher, L. Kadanoff, D. Lamb & F. Toschi.
Phys. Rev. Lett. **100**, 234503, 2008. **Times Cited 33**

Publications (total)

175. On the global regularity of a helical-decimated version of the 3D Navier-Stokes equation
L. Biferale, E.S. Titi
Journ. Stat. Phys. DOI 10.1007/s10955-013-0746-4, 2013
174. Lagrangian single particle turbulent statistics through the Hilbert-Huang Transform
Y. Huang, L. Biferale, E. Calzavarini, C. Sun and F. Toschi
Phys. Rev. E **87**, 041003(R), 2013
173. Extreme events in the dispersion of two neighboring particles under the influence of fluid turbulence
R. Scatamacchia, L. Biferale and F. Toschi
Phys. Rev. Lett. **109**, 144501 (2012)
172. On Lagrangian single-particle statistics
G. Falkovich, H. Xu, A. Pumir, E. Bodenschatz, L. Biferale, G. Boffetta, A.S. Lanotte and F. Toschi
Phys. Fluids **24** 055102 (2012)
171. Droplets size distribution in homogeneous and isotropic turbulence
P. Perlekar, L. Biferale, M. Sbragaglia, S. Shrivastava and F. Toschi
Phys. Fluids **24**, 065101 (2012)
170. Inverse energy cascade in 3D isotropic turbulence
L. Biferale, S. Musacchio and F. Toschi
Phys. Rev. Lett. **108** 164501, 2012
169. Breakup of small aggregates driven by turbulent hydrodynamical stress
M.U. Babler, L. Biferale and A.S. Lanotte
Phys. Rev. E **85** 025301(R), 2012
168. Convection in multiphase fluid flows using Lattice Boltzmann Methods
L. Biferale, P. Perlekar, M. Sbragaglia and F. Toschi
Phys. Rev. Lett. **108** 104502, 2012
167. Spatial and velocity statistics of inertial particles in turbulent flows
J. Bec, L. Biferale, M. Cencini, A.S. Lanotte, F. Toschi
J. Phys. Conf. Ser. **318** 092024, 2011
166. Front propagation in Rayleigh-Taylor systems with reaction
A. Scagliarini, L. Biferale, F. Mantovani, M. Pivanti, F. Pozzati, M. Sbragaglia, S.F. Schifano, F. Toschi, R. Tripiccione
J. Phys. Conf. Ser. **318** 092024, 2011
165. About scaling properties of relative velocity between heavy particles in turbulence
A. S. Lanotte, J. Bec, L. Biferale, M. Cencini & F. Toschi
J. Phys. Conf. Ser. **318** 052010, 2011
164. Second order closure for stratified convection: bulk region and overshooting
L. Biferale, F. Mantovani, M. Pivanti, F. Pozzati, M. Sbragaglia, A. Scagliarini, S.F. Schifano, F. Toschi, R. Tripiccione
J. Phys. Conf. Ser. **318** 042018, 2011
163. Multi-time multi-scale correlation functions in hydrodynamical turbulence.
L. Biferale, E. Calzavarini, F. Toschi
Phys. Fluids **23** 085107, 2011.

162. Second order closure in stratified turbulence: simulations and modeling of bulk and entrainment regions.
L. Biferale, F. Mantovani, M. Sbragaglia, A. Scagliarini, F. Toschi, R. Tripiccone
Phys. Rev. E **84** 016305, 2011.

161. Discrete simulation of fluid dynamics: applications PREFACE
L. Biferale, P.V. Coveney, S. Ubertini, S. Succi.
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND
ENGINEERING SCIENCES **369** 2384-2386, 2011.

160. Numerical simulations of Rayleigh-Taylor front evolution in turbulent stratified fluids
L. Biferale, F. Mantovani, F. Pozzati, M. Sbragaglia, A. Scagliarini, S.F. Schifano, F. Toschi, R. Tripiccone.
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND
ENGINEERING SCIENCES **369** 2448-2455, 2011.

159. Discrete simulation of fluid dynamics: methods PREFACE
L. Biferale, P.V. Coveney, S. Ubertini, S. Succi
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND
ENGINEERING SCIENCES **369** 2152-2154, 2011.

158. Reactive Rayleigh-Taylor systems: Front propagation and non-stationarity
Biferale L.; Mantovani F.; Sbragaglia M.; et al.
Europhys. Lett. **94** 54004, 2011.

157. Lattice Boltzmann fluid-dynamics on the QPACE supercomputer
L. Biferale, F. Mantovani, M. Pivanti, M. Sbragaglia, A. Scagliarini, S.F. Schifano, F. Toschi, R. Tripiccone.
International Conference on Computational Science (ICCS) Amsterdam, NETHERLANDS
Procedia Computer Science, **1** 1069, 2010.

156. High resolution numerical study of Rayleigh-Taylor turbulence using a thermal lattice Boltzmann scheme
L. Biferale, F. Mantovani, M. Sbragaglia, A. Scagliarini, F. Toschi, R. Tripiccone
Phys. Fluids **22**, 115112, 2010. arXiv:1009.5483

155. Droplet breakup in homogeneous and isotropic turbulence
F. Toschi, P. Perlekar, L. Biferale, M. Sbragaglia
Contribution to Gallery of Fluid Motions APS 2010. arXiv:1010.17953

154. Numerical simulations of compressible Rayleigh-Taylor turbulence in stratified fluids
A. Scagliarini, L. Biferale, M. Sbragaglia, K. Sugiyama, F. Toschi
2nd International Conference and Advanced School on Turbulent Mixing and Beyond,
PHYSICA SCRIPTA **T142**, 014017, 2010. arXiv:1009.5819

153. Inertial range Eulerian and Lagrangian statistics from numerical simulations of isotropic turbulence
R. Benzi, L. Biferale, R. Fisher, D.Q. Lamb and F. Toschi
Journ. Fluid Mech. **653**, 221, 2010.

152. Lattice Boltzmann Methods for thermal flows: continuum limit and applications to compressible
Rayleigh-Taylor systems.
A. Scagliarini, L. Biferale, M. Sbragaglia, K. Sugiyama, F. Toschi
Phys. Fluids **22** 055101, 2010.

151. Turbulent Pair Dispersion of Inertial Particles.
J. Bec, L. Biferale, A. Lanotte, A. Scagliarini and F. Toschi.
Journ. Fluid Mech. **645** 497, 2010

150. Intermittency in the velocity distribution of heavy particles in turbulence.
J. Bec, L. Biferale, M. Cencini, A. Lanotte and F. Toschi.
Journ. Fluid Mech. **646** 527, 2010
149. On the measurement of vortex filament lifetime statistics in turbulence.
L. Biferale, A. Scagliarini and F. Toschi
Phys Fluids **22**, 065101, 2010. arXiv:0908.0205
148. Diffusion of heavy particles in turbulent flows
A.S. Lanotte, J. Bec, L. Biferale, M. Cencini, A. Scagliarini, and F. Toschi
Advances in Turbulence XII, Proceedings of the 12th European Turbulence Conference (ETC-12), Marburg (D) Springer Proceedings in Physics, 485, 2009.
147. Dynamics of vortex filaments in turbulent flows and their impact on particle dispersion
A. Scagliarini, L. Biferale, and F. Toschi
Advances in Turbulence XII, Proceedings of the 12th European Turbulence Conference (ETC-12), Marburg (D), Springer Proceedings in Physics, 325, 2009.
146. Lagrangian modeling and properties of particles with inertia
F. Toschi, L. Biferale, E. Calzavarini, E. L  v  que and A. Scagliarini
Advances in Turbulence XII, Proceedings of the 12th European Turbulence Conference (ETC-12), Marburg (D), Springer Proceedings in Physics, 3, 2009.
145. Multiphase Lattice Boltzmann on the cell Broadband Engine
F. Belletti, L. Biferale, F. Mantovani, S. F. Schifano, F. Toschi and R. Tripiccione.
Il Nuovo Cimento, **32**, 53, 2009.
144. Visco elastic flows at macro-, micro- and nano-scales.
L. Biferale, G. Manzi and M. Sbragaglia
La Houille Blanche Revue internationale de l'eau, **6**, 79, 2009. DOI 10.1051/lhb/2009083
143. Hydrokinetic simulations of nanoscopic precursor films in rough channels S. Chibbaro, L. Biferale, K. Binder, D. Dimitrov, F. Diotallevi, A. Milchev, S. Succi
J. Stat. Mech P06007, 2009.
142. Lattice Boltzmann method with self-consistent thermo-hydrodynamic equilibria
M. Sbragaglia, R. Benzi, L. Biferale, H. Chen, X. Shan and S. Succi
Journ. Fluid Mech. **628** 299, 2009.
141. Fully Developed Turbulence and the Multifractal Conjecture
R. Benzi and L. Biferale
Jour. Stat. Phys. **135** 977, 2009. Special Issue deidcated to E. Brezin and G. Parisi.
140. Capillary filling using Lattice Boltzmann Equations: the case of multi-phase flows. arXiv:0707.0945
F. Diotallevi, L. Biferale, S. Chibbaro, A. Lamura, G. Pontrelli, M. Sbragaglia, S. Succi, F. Toschi
EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS **166**, 111-116 (2009)
139. Capillary filling for multicomponent fluid using the pseudo-potential Lattice Boltzmann method
S. Chibbaro, L. Biferale, F. Diotallevi, S. Succi
Proceedings for DSFD 2007. EUROPEAN PHYSICAL JOURNAL-SPECIAL TOPICS **171**, 223, 2009.
138. Lattice Boltzmann simulations of capillary filling: finite vapour density effects arXiv:0801.4223
F. Diotallevi, L. Biferale, S. Chibbaro, G. Pontrelli, F. Toschi, S. Succi

137. Velocity-gradient statistics along particle trajectories in turbulent flows: The refined similarity hypothesis in the Lagrangian frame.

R. Benzi, L. Biferale, E. Calzavarini, D. Lohse, F. Toschi
Phys Rev. E **80** 066318, 2009.

137. Statistical behaviour of isotropic and anisotropic fluctuations in homogeneous turbulence

L. Biferale, AS Lanotte and F. Toschi.
PHYSICA D **237** 1969, 2008.

135. Front pinning in capillary filling of chemically coated channels

F. Diotallevi, L. Biferale, S. Chibbaro, A. Puglisi, S. Succi
Phys. Rev. E **78** 036305, 2008. arXiv:0806.1862

134. Evidence of thin-film precursors formation in hydrokinetic and atomistic simulations of nano-channel capillary filling

S.. Chibbaro, L. Biferale, F. Diotallevi, S. Succi, K. Binder, A. Milchev, D. Dimitrov, S. Girardo, D. Pisignano
Europhys. Lett. **84** 44003, 2008. arXiv:0806.3419

133 Wetting failure and contact line dynamics in a Couette flow.

M. Sbragaglia, K. Sugiyama and L. Biferale
Journ. Fluid Mech. **614**, 471, 2008.

132. Universal Intermittent Properties of Particle Trajectories in Highly Turbulent Flows

A. Arneodo, R. Benzi, J. Berg, L. Biferale, E. Bodenschatz, A. Busse, E. Calzavarini, B. Castaing, M. Cencini, L. Chevillard, R. T. Fisher, R. Grauer, H. Homann, D. Lamb, A. S. Lanotte, E. Leveque, B. Luthi, J. Mann, N. Mordant, W.-C. Muller, S. Ott, N. T. Ouellette J.-F. Pinton, S. B. Pope, S. G. Roux, F. Toschi, H. Xu and P. K. Yeung
Phys. Rev. Lett. **100**, 254504, 2008.

131. A note on the fluctuation of dissipative scale in turbulence

L. Biferale.
Phys. Fluids **20** , 031703, 2008.

130. Modeling the pressure Hessian and viscous Laplacian in Turbulence: comparisons with DNS and implications on velocity gradient dynamics

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