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# 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](mailto:francesco.picano@unipd.it)

**Current position:** **Associate Professor** in Fluid Dynamics (ING-IND/06) at Dep. Industrial Engineering, University of Padova, Italy (since 01/09/2015).

**Recent research interests:**

**Multiphase flows:** turbulent and laminar flows laden with solid/liquid dispersed phases. Phase change. Rheology of non-Newtonian complex fluids. Sedimentation process.

**Turbulent flows:** modulation of turbulence by dispersed phases: channel flow and homogeneous flows. Turbulent flow modeling via LES and RANS.

**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.

**Turbulent Combustion:** Premixed turbulent combustion theory and modeling. Measurement techniques.

**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:

01/10/2014 – 31/08/2015  
01/10/2013 – 20/03/2014

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

01/05/2014 - 30/04/2015

**Part-time 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*

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- 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*
- 2007** **Research assistant** at DMA, Sapienza University of Rome. Topic: *“LES models for turbulent flows in cylindrical geometry”*

### Education

- 2017 Apr 7<sup>th</sup>** **ASN (09/A1)**: qualification to function as Full Professor in Aerospace and Naval Engineering (Fluid Dynamics) in Italy.
- 2007 Apr 20<sup>th</sup>** **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 14<sup>th</sup>** **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

**46** journal papers (**5** in *Physical Review Letters*, **16** in *Journal of Fluid Mechanics*, **8** in *Physics of Fluids*, **1**

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*Combustion & Flame*, **1** *Physical Review Fluids*, **1** *Experiments in Fluids*, **26** without PhD supervisors as coauthor), **30** International Conference Proceedings collected in books or journals, about **60** Conference proceedings or abstracts.

### **Bibliometric indices**

#### **Google scholar**

Citations:	1246	1097 (since 2014)
h-index	22	20 (since 2014)
i10-index	34	32 (since 2014)

#### **SCOPUS**

h-index : 19, Documents 69, Total citations: 921

### **Teaching experience:**

- 2018-** **Professor responsible of** “Aerodynamics” 9 ECTS (72 hours) In the Aerospace engineering BA program at University di Padova.
- 2018-** **Professor responsible of** “Applied Fluid Dynamics” 9 ECTS (72 hours) 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.
- 2016-2018** **Professor responsible of** “Fluid Mechanics” 6 ECTS (48 hours) In the energy engineering BA program at University di Padova AA.
- 2015-** **Seminar teaching activities** at PhD course in Science, Technology and measurements for Space, University of Padova (4 hours per year).
- 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 responsible** 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).
- 2011** **Professor responsible** of “Laboratory of turbulent combustion” at “La Sapienza” University of Rome.

### **Professional and scientific collaborations**

- 2018-2020** **Guest editor for the special issue** “Recent advances in modeling and simulations of multiphase flows” that

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will be published on the Journal Meccanica, Springer, on 2020.

- 2019** **Co-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 of the international scientific workshop** Euromech Colloquium 596 “NUMERICAL SIMULATIONS OF FLOWS WITH PARTICLES, BUBBLES AND DROPLETS” that will be held in Venice May 9-11. 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 40 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 E”, “Journal of Fluid Mechanics”, “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 five 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:**

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<b>2018-2019</b>	<b>PI of the Eurpean PRACE-16<sup>th</sup></b> project DILPART for 32M core-hours on MARCONI-A2 CINECA.
<b>2018-2019</b>	<b>Winner of FFABR</b> of MIUR for fundamental research funding (success rate 25% of applications by associate professor, 3k€)
<b>2017-2018</b>	<b>Participant</b> as responsible for fluid flow analysis in a project with UNOX S.P.A. (PI: prof. Galvanetto, 1 years, 50k€) optimization in ventilated oven heat distribution.
<b>2016-2018</b>	<b>PI</b> of the Padova University Research Project (2 years, 36k€) PRAT2015 on turbulent spray physics and modeling
<b>2016-2017</b>	<b>PI</b> of a research projects with Della Toffola S.P.A. for developing and optimization of the filtration process using micro-porous ceramic material (1 year, 15k€).
<b>2015-2016</b>	<b>PI</b> 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, 7.5k€).
<b>2014-2018</b>	<b>Member of the COST-ACTION:</b> “ <i>Flowing Matter</i> ”; PI: Prof. F. Toschi
<b>2014-2018</b>	<b>Participation</b> in the ERC Consolidator Grant project TRITOS, (PI Prof. BRANDT) with research activities on dense suspension dynamics.
<b>2014-2018</b>	<b>Participation</b> in the strategic University research project MAESTRA 2011 “From Materials for Membrane-Electrode Assemblies to Electric Energy Conversion and Storage Devices”, Università di Padova (PI Prof. Guarnieri, 800k€) as responsible for fluid dynamics optimization of flow batteries.
<b>2011-2015</b>	<b>Member of the COST-ACTION FP1005:</b> “Fibre Suspension Flow Modeling”; PI: Prof. C.M. Marchioli.
<b>2011-</b>	<b>PI of “ISCRA C”</b> at CINECA or <b>of the “Standard HPC Grant ”</b> at CASPUR for supercomputer resources on several projects (around 0.5/1M core-hours/year).
<b>2010</b>	<b>Member</b> of DEISA (Distributed European Infrastructure for Supercomputing Applications) application <b>WALLPART</b> for large scale computations of particle dispersion in wall turbulence. PI: Prof. Luca Brandt.
<b>2009-2013</b>	<b>Member of the COST-ACTION MP0806:</b> “ <i>Particles in Turbulence</i> ”; PI: Prof. F. Toschi
<b>2008</b>	<b>Collaboration in the Italian national project PRIN 2008:</b> “ <i>Wall turbulence at high Reynolds number</i> ”; PI:

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Prof. C.M. Casciola.

### Administrative activities

- 2017-** Member of the Steering Committee of the Bachelor and Master programs of Aerospace Engineering, 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: UNIX, Linux, Windows, MacOSX  
Writing software: Latex, Openoffice Writer e MS Word.  
Programming language: Fortran, Fortran90, C, Tao, OpenMp, MPI.  
Other software: Tecplot, Paraview, OpenFoam, Fluent, Gimp, Photoshop, Autocad,

### Language skills:

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

## List of Publications of Francesco Picano

### **Papers in international journals (peer reviewed)**

1. 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
2. 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
3. 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.
4. 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
5. 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)
6. 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)
7. 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)
8. 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)
9. 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)
10. 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

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(IF:7.728)

11. 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)
12. 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)
13. 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)
14. 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)
15. 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)
16. 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)
17. 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)
18. P. Gualtieri, F. Picano, G. Sardina and C.M. Casciola. *Exact regularized point particle method for multi-phase flows in the two-way coupling regime.* **Journal of Fluid Mechanics** 773:520-561 2015 (IF:2.294)
19. 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
20. G. Rocco, F. Battista, F. Picano, G. Troiani, C.M. Casciola. *Curvature effects in turbulent premixed flames of H<sub>2</sub>/Air: a DNS study with reduced chemistry.* **Flow, Turbulence and Combustion** 94(2):359-379, 2015 (IF:1.508)
21. 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
22. Matthaus 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)
23. 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
24. 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)
25. 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)
26. 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)
27. 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)
28. 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)
29. 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)
30. G. Troiani, F. Battista and F. Picano. *Measurements of local turbulent consumption speed in an*

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- air-methane Bunsen jet*. **Combustion and Flame** 160:2029-2037, 2013 (IF:3.708)
31. 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)
  32. 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)
  33. 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)
  34. 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)
  35. F. Picano and K. Hanjalic. *Leray- $\alpha$  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)
  36. 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)
  37. G. Sardina, P. Schlatter, L. Brandt, F. Picano and C.M. Casciola. *Wall accumulation and spatial localization in particle-laden wall flows*. **Journal of Fluid Mechanics** 699:50-78, 2012 (IF:2.294)
  38. 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)
  39. 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)
  40. 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)
  41. F. Picano, F. Battista, G. Troiani, and C.M. Casciola. *Dynamics of PIV seeding particles in turbulent premixed flames*, **Experiments in Fluids**, 50:75-88, 2011 (1.907)
  42. C.M. Casciola, P. Gualtieri, F. Picano, G. Sardina and G. Troiani. *Dynamics of inertial particles in free jets*, **Physica Scripta**, T142: 014001, 2010 (IF:1.296)
  43. F. Picano, G. Sardina, P. Gualtieri and C.M. Casciola. *Anomalous memory effects in the transport of inertial particles in turbulent jets*, **Physics of Fluids**, 22(5):051705, 2010 (IF:2.040)
  44. F. Picano, G. Sardina and C.M. Casciola. *Spatial development of particle-laden turbulent pipe flow*, **Physics of Fluids**, 21(9):093305, 2009 (IF:2.040)
  45. P. Gualtieri, F. Picano and C.M. Casciola. *Anisotropic clustering of inertial particles in homogeneous shear flow*. **Journal of Fluid Mechanics**, 629:25-39, 2009, (IF:2.294)
  46. F. Picano and C.M. Casciola. *Small scale isotropy and universality of axisymmetric jets*. **Physics of Fluids**, 19(11):118106, 2007 (IF:2.040)

**Conference Proceedings collected in contributed books (peer reviewed)**

47. Sardina, G., Picano, F., Brandt, L & Caballero, R. *Direct and large eddy simulations of droplet condensation in turbulent warm clouds* **ERCOFTAC SERIES 24**, 475-481, 2018
  48. Brandt L. Ardekani M.N., Picano F., Costa P., W.P. Breugem, L. Brandt *Numerical study of turbulent channel flow laden with finite-size non-spherical particles*. 10th International Symposium on Turbulence and Shear Flow Phenomena, **TSFP 2017**, Volume 4, 2017
  49. F. Picano, P. Costa, W.P. Breugem, L. Brandt *Turbulence modulation by dense suspensions in channel flows*. 10th International Symposium on Turbulence and Shear Flow Phenomena, **TSFP 2017**, Volume 4, 2017
  50. Dalla Barba F & F. Picano, *DNS of the evaporation of acetone droplets in a saturated turbulent jet spray*. 10th International Symposium on Turbulence and Shear Flow Phenomena, **TSFP 2017**, Volume 4, 2017.
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51. Brandt L, Picano F. Breugem W.P. *Turbulent flow of a suspension of rigid spherical particles in plane channels* **Springer Proceedings in Physics** 165,311-315, 2016.
  52. Battista, F., Picano, F., Troiani, G., Casciola, C.M. *Direct numerical simulation of hydrogen-carbon monoxide turbulent premixed flame* **ERCOFTAC SERIES 20**, 541-546, 2015
  53. F. Picano, G. Sardina, P. Gualtieri and C.M. Casciola. *Turbulent flow of a suspension of rigid spherical particles in plane channels*. In **Progress in Turbulence and wind energy VI, iTi 2014**, 2014
  54. F. Picano, G. Sardina, P. Gualtieri and C.M. Casciola. *Transport of inertial particles in turbulent jets*. In **Progress in Turbulence and wind energy IV**, Springer 2012
  55. F. Battista, F. Picano, G. Troiani and C. M. Casciola. *Inertial particles in a turbulent Bunsen flame*. In **Progress in Turbulence and wind energy IV**, Springer 2012
  56. F. Picano, G. Sardina, P. Gualtieri and C.M. Casciola. *Particle-laden jets: particle distribution and back-reaction on the flow* **J. Phys.: Conf. Ser.** 318:052018, (DOI:10.1088/1742-6596/318/5/052018), 2011
  57. F. Battista, F. Picano, G. Troiani and C.M. Casciola. *Transport of inertial particles in a turbulent premixed jet flame* **J. Phys.: Conf. Ser.** 318:092008, doi:10.1088/1742-6596/318/9/092008, 2011
  58. F. Battista, M. Froio, F. Picano and C.M. Casciola. *Bubble-Turbulence Interaction in Binary Fluids* **J. Phys.: Conf. Ser.** 318:092011, doi:10.1088/1742-6596/318/9/092011, 2011
  59. P. Gualtieri, F. Picano, G. Sardina and C.M. Casciola. *Clustering and turbulence modulation in particle laden shear flows* **J. Phys.: Conf. Ser.** 333:012007, [doi:10.1088/1742-6596/333/1/012007](https://doi.org/10.1088/1742-6596/333/1/012007), 2011
  60. F. Battista, F. Picano, G. Troiani and C.M. Casciola. *Particle clustering in turbulent premixed flames* **J. Phys.: Conf. Ser.** 333:012002, doi:10.1088/1742-6596/333/1/012002, 2011
  61. P. Gualtieri, F. Picano, G. Sardina and C.M. Casciola. *The effects of back-reaction on turbulence modulation in shear flows: a new exact regularized point-particle method* **J. Phys.: Conf. Ser.** 318:092015, doi:10.1088/1742-6596/318/9/092015, 2011
  62. F. Battista, F. Picano, G. Troiani, and C.M. Casciola. *DNS of a variable density jet in the supercritical thermodynamic state*. In **Proceedings of Direct and Large-Eddy Simulation VIII, Eindhoven 6-9/07/2010, Springer 2011**
  63. G. Sardina, F. Picano, G. Gualtieri and C.M. Casciola. *Development of a Particle-Laden Pipe Flow: Implications for Evaporation*. In **Proceedings of Direct and Large-Eddy Simulation VIII, Eindhoven 6-9/07/2010, Springer 2011**
  64. F. Picano, G. Sardina, G. Gualtieri and C.M. Casciola. *DNS of a Free Turbulent Jet Laden with Small Inertial Particles*. In **Proceedings of Direct and Large-Eddy Simulation VIII, Eindhoven 6-9/07/2010, Springer 2011**
  65. F. Picano, C. M. Casciola, and K. Hanjalic. *Scrutinizing the Leray-alpha regularization for LES in turbulent axisymmetric free jets*. In **Proceedings of Direct and Large-Eddy Simulation VII**. Springer, ISBN: 978-90-481-3651-3, 2010.
  66. G. Sardina, F. Picano, and C.M. Casciola. *Spatial evolution of inertial particles in turbulent pipe flow*. In **Progress in Turbulence III**. Springer, ISBN: 978-3-642-02224-1, 2010
  67. P. Gualtieri, F. Picano, and C. M. Casciola. *Anisotropic clustering of inertial particles in shear turbulence*. In **Progress in Turbulence III**. Springer, ISBN: 978-3-642-02224-1, 2010
  68. F. Battista, F. Picano, G. Troiani, and C.M. Casciola. *Effects of particle inertia on PIV measurements of turbulent premixed flames*. In **Turbulence, Heat and Mass Transfer 6**. Proceedings of 6th Symposium on Turbulence, Heat and Mass Transfer, Rome 14-17/9/2009, Begell House Inc., New York, Wallingford (UK), ISBN 978-1-56700-262-1, 2009
  69. G. Sardina, P. Schlatter, L. Brandt, F. Picano, and C.M. Casciola. *Large scale accumulation patterns of inertial particles in wall-bounded turbulent flow*. In **Turbulence, Heat and Mass Transfer 6**. Proceedings of 6th Symposium on Turbulence, Heat and Mass Transfer, Rome 14-17/9/2009, Begell House Inc., New York, Wallingford (UK), ISBN 978-1-56700-262-1, 2009
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