
CURRICULUM VITÆ of Francesco Picano

Personal information

First Name and Surname: Francesco Picano
Date of birth: 11/10/1978
Place of birth: Rome (Rm), Italy
Nationality: Italian
Work Address: Via Venezia 1, 35131, Padua, Italy
Telephone: Work +39 049 8276773
E-mail: Work: francesco.picano@unipd.it

Current position:

Full Professor in Fluid Dynamics (ING-IND/06) at Dep. Industrial Engineering, University of Padova, Italy (since 01/03/2022) and **Coordinator of the PhD program in Sciences, Technologies, Measurements for Space.**

Recent research interests:

Turbulent flows: Turbulent flow modeling via LES and RANS. Supersonic and Hypersonic turbulent flows. Parachute-capsule flows during descent phases.
Multiphase flows: turbulent and laminar flows laden with solid/liquid dispersed phases. Phase change. Rheology of non-Newtonian complex fluids. Sedimentation process. Spray evaporation.
Computational Fluid Dynamics: Numerical techniques for fluid simulations: compressible and incompressible formulations. Moving complex boundaries via Immersed Boundary Methods. Lattice-Boltzmann formulations. Parallelization techniques. Turbulent single- and multi-phase modeling. Fluid-structure interaction with fragmentation.
Turbulent Combustion: Premixed turbulent combustion theory and modeling. Measurement techniques. Spray combustion.
Porous media and electrodes: Analysis of porous media mass transport and dispersion with application to electrode porous media for redox flow battery and fuel cells.

Past position:

01/09/2015 – 28/02/2022

Associate Professor in Fluid Dynamics (ING-IND/06) at Dep. Industrial Engineering, University of Padova, Italy.

01/10/2013 – 31/08/2015

Assistant Professor in Fluid Dynamics (ING-IND/06) at Dep. Industrial Engineering, University of Padova, Italy.

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- 01/05/2014 - 30/04/2015** **Adjunct researcher (20%)** in Fluid Mechanics at Mechanics, Royal Institute of Technology, KTH, Stockholm.
- 2011-2013** **Post-doc** in Fluid Mechanics at Mechanics, Royal Institute of Technology, KTH, Stockholm. Supervisor: Prof. Brandt. Topic: *Mechanics of suspensions*
- 2012** **Visiting researcher** at Dep. of Applied Physics, TU-Eindhoven. Supervisor: Prof. Toschi. Topic: *Rheology of suspensions of non-spherical particles*
- 2007-2011** **Post-doc** in Fluid Mechanics ("Assegno di Ricerca", ING-IND/06) at Dep. of Mechanics and Aeronautics, Sapienza University of Rome. Supervisor Prof. Casciola. Topic: *Dynamics of droplets in turbulent jets*

Education

- 2007 Apr 20th** **PhD** in Theoretical and Applied Mechanics - "La Sapienza" University of Rome, Italy. Thesis title: "*Dynamics of turbulent axisymmetric jets*". Advisors: Prof. R. Piva and Prof. C.M. Casciola
- 2003 Jul 14th** **Master degree** (110/110 with honour) in Mechanical Engineering at "La Sapienza" University of Rome, Italy. Thesis title: "*Direct simulation of isotropic and homogeneous combustion*". Advisor Prof. R. Piva

Honours & Awards

- 2018** Award for **best student evaluation** within all courses AY 2017/2018 of the MA program in Aerospace Engineering of University of Padova.
- 2015** The paper "Turbulent channel flow of dense suspensions of neutrally buoyant particles", Picano, Breugem, Brandt, Journal of Fluid Mechanics 2015 has **been selected as one of the best submitted on 2014** (12 on about 600) and **highlighted with an extended review** by Prof. Prosperetti published as open access paper "**Focus on Fluids**" on **Journal of Fluid Mechanics** 2015.
- 2011** Award **AIMETA JUNIOR 2011** as the best young researcher in fluid mechanics by Theoretical and Applied Mechanics Italian Association AIMETA
- 2010** Co-author of one of the **top excellent researches awarded by "La Sapienza"**, University of Rome

Scientific production

70 journal papers (**5** in *Physical Review Letters*, **22** in *Journal of Fluid Mechanics*, **9** in *Physics of Fluids*), **35**

International Conference Proceedings collected in books or journals, about **70** Conference proceedings or abstracts. **2** book chapters.

Patents

1 patent deposited “METODO DI GESTIONE DELLO STATO DI CARICA PER BATTERIE A FLUSSO REDOX E BATTERIA A FLUSSO REDOX” by Trovò (35%), Guarnieri (35%) & Picano (30%), 2020

Bibliometric indices

Google scholar

Citations:	3163	2614 (since 2017)
h-index	30	29 (since 2017)
i10-index	56	54 (since 2017)

SCOPUS

h-index : 27, Documents 116, Total citations: 2087

Italian qualifications

Bibliometric indices higher than the threshold needed to be part of the National Committee for professorship qualifications (SCOPUS&WOS):

Number of journal papers last 10 years:	55 (>28)
Number of citations last 15 years:	1901 (>389)
H-index last 15 years:	27 (>13)

Invited lectures and seminars

2020

Invited Lecture at the Ercoftac zoom-meeting on Covid 19 Flows “*How much do we know and how much we don’t know about the covid 19 flow physics*” 13/11/2020.

2020

Invited Lecturer at the advanced school «Advanced numerical approaches for simulation of turbulent multiphase flows» 7-11/09/2020 Udine promoted by the International Centre for Mechanical Sciences (CISM).

2019

Invited Lecturer at the advanced school «Anisotropic Particles in Viscous and Turbulent Flows» 1-5/07/2019 Udine promoted by the International Centre for Mechanical Sciences (CISM).

2018

Invited Lecture at the “Multiphase and Interface Fluids Symposium” at the Univ. Florida Campus 15-16/11/2018

2018

Invited Seminar at University of Magdeburg 30/01/2018

2012

Invited Seminar at TU/e, Eindhoven and TU-Delft, in October 2012

2011

Invited Seminar at KTH Mechanics, Stockholm,

2011	Invited lecture (AIMETA JUNIOR PRIZE) at AIMETA Conference Bologna
2008-	Invited Seminars at the Universities of Alma Mater, Udine, Sapienza, Torvergata, Genova
<u>Teaching experience</u>	
2020	Professor of "Laboratory of Computational Fluid Mechanics" 3 ECTS (24 hours) In the Aerospace engineering MA program at University di Padova.
2018-	Professor responsible of "Aerodynamics 1" 9 ECTS (72 hours) In the Aerospace engineering BA program at University di Padova. (3 years)
2019-	Professor responsible of "Introduction to Computational Fluid Dynamics" (10 hours) In the PhD program of CISAS, University of Padova. (2 years)
2019-	Professor responsible of "Applied Fluid Dynamics" 6 ECTS (48 hours) modulated by "Aerodynamics 2" in the Mechanical engineering MA program at University di Padova.
2014-	Professor responsible of "Aerodynamics 2" 9 ECTS (72 hours) In the Aerospace engineering MA program at University di Padova. (7 years)
2016-2018	Professor responsible of "Fluid Mechanics" 6 ECTS (48 hours) In the energy engineering BA program at University di Padova AA. (3 years)
2015	Professor of "Laboratory of Space Propulsion" 3/9 ECTS (24 hours) In the Aerospace engineering MA program at Università di Padova AA 15/16.
2014	Professor of the short course "Fluid dynamics of Flow Batteries", 8 hours towards research fellows (assegnisti di ricerca) within the Veneto Regional project FSE 2014, (PI: prof. Guarnieri).
<u>Professional and scientific collaborations</u>	
2022	Chairman and local organizer of the international scientific conference " <i>4th International Conference on Numerical Methods in Multiphase Flows (ICNMMF-IV)</i> " 28-30/09/2022, Venice (140 participants).
2021	Co-chairmen of the international scientific workshop Euromech Colloquium 621 "Transport and fluxes in dispersed turbulent flows" that will be held in Reykjavik, Iceland, June 30-July 1, 2021 (ONLINE).

2021	Member of the Scientific committee of the ECCOMAS International Conference Coupled Problems IX, Chia Laguna, ONLINE 14-16/06/2021
2020	Guest Editor for the special issue “Recent advances in modeling and simulations of multiphase flows” published in the Springer journal Meccanica 2020
2019-	Member of Advisory Board of the Springer journal: “Iranian Journal of Science and Technology, Transactions of Mechanical Engineering” (IF=1.09)
2019	Chairmen of the invited session “Flows in Porous Media for Industrial Applications”, VIII Int. Conference on Coupled Problems, Sitges (Spain) June 3-5, 2019.
2018	Co-Chairmen and local organizer of the international scientific workshop Euromech Colloquium 596 “NUMERICAL SIMULATIONS OF FLOWS WITH PARTICLES, BUBBLES AND DROPLETS”, Venice May 9-11 2018. About 50 participants registered.
2013-	Reviewer for Peer-reviewed proposal granted by: “ISCRA-B”, CINECA, Italy “PRACE” projects, Partnership for Advanced Computing in Europe. “ISF”, Israel Science Foundation “IRF”, The Icelandic Research Fund “SNSF”, Swiss National Science Foundation
2006-	Advisor or Co-advisor of more than 100 MA and BA thesis in Aerospace and Mechanical Engineering. Main topics: suspension dynamics simulations DNS/LES of reactive or incompressible turbulent flows (jets, pipe, channel and homogenous shear flow), interaction between turbulence and premixed flame fronts, dynamics of inertial particles dispersed in turbulent flows with and without back-reaction, evaporation of droplets in turbulent flows, OpenFOAM .
2008-	Referee for Peer-reviewed international journals: “Physical Review Letters”, “Physical Review Fluids”, “Journal of Fluid Mechanics”, “Physical Review E”, “Soft Matter”, “AIChEJ”, “International Journal of Multiphase Flow”, “European Journal of Mechanics B/Fluids”, “Journal of Turbulence”, “The European Physical Journal B”, “Flow, Turbulence and Combustion”, “Journal of Physics: Conference Series”, “Progress in Computational Fluid Dynamics”, “Meccanica” and “Computers & Geosciences”
2008-	Advisor or co-advisor of six PhDs student at KTH Mechanics, Sapienza University of Rome and University of Padova

Dalla Barba (Advisor)
Wang (Advisor)
De Vanna (Co-Advisor)
Maggiolo (Co-Advisor)
Fornari (Co-Advisor)
Battista (Co-Advisor)

Research projects and competitive grants:

2021-2022	PI of the Competitive National government project FISR PURITY to mitigate impact of COVID-19 Pandemic studying innovative filter devices (6months)
2020-2021	Co-PI of the European PRACE-COVID19 project Project COVID1951 to mitigate impact of COVID-19 Pandemic studying the dispersion of infectious droplets using High Performance Computing resources (20M core-hours on Irene, France)
2020-2021	PI of the European PRACE project DEBRIS to study multiphase dense debris flow using High Performance Computing resources (20M core-hours on Irene, France)
2019-2022	PI of the Padova University Research Project (2.5 years) SID2019 on plastic particle sorting in turbulent flow devices
2019-2020	PI of a research projects with Unismart for developing and optimization of a dishwasher machine by Bonferraro S.P.A. (6 months).
2018-2019	PI of the European PRACE project DILPART for High Performance Computing (32M core-hours on Marconi CINECA)
2017-2018	Participant as responsible for fluid flow analysis in a project with UNOX S.P.A. (PI: prof. Galvanetto, 1 year) optimization in ventilated oven heat distribution.
2016-2018	PI of the Padova University Research Project (2 years, 36k€) PRAT2015 on turbulent spray physics and modeling
2016-2017	PI of a research projects with Della Toffola S.P.A. for developing and optimization of the filtration process using micro-porous ceramic material (6 months).
2015-2016	PI of a research projects with Della Toffola S.P.A. for developing and optimization of the filtration process using micro-porous ceramic material (overall: 6 months).

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- 2014-2018** **Member of the COST-ACTION:** “*Flowing Matter*”; PI: Prof. F. Toschi
- 2014-2018** **Participation** in the ERC Consolidator Grant project TRITOS, (PI Prof. BRANDT) with research activities on dense suspension dynamics.
- 2014-2018** **Participation** in the strategic University research project MAESTRA 2011 “From Materials for Membrane-Electrode Assemblies to Electric Energy Conversion and Storage Devices”, University of Padova (PI Prof. Guarnieri, 800k€) as responsible for fluid dynamics optimization of flow batteries.
- 2011-2015** **Member of the COST-ACTION FP1005:** “Fibre Suspension Flow Modeling”; PI: Prof. C.M. Marchioli.
- 2011-** **PI of “ISCRA C”** at CINECA or **of the “Standard HPC Grant”** at CASPUR for supercomputer resources on several projects (around 0.5/1M core-hours/year).
- 2010** **Member** of DEISA (Distributed European Infrastructure for Supercomputing Applications) application **WALLPART** for large scale computations of particle dispersion in wall turbulence. PI: Prof. Luca Brandt.
- 2009-2013** **Member of the COST-ACTION MP0806:** “*Particles in Turbulence*”; PI: Prof. F. Toschi
- 2008** **Collaboration in the Italian national project PRIN 2008:** “*Wall turbulence at high Reynolds number*”; PI: Prof. C.M. Casciola.

Administrative activities

- 2022-** **Member of the Resource and Recruitment Steering Committee of Industrial Engineering Department,** University of Padova.
- 2020-** **Coordinator of the PhD program in Sciences, Technologies, Measurements for Space** at CISAS, University of Padova.
- 2019-2022** **Member of the Research Steering Committee of Industrial Engineering Department,** University of Padova.
- 2018-** **Responsible for University of Padova of the student project LIFTUP,** which aim to design, build and fly a drone in the international student competition Air Cargo Challenge.
- 2015-** **Member of the PhD board Committe in Sciences, Technologies, Measurements for Space** at CISAS,
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University of Padova.

2014-

Responsible for WEB contents for Aerospace Engineering programs, University of Padova.

2014-

Member of the Committee for evaluation of the Bachelor and Master programs of Aerospace Engineering (GAV), University of Padova.

Computer skills

Operative Systems:
Writing software:
Programming language:
Other software:

UNIX, Linux, Windows, MacOSX
Latex, Openoffice Writer e MS Word.
Fortran, Fortran90, C, Tao, OpenMp, MPI.
Tecplot, Paraview, OpenFoam, Fluent, Gimp,
Photoshop, Autocad,

Language skills:

Mother tongue: Italian. Fluent in English. Basic knowledge of French, Spanish and Swedish.

Padova 15/10/2022

Francesco Piceno

List of Publications of Francesco Picano

Papers in international journals (peer reviewed)

1. M. Cogo, F. Salvatore, F. Picano & M. Bernardini. *Direct numerical simulation of supersonic and hypersonic turbulent boundary layers at moderate-high Reynolds numbers and isothermal wall condition* **Journal of Fluid Mechanics**, 945 A30, 2022
2. F. Dalla Barba, M. Zaccariotto, U. Galvanetto & F. Picano, *3D fluid–structure interaction with fracturing: A new method with applications* **Computer Methods in Applied Mechanics and Engineering**, 398 115210, (2022)
3. Wang, J., Dalla Barba, F., Roccon, A., Sardina, G., Soldati, A., & Picano, F. *Modelling the direct virus exposure risk associated with respiratory events.* **Journal of the Royal Society Interface**, 19(186), 20210819 (2022).
4. L. Angelilli, P.P. Ciottoli, F. Picano, M. Valorani & H.G. Im, *Assessment of subgrid dispersion models for large-eddy simulations of turbulent jet flows with dilute spray droplets.* **Physics of Fluids**, 34, 073305, 2022
5. J. Wang , M. Alipour , G. Soligo , A. Roccon , M. De Paoli , F. Picano & A. Soldati. *Short-range exposure to airborne virus transmission and current guidelines.* **Proceedings of the National Academy of Sciences**, 118 (37), 2021
6. D. Maggiolo, F. Picano & F. Toschi *Asymmetric invasion in anisotropic porous media* **Physical Review E**, 104, 045103, 2021
7. P. Costa, L. Brandt & F. Picano. *Near-wall turbulence modulation by small inertial particles* **Journal of Fluid Mechanics**, 922 A9, 2021
8. Yousefi, A., Ardekani, M.N., Picano, F., Brandt, L. *Regimes of heat transfer in finite-size particle suspensions.* **International Journal of Heat and Mass Transfer**, 177, 121514, 2021
9. F. Dalla Barba, J. Wang & F. Picano, *Revisiting \mathcal{D}^2 -law for the evaporation of dilute droplets.* **Physics of Fluids**, 33, 051701, 2021
10. F. De Vanna, M. Cogo, M. Bernardini, F. Picano, E. Benini. *A unified wall-resolved/wall-modelled method for Large-Eddy Simulations of compressible wall-bounded flows.* **Physical Review Fluids**, 6, 034614, 2021
11. F. Dalla Barba & F. Picano *Direct numerical simulation of the scouring of a brittle streambed in a turbulent channel flow* **Acta Mechanica**, 232 4705-4728, 2021
12. F. De Vanna, F. Picano, E. Benini & M.K. Quinn. *Large-Eddy-Simulations of the unsteady behaviour of a hypersonic intake at Mach 5.* **AIAA Journal**, 2021
13. J. Wang, F. Dalla Barba & F. Picano, *Direct numerical simulation of an evaporating turbulent diluted jet-spray at moderate Reynolds number.* **Int. J. of Multiphase Flow**, 137, 103567, 2021.
14. F. De Vanna, A. Benato, F. Picano, E. Benini. *High-order conservative formulation of viscous terms for variable viscosity flows* **Acta Mechanica**, 232, 2115-2133, 2021
15. Dalla Barba, F., Scapin, N., Demou, A. D., Rosti, M. E., Picano, F., & Brandt, L. *An interface capturing method for liquid-gas flows at low-Mach number.* **Computers & Fluids**, 216, 104789, 2021.
16. Chiara, L. F., Rosti, M. E., Picano, F., & Brandt, L. *Suspensions of deformable particles in Poiseuille flows at finite inertia.* **Fluid Dynamics Research**, 52(6), 065507, 2020.
17. F. Dalla Barba, F. Picano, *A Novel Approach for Direct Numerical Simulation of Hydraulic Fracture Problems* **Flow, Turbulence and Combustion**, <https://doi.org/10.1007/s10494-020-00145-x>, 105, 335-357, 2020 (IF:2.472)
18. P. P. Ciottoli, F. Battista, R. Malpica Galassi, F. Dalla Barba, F. Picano, *Direct Numerical Simulations of the Evaporation of Dilute Sprays in Turbulent Swirling Jets* **Flow, Turbulence and Combustion**, <https://doi.org/10.1007/s10494-020-00200-7>, 2020 (IF:2.472)
19. P. Costa, L. Brandt & F. Picano. *Interface-resolved simulations of small inertial particles in turbulent channel flow.* **Journal of Fluid Mechanics**, 883:A54, 2020 (IF:3.354)
20. D. Maggiolo, F. Picano et al. *Solute transport and reaction in porous electrodes at high Schmidt*

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- numbers **Journal of Fluid Mechanics**, 896:A13, 2020 (IF:3.354)
21. F. De Vanna, F. Picano, E. Benini. *A sharp-interface immersed boundary method for moving objects in compressible viscous flows.* **Computers & Fluids**, 104415, 2020 (IF:2.399)
 22. M. Guarnieri, A. Trovò, F. Picano, *Enhancing the efficiency of kW-class vanadium redox flow batteries by flow factor modulation: An experimental method* **Applied Energy**, 262,114532, 2020 (IF: 8.558)
 23. F. Picano, L. Brandt, O. Tammisola. *Editorial: "Recent advances in modeling and simulations of multiphase flows."* **Meccanica**, 55(2), 295-297, 2020 (IF:2.153)
 24. W. Fornari, S. Zade, L. Brandt, F. Picano. *Settling of finite-size particles in turbulence at different volume fractions.* **Acta Meccanica**, 230, 413-430, 2019 (IF:2.109)
 25. A. Trovò, F. Picano, M. Guarnieri, *Comparison of energy losses in a 9 kW vanadium redox flow battery* **Journal of Power Sources**, 440, 227144, 2019 (IF: 8.247)
 26. D. Maggiolo, F. Zanini, F. Picano, A. Trovò, S. Carmignato, M. Guarnieri, *Particle based method and X-ray computed tomography for pore-scale flow characterization in VRFB electrodes* **Energy Storage Materials** 16, 91-96, 2019. (IF: 16.8)
 27. Dalla Barba F. & F. Picano, *Clustering and entrainment effects on the evaporation of dilute droplets in a turbulent jet* **Physical Review Fluids**, 3 ,034304, 2018. (IF: 2.512)
 28. M. Niazi Ardekani, L.A. Asmar, F. Picano, L. Brandt. *Numerical study of heat transfer in laminar and turbulent pipe flow with finite-size spherical particles.* **Int. J. Heat and Fluid Flow**, 71, 189-199, 2018 (IF: 2.073)
 29. P. Costa, F. Picano, L. Brandt & W.P. Breugem. *Effects of the finite particle size in turbulent wall-bounded flows of dense suspensions* **Journal of Fluid Mechanics**, 843:450-478, 2018, (IF:2.821)
 30. M. Niazi Ardekani, O. Abouali, F. Picano, L. Brandt. *Heat transfer in laminar Couette flow laden with rigid spherical particles.* **Journal of Fluid Mechanics**, 308-334, 834, 2018, (IF:2.821)
 31. W. Fornari, F. Picano, L. Brandt. *The effect of polydispersity in a turbulent channel flow laden with finite-size particles..* **European J. of Mechanics /B Fluids**, 67:54-64 2018, (IF:1.969)
 32. I. Lashgari, F. Picano, P. Costa, W.-P. Breugem, L. Brandt. *Turbulent channel flow of dense binary mixture of rigid particles* **Journal of Fluid Mechanics**, 818:623-645 2017, (IF:2.821)
 33. M. Niazi Ardekani, P. Costa, W.-P. Breugem, F. Picano, L. Brandt. *Drag reduction in turbulent channel flow laden with finite-size oblate spheroids.* **Journal of Fluid Mechanics**, 816:43-70 2017, (IF:2.821)
 34. P. Costa, F. Picano, L. Brandt & W.P. Breugem. *Universal scaling laws for dense particle suspensions in turbulent wall- bounded flows* **Physical Review Letters**, 117, 134501, 2016 (IF:7.728)
 35. W. Fornari, F. Picano, G. Sardina, L. Brandt. *Reduced particle settling speed in turbulence..* **Journal of Fluid Mechanics**, 808:153-167 2016, (IF:2.294)
 36. D. Maggiolo, F. Picano, M. Guarnieri, *Flow and dispersion in anisotropic porous media: A lattice-boltzmann study.* **Physics of Fluids** 28, 102001, 2016 (IF:2.040)
 37. I. Lashgari, F. Picano, W.-P. Breugem, L. Brandt. *Channel flow of rigid sphere suspensions: Particle dynamics in the inertial regime.* **Int. Journal of Multiphase Flow**, 78, 12-24, 2016 (IF:2.061)
 38. W. Fornari, F. Picano, L. Brandt. *Sedimentation of finite-size spheres in quiescent and turbulent environments.* **Journal of Fluid Mechanics**, 788:640-669 2016, (IF:2.294)
 39. W. Fornari, A. Formenti, F. Picano, L. Brandt. *The effect of particle density in turbulent channel flow laden with finite size particles in semi-dilute conditions.* **Physics of Fluids** 28, 033301, 2016 (IF:2.040)
 40. W. Fornari, L. Brandt , Chaudhuri P., Lopez C.U., D. Mitra, F. Picano. *C Rheology of confined non-Brownian suspensions* **Physical Review Letters** 116: 018301, 2016 (IF:7.728)
 41. G. Sardina, F. Picano, L. Brandt and R. Caballero. *Continuous Growth of Droplet Size Variance due to Condensation in Turbulent Clouds,* **Physical Review Letters** 115: 184501, 2015 (IF:7.728)
 42. P. Gualtieri, F. Picano, G. Sardina and C.M. Casciola. *Exact regularized point particle method for*
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- multi-phase flows in the two-way coupling regime. Journal of Fluid Mechanics* 773:520-561 2015 (IF:2.294)
43. F. Picano, W.P. Breugem, L. Brandt. *Turbulent channel flow of dense suspensions of neutrally-buoyant spheres. Journal of Fluid Mechanics*, 764:463-487 2015, (IF:2.294) selected for an extended review "Life and death by boundary conditions" by Prof. Prosperetti, Focus on Fluids, JFM2015
 44. G. Rocco, F. Battista, F. Picano, G. Troiani, C.M. Casciola. *Curvature effects in turbulent premixed flames of H₂/Air: a DNS study with reduced chemistry. Flow, Turbulence and Combustion* 94(2):359-379, 2015 (IF:1.508)
 45. I. Lashgari, F. Picano, L. Brandt. *Transition and self-sustained turbulence in dilute suspensions of finite-size particles. Theoretical and Applied Mechanics Letters*, 5, 2015
 46. Matthias U. Babler, Luca Biferale, Luca Brandt, Ulrike Feudel, Ksenia Guseva, Alessandra S. Lanotte, Cristian Marchioli, Francesco Picano, Gaetano Sardina, Alfredo Soldati and Federico Toschi, *Numerical simulations of aggregate breakup in bounded and unbounded turbulent flows. Journal of Fluid Mechanics*, 766:104-128 2015, (IF:2.294)
 47. I. Lashgari, F. Picano, W.-P. Breugem, L. Brandt. *Transition to turbulence in the presence of finite size particles. Procedia IUTAM*, 14, 211-217, 2015
 48. F. Battista, G. Troiani, F. Picano, *Fractal scaling of turbulent premixed flame fronts: Application to LES, International Journal of Heat and Fluid Flow*, 51, 78-87, 2015 (IF:1.777)
 49. I. Lashgari, F. Picano, W.P. Breugem, L. Brandt. *Laminar, turbulent, and inertial shear-thickening regimes in channel flow of neutrally buoyant particle suspensions. Physical Review Letters*, 113, 254502, 2014 (IF:7.728)
 50. S. Olivieri, F. Picano, G. Sardina, D. Iudicone, L. Brandt, *The effect of the Basset history force on particle clustering in homogeneous and isotropic turbulence. Physics of Fluids* 26, 041704, 2014 (IF:2.040)
 51. F. Battista, F. Picano, C.M. Casciola. *Turbulent mixing of a slightly supercritical Van der Waals fluid at Low-Mach number. Physics of Fluids* 26, 055101, 2014 (IF:2.040)
 52. G. Sardina, F. Picano, P. Schlatter, L. Brandt and C.M. Casciola. *Statistics of particle accumulation in spatially developing turbulent boundary layers. Flow, Turbulence and Combustion*. 92(1-2):27-40, 2014 (IF:1.508)
 53. F. Picano, W.-P. Breugem, D. Mitra and L. Brandt. *Shear-thickening in Non-Brownian suspensions: an excluded volume effect, Physical Review Letters* 111:098302, 2013 (IF:7.728)
 54. G. Troiani, F. Battista and F. Picano. *Measurements of local turbulent consumption speed in an air-methane Bunsen jet. Combustion and Flame* 160:2029-2037, 2013 (IF:3.708)
 55. R.A. Lambert, F. Picano, W.-P. Breugem and L. Brandt. *Nutrient uptake and Swimming particle motion in an active suspension. Journal of Fluid Mechanics* 733:528-557, 2013 (IF:2.294)
 56. A. Nowbahar, G. Sardina, F. Picano and L. Brandt. *Turbophoresis attenuation in a turbulent channel flow with polymer additives. Journal of Fluid Mechanics* 732:706-719, 2013 (IF:2.294)
 57. P. Gualtieri, F. Picano, G. Sardina and C.M. Casciola. *Clustering and turbulence modulation in particle-laden shear flows. Journal of Fluid Mechanics* 715:134-162, 2013 (IF:2.294)
 58. F. Magaletti, F. Picano, M. Chinappi, L. Marino and C.M. Casciola. *The sharp interface limit of the Cahn-Hilliard/Navier-Stokes model for binary fluids. Journal of Fluid Mechanics* 714:95-126, 2013 (IF:2.294)
 59. F. Picano and K. Hanjalic. *Leray- α regularization of the Smagorinsky-closed filtered equations for turbulent jets at high Reynolds numbers. Flow, Turbulence and Combustion* 89(4):627-650, 2012 (IF:1.508)
 60. G. Sardina, P. Schlatter, F. Picano, C.M. Casciola, L. Brandt and D.S. Hennigson. *Self-similar transport of inertial particles in a turbulent boundary layer. Journal of Fluid Mechanics* 706:584-596, 2012 (IF:2.294)
 61. G. Sardina, P. Schlatter, L. Brandt, F. Picano and C.M. Casciola. *Wall accumulation and spatial*
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- localization in particle-laden wall flows. Journal of Fluid Mechanics* 699:50-78, 2012 (IF:2.294)
62. P. Gualtieri, F. Picano, G. Sardina, C.M. Casciola. *Statistics of particle pair relative velocity in the homogeneous shear flow*, **Physica D**, 241:245-250, 2012 (IF:1.829)
 63. F. Battista, F. Picano, G. Troiani and C.M. Casciola. *Intermittent features of inertial particle distribution in turbulent premixed flames*, **Physics of Fluids**, 23(12):123304, 2011 (IF:2.040)
 64. G. Sardina, F. Picano, P. Schlatter, L. Brandt and C.M. Casciola. *Large scale accumulation patterns of inertial particles in wall-bounded turbulent flow*, **Flow, Turbulence and Combustion**, 86:519-532, (DOI: 10.1007/s10494-010-9322-z), 2011 (IF:1.508)
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