
CURRICULUM VITÆ

CRISTIAN MARCHIOLI

• Education

- 2003: Ph.D., Mechanical Engineering, University of Udine, Italy
- 1999: BS - MS, Industrial Engineering, University of Udine, Italy

• Academic Positions and Qualifications

- 2019 - present: Guest Professor, Institute of Fluid Mechanics and Heat Transfer, TU Wien (Aut)
Course: Gas dynamics and Aerodynamics (322.075)
- 2017: National Scientific Qualification (Abilitazione Scientifica Nazionale) to Full Professor of Fluid Mechanics in Italian Universities
- 2016 - present: Associate Professor of Fluid Mechanics, DPIA, University of Udine
- 2013: National Scientific Qualification (Abilitazione Scientifica Nazionale) to Associate Professor of Fluid Mechanics in Italian Universities
- 2010-2016: Senior Scientist & Assistant Professor of Fluid Mechanics, DIEG, University of Udine
- 2006: Guest Scientist, Dept. Multiscale Physics, Technische Universiteit, Delft (Ned)
- 2006: Guest Scientist, Dept. Mechanical Eng., Technische Universiteit, Eindhoven (Ned)
- 2004-2010: Adjoint Professor of Fluid Mechanics, Dept. Energy Technologies, University of Udine
- 2003-2009: Post-Doctoral Fellow, Dept. Energy Technologies, University of Udine

• Honors, Grants and Awards

- 2020: Invited speaker at the IUTAM Symposium on *Turbulent structure and particles-turbulence interaction*, Lanzhou, China, 26-29 June 2020 (postponed to July 2021)
- 2019: Invited seminar at *Inst. Aerodynamics, RWTH Aachen University*, Aachen (DE), Feb. 5, 2019
- 2018: Invited speaker at the BIRS-CMO Workshop N. 18w5139 *New Frontiers in Multiphase CFD for the 21st Century Energy Mix*, Oaxaca (MX), August 19-24, 2018
- 2018: Keynote speaker at *5th Int. Conf. Turbulence and Interactions (TI2018)*, La Martinique (FR), June 25-29, 2018
- 2018: Guest lecturer at *Symposium on Fluid Dynamics Modelling for Real World Applications* (EPSRC Centre for Doctoral Training in Fluid Dynamics, Director: Prof. P. Jimack), University of Leeds, Leeds (UK), June 20, 2018
- 2018: Invited seminar at *Linne Flow Centre, KTH*, Stockholm (SE), April 26, 2018
- 2017: Guest lecturer at *Flowing Matter* (COST-CISM Advanced Course, coordinated by B. Dollet & B. Mehlig), CISM, Udine (IT), September 25-29, 2017
- 2017: Invited seminar at *Institute of Mechanics, Beijing International Center for Theoretical and Applied Mechanics (BICTAM)*, Chinese Academy of Sciences, Beijing (CHN), September 7, 2017
- 2017: Keynote speaker at *3rd Int. Conf. Numerical Methods in Multiphase Flow (ICNMMF-III)*, Tokio (JAP), June 26-29, 2017
- 2017: Fiorino d'Argento, awarded by the City of Florence (IT),
- 2016: Invited seminar at *Institute of Fluid Mechanics and Heat Transfer*, TUWien, Wien (AT), September 29, 2016
- 2015: Invited seminar at *Observatoire de la Cote d'Azur*, Nice (FR), November 2, 2015

2015: Invited speaker at *ERCOFTAC Autumn Festival 2015*, Vinci (IT), October 15-16
 2015: Erasmus Teaching Mobility Grant (Course taught: *Subgrid-scale modeling for particle simulations in LES*), Université Pierre et Marie Curie (Paris VI), 03-05 March 2015
 2014: Keynote speaker at *13th Int. Conf. Multiphase Flows in Industrial Plants (MFIP13)*, Sestri Levante (IT), September 17-19
 2014: Invited speaker at *Nordita Conf. Dynamics of Particles in Flows*, Stockholm (SE), June 11-13
 2012: Invited lecture at *50th European Two-Phase Flow Group Meeting*, Udine (IT), May 16-18
 2011: Keynote lecture at *XX AIMETA Conference*, Bologna (IT), September 12-15
 2011 - present: PI of IS CRA B/IS CRA C Grants (total standard hours granted: 1,5 millions)
 2011: Standard HPC Tenders Grant CASPUR
 2010: Recipient of the Young scientist 2008 best paper prize awarded by the University of Udine
 2009: Invited lecture at *5th European-Japanese Two-Phase Flow Group Meeting*, Spoleto (IT), September 20-25
 2005: Recipient of the 2003-2004 UIT (Unione Italiana di Termofluidodinamica) award for the best PhD thesis on Thermofluidynamics

• Specific Experience in Competitive Projects

2018 - 2022: Principal Investigator of MSCA-EID-ITN Project *Next-generation computational methods for enhanced multiphase flow processes* (Proposal N. 813948 - Budget: 753.185 EUR)
 2011 - 2015: Chairman of COST Project *Fibre suspension flow modelling - a key for innovation and competitiveness in the pulp and paper industry* (Budget: 435.700 EUR)

• Research Funds

PUBLIC FUNDING - Public funding is hierarchically obtained from all sources ranging from the local regional authority, to specific national research programmes and to specific competitive projects:

- CLEANSTONE *Recovery and upgrading of stone processing waste for ecological sustainability* (11/2019 - 10/2021) - Call: 2014 - 2020 INTERREG V-A Italy - Austria - Project Budget 862.419 EUR (RU Budget: 245.000 EUR) - Role: Member of RU
- UBE *Underwater Blue Efficiency* (05/2014 - 10/2016) - Call: PAR FSC 2007-2013, Linea d'Azione 3.1.2 "Miglioramento dell'offerta di ricerca, innovazione e trasferimento tecnologico", Azione 3.1.2.2 "Distretti tecnologici" (Ditenave) - Project Budget 499.700 EUR (RU Budget: 60.000 EUR) - Role: Member of RU
- Nugenia + (Grant *FP7-EURATOM-FISSION*) *Simulation of two-phase flow patterns with a new approach based on Smoothed Particle Hydrodynamics* (03/2015 - 09/2016) - Call: FP7-Fission-2013 - Project Budget: 180.000 EUR (RU Budget: 70.000 EUR) - Role: Member of RU
- COST Project *Fibre suspension flow modelling - a key for innovation and competitiveness in the pulp and paper industry* (05/2011 - 06/2015) - Project Budget: 435.700 EUR - Role: Coordinator
- Fondo Sociale Europeo - Misura D4 (Grant Funds 2003-2004) *Dispersion Mechanisms in the Gulf of Trieste: Interaction between Turbulence and Biological Processes* - Budget: 24.000 EUR

PRIVATE FUNDING - Private funding is obtained from contract research (contratti conto terzi) with industrial partners. Total funding is about 90.000 EUR from the following partners:

- MBF S.p.A (2019) *Analisi dell'impianto per l'imbottigliamento di vini frizzanti: identificazione di criticità e possibilità di miglioramento.*
- Ardea s.r.l. (2017) *Analisi di sistemi per il contenimento delle emissioni di polveri da tramogge.*

- Meccanotecnica Veneta s.r.l. (2014) *Computational characterization of the lubro-refrigeration process of circular saw blades.*
- Boer Group (2011) *Analisi fluidodinamica di impianti di disoleazione esistenti e identificazione di linee-guida per l'ottimizzazione di progetto.*
- Aria s.r.l. (2007) *Analisi fluidodinamica per sistema di pulizia e igienizzazione delle canalizzazioni: studio della dinamica di un flusso d'aria in uscita da ugello destinato alla bonifica delle condotte.*

MISCELLANEOUS FUNDING

- 2016: Research grant for hosting 1 young researcher within the *Young Investigator Training Programme* funded by ACRI (4.000 EUR).

• Professional Activity

COORDINATOR of:

- *Advanced numerical approaches for simulation of turbulent multiphase flows* (CISM-COMETE Summer School, September 7-11, 2020, CISM, Udine, Italy)
- *Anisotropic particles in viscous and turbulent flows* (CISM-AIMETA Summer School, July 1-5, 2019, CISM, Udine, Italy)
- *Fluid dynamics effects on particle formation in crystallization processes* (EFCE-Euromech Summer School, July 2-6, 2018, CISM, Udine, Italy)
- *Collective Dynamics of particles: from viscous to turbulent flows* (COST-ERCOFTAC Training School, May 26-30, 2014, CISM, Udine, Italy)
- *Non-spherical particles and aggregates in fluid flows* (COST-ERCOFTAC Training School, June 17-21, 2013, CISM, Udine, Italy)

INVITED LECTURER at:

- *Fluids Symposium: Fluid Dynamics Modelling for Real World Application* (Coordinator: P. Jimack, June 20, 2018, University of Leeds, UK)
- *Particles in wall-bounded turbulent flows: deposition, re-suspension and agglomeration* (Coordinators: J.P. Minier, J. Pozorski, September 14-18, 2015, CISM, Udine)
- COST Training School on *Regular and irregular non-spherical particles in laminar and turbulent flow* (Martin-Luther Universitat, Halle-Wittenberg, May 27-29, 2015)
- XIII UIT Summer School on *Thermo-fluid dynamics of two-phase systems* (Certosa di Pontignano, September 9-14, 2013)

ORGANIZER of scientific workshops, symposia and fora:

- Scientific Committee Member of the *13th ERCOFTAC Workshop on Direct and Large-Eddy Simulation (DLES13)*, Stockholm, 7-9 June 2021
- Scientific Committee Member of the *5th African Conf. on Computational Mechanics (AFRICOMP2020)*, Cape Town, 30 Nov. - 2 Dec. 2020
- Scientific Committee Member of the *2nd Dispersed Two-Phase Flows Workshop (DTPF 2018)*, ENS Lyon, 21-23 September 2020
- Scientific Committee Member of the IUTAM Symposium on *Turbulent structure and particles-turbulence interaction*, Lanzhou, China, 26-29 June 2020 (postponed to 2021)
- Chairman of the *1st BICTAM-CISM Symposium on Dispersed Multiphase Flows: From measuring to modeling*, Beijing, 4-6 March 2020 (postponed to 2021)
- Mini-Symposium on *Modelling and Simulation of Multiphase Flows* (co-organized with J. Pozorski, M. Marek), 4th Polish Congress of Mechanics (PCM-CMM), 8-12 September 2019, Kraków, Poland

- Scientific Committee Member of the *12th ERCOFTAC Workshop on Direct and Large-Eddy Simulation (DLES12)*, Madrid, 5-7 June 2019
- Scientific Committee Member of the *10th International Conference on Multiphase Flow (ICMF 2019)*, Rio de Janeiro, 19-24 May 2019
- Scientific Committee Member of the *1st Dispersed Two-Phase Flows Workshop (DTPF 2018)*, EN-SEEIHT Toulouse, 17-19 September 2018
- IUTAM Symposium on *Motile cells in complex environments*, May 15-18, 2018, Udine, Italy
- Special Symposium on *Modelling and Experimentation of Fibre Suspensions in Process Engineering* World Congress of Chemical Engineering (WCCE 10), 1-5 October 2017, Barcelona, Spain
- Scientific Committee Member of the *11th ERCOFTAC Workshop on Direct and Large-Eddy Simulation (DLES11)*, Pisa, 29-31 May 2017
- Scientific Secretary, Organizing Committee Member and Poster Competition Chair of the *9th International Conference on Multiphase Flow (ICMF 2016)*, 22-27 May 2016
- COST Action FP1005 Final Conference *Fiber Suspension Flow Modelling*, 9-11 June 2015, NTNU, Trondheim, Norway
- Section on *Interfacial Flows* at GAMM 86th Annual Scientific Conference, 23-25 March 2015, Grand Hotel Tiziano, Lecce, Italy
- Open forum on *Fluid-Particle Interactions in Turbulence* 4th Joint US-European Fluids Engineering Summer Meeting (FEDSM 2014), 3-7 August 2014
- Open forum on *Fluid Dynamic Behavior of Complex Particles* 4th Joint US-European Fluids Engineering Summer Meeting (FEDSM 2014), 3-7 August 2014
- 19th ERCOFTAC Alpe Danube Adria Pilot-Center Meeting 23 May 2014, CISM, Udine, Italy
- 6th Joint ERCOFTAC-COST Meeting on *Fiber suspension flow modelling*, 23-25 October 2013, University of Udine, Udine, Italy
- 1st Symposium on *Dispersed two-phase flows: Dispersion, deposition and agglomeration*, 11th Int. Conf. Numerical Analysis and Applied Mathematics, 21-27 September 2013, Rodos, Greece

VICE-COORDINATOR and MEMBER of the PhD Program Board *Environmental and Energy Engineering Sciences (Scienze dell'Ingegneria Energetica e Ambientale)*, University of Udine.

EDITOR of *Acta Mechanica* (April 2017 - present)

REVIEW EDITOR of *Frontiers in Chemical and Process Engineering* (2016 - present)

MEMBER of the Editorial Advisory Board of *Acta Mechanica* (October 2014 - March 2017), *Flow, Turbulence & Combustion* (April 2019 - Present)

MEMBER of ERCOFTAC SIG42 *Fiber Suspension Flow* Steering Committee

MEMBER of UIT (Unione Italiana di Termofluidodinamica), ASME (American Society of Mechanical Engineers), APS (American Physical Society), EUROMECH (European Mechanics Society)

MEMBER of the scientific council, academic council and board of directors of the International Center of Mechanical Sciences (CISM)

DIRECTOR of the Department of Fluid Dynamics of the International Center of Mechanical Sciences (CISM)

CORRESPONDING MEMBER for Italy of the Japanese Society of Multiphase Flow

REFERENCE PERSON for production and management of the following DATA REPOSITORIES:

- COST FP1005 - test case WG3: DNS of fiber-laden channel flow
- COST P20 - test case WG3: LES of particle-laden channel flow

- Picciotto, M., Marchioli, C. & Soldati, A. (2006) Database of particles dispersed in turbulent channel flow CFD database, CINECA, Italy (<http://cfd.cineca.it/cfd>)
- Marchioli, C., Picciotto, M. & Soldati, A. (2005) Velocity statistics in particle-laden turbulent vertical channel flow with and without lift. CFD database, CINECA, Italy (<http://cfd.cineca.it/cfd>)

REVIEWER for Scientific Journals:

- *Acta Mechanica, AIAA Journal, Advances in Colloid and Interface Science, Advances in Water Resources, Atmospheric Environment, Canadian Journal of Chemical Engineering, Chemical Engineering Science, Communications in Computational Physics, Computational Geosciences, Computers & Fluids, Computer Methods in Applied Mechanics & Engineering, European Journal of Mechanics B/Fluids, Experiments in Fluids, Flow, Turbulence & Combustion, Fluid Dynamics Research, International Journal of Heat & Fluid Flow, International Journal of Heat & Mass Transfer, International Journal of Heat & Technology, International Journal of Modern Mathematics, International Journal of Multiphase Flows, International Journal for Numerical Methods in Fluids, International Journal of Thermal Sciences, Journal of Aerosol Science, Journal of Computational & Applied Mathematics, Journal of Computational Physics, Journal of Fluid Mechanics, Journal of Fluids Engineering, Journal of Fluids & Structures, Journal of Hazardous Materials, Journal of Non-Newtonian Fluid Mechanics, Journal of Physics A - Math. Gen., Journal of Physics D - Applied Physics, Journal of Turbulence, Journal of Zhejiang University Science, Meccanica, Multiphase Science & Technology, New Journal of Physics, Nuclear Engineering and Design, Numerical Heat Transfer B, Particulate Science & Technology, Physical Review E, Physical Review Fluids, Physical Review Letters, Physics of Fluids, Physics Letters A, Plasma Science & Technology, Powder Technology, Progress in Energy & Combustion Science, Water*

REVIEWER for Governmental Bodies and Non-Profit Organizations:

- ANR (French National Research Agency, FR), Call: "JCJC - SIMI 9"
- NSERC-CRSNG (Natural Sciences and Engineering Research Council of Canada, CA) Call: "NSERC Discovery Grant"
- SERI (State Secretariat for Education, Research and Innovation, CH), Call: "COST Research Proposal C10.0073"
- UEFISCDI (Executive Agency for Higher Education, Research, Development and Innovation Funding, RO), Call: "Research within Priority Sectors Programme - RO14"
- FWO (Research Foundation, Flanders, BE)
- ETAg (Estonian Research Council, EE), Call: "Norwegian-Estonian Research Cooperation Programme"
- NCN (Polish National Science Centre, PO), Call: "OPUS Funding scheme"
- CINECA Call: "Italian SuperComputing Resource Allocation - ISCRA"

OPPONENT of PhD Theses:

Extramural

- *Large-eddy simulation of coupled dispersed phase-flows: a statistically-consistent framework* (Defendant: David Mercier, Advisors: Aymeric Viè, Marc Massot, Date: 18/06/2020, Université Paris-Saclay, FR)
- *Développement d'un solveur 3D massivement parallèle pour la prédiction d'écoulements granulaires réactifs en géométrie complexe* (Defendant: Yann Dufresne, Advisor: Vincent Moureau, Date: 29/11/2019, CORIA, Rouen, FR)
- *Path and wake of cylinders falling in a liquid at rest or in a bubble swarm* (Defendant: Clement Toupoint, Advisors: Patricia Ern, Veronique Roig, Date: 29/11/2018, IMFT, Toulouse, FR)
- *Modélisation d'un jet chargé en nanoparticules à partir d'une fuite de canalisation de transport* (Defendant: Le-Hong Duc, Advisors: Pascal Fede, Eric Climent, Date: 04/06/18, IMFT, Toulouse, FR)

- *Development of a volume-penalty method for the simulation of bubbly flows* (Defendant: Antoine Morente, Advisor: Dominique Legendre, Date: 31/10/2017, IMFT, Toulouse, FR)
- *Particle accumulation structures in boundary-driven flows* (Defendant: Francesco Romanó, Advisor: Hendrik Kuhlmann, Date: 27/09/2016, TUWien, Wien, AT)
- *Doctorate in Chemical Engineering, Advanced Process Design and Modelling* (Defendants: G. Boccardo, M. Curti, M.M. Coletto, A. Pezzin, T. Zelenkova; Date: 30/01/2015, Politecnico di Torino)
- *Study of dilute suspension of non-spherical particles in turbulent flow* (Defendant: Afshin Abbasi Hoseini, Advisor: Helge Andersson, Date: 17/06/2014, NTNU, Trondheim, NO)

Intramural

- *Numerical simulations of breakage, coalescence and droplet size distribution* (Defendant: Giovanni Soligo, Advisor: Alfredo Soldati, Date: 13/02/2020, University of Udine, IT)
- *Analysis of the drag reduction in turbulent viscosity-stratified flows* (Defendant: Somayeh Ahmadi, Advisor: Alfredo Soldati, Date: 12/03/2018, University of Udine, IT)
- *Direct Numerical Simulation of turbulence-interface interactions* (Defendant: Alessio Roccon, Advisor: Alfredo Soldati, Date: 12/03/2018, University of Udine, IT)
- *Convection in porous media* (Defendant: Marco De Paoli, Advisor: Alfredo Soldati, Date: 02/03/2017, University of Udine, IT)
- *Experimental investigation on the aerodynamic behavior of cooling channels for the leading edge of gas turbine blades* (Defendant: Luca Furlani, Advisor: Luca Casarsa, Date: 02/03/2017, Univ. Udine, IT)
- *Caratterizzazione ed ottimizzazione energetica di impianti per l'industria farmaceutica* (Defendant: Federico Olimpi, Advisor: Alfredo Soldati, Date: 02/03/2017, Univ. Udine, IT)
- *Heat transfer in gaseous micro-flows: conjugate heat transfer, rarefaction and compressibility effects* (Defendant: Michele Coppola, Advisor: Giulio Croce, Date: 30/03/2016, University of Udine, IT)
- *Analisi e sviluppo di modelli per la valutazione della dispersione di odori in contesti antropizzati* (Defendant: Nicola Pettarin, Advisor: Alfredo Soldati, Date: 30/03/2016, University of Udine, IT)
- *Experimental evaluation of biopolymer and synthetic polymer drag reduction in industrial scale facilities* (Defendant: Mattia Simeoni, Advisor: Alfredo Soldati, Date: 30/03/2016, Univ. Udine, IT)
- *Dynamics of passive and active particles at the surface of a stratified/unstratified turbulent open channel flow* (Defendant: Salvatore Lovecchio, Advisor: A. Soldati, Date: 10/05/2015, University of Udine, IT)
- *The tracer method and conductance probes to study stratified-dispersed flows in near horizontal pipes* (Defendant: Enrico Pitton, Advisor: Alfredo Soldati, Date: 10/05/2015, University of Udine, IT)
- *Development of hybrid continuum-kinetic solver for micro gas flow simulation* (Defendant: Olga Rovenskaya, Advisor: Giulio Croce, Date: 10/05/2015, University of Udine, IT)
- *Aerothermal numerical predictions of trailing edge and leading edge cooling channels* (Defendant: Matteo Pascotto, Advisor: Luca Casarsa, Date: 12/05/2014, University of Udine, IT)
- *Turbulence modulation by large deformable droplets* (Defendant: Luca Scarbolo, Advisor: Alfredo Soldati, Date: 12/05/2014, University of Udine, IT)

OPPONENT of Licentiate Theses:

- *Stability analysis of channel flow laden with small particles* (Defendant: Joy Klinkenberg, Advisors: Luca Brandt, Rick De Lange, Date: 07/10/2011, KTH, Stockholm, SE)

• Research

RESEARCH ACTIVITY

- 2019 - present: Guest Professor, Institute of Fluid Mechanics and Heat Transfer, Technische Universität Wien (Wien, Austria)
- 08/2017-09/2017: Visiting Professor, Department of Engineering Mechanics, School of Aerospace, Tsinghua University (Beijing, China)
- 04/2014-05/2014: COST visitor at Department of Mechanical Engineering, Norwegian University of Science and Technology (NTNU), Trondheim (Norway)
- 07/2012-08/2012: COST visitor at Department of Mechanical Engineering, Norwegian University of Science and Technology (NTNU), Trondheim (Norway)
- 09/2006-10/2006: HPC-Europa visitor at Department of Mechanical Engineering, Technische Universiteit (TUd), Delft (Netherlands)
- 01/2006-03/2006: HPC-Europa visitor at Department of Mechanical Engineering, Technische Universiteit (TUE), Eindhoven (Netherlands)
- 09/2001-06/2002: Visiting scholar at Department of Mechanical Engineering, The Johns Hopkins University, Baltimore (USA)

RESEARCH TOPICS

- Turbulent dispersion of particles, aerosols and bubbles: Fundamentals and applications
- Numerical simulation (DNS, LES) of two-phase turbulent flows
- Analysis and control of turbulent transfer mechanisms of mass, momentum and heat
- Eulerian-Lagrangian methods, sub-grid modeling for particles

• Teaching

Note: Unless otherwise indicated, all courses listed below were delivered at the University of Udine

- 2019-pres. : Gas dynamics and Aerodynamics (Institute of Fluid Mechanics & Heat Transfer, TU Wien)
- 2018-2019 : Transport phenomena: An introduction to mathematical modelling and numerical solutions (Fenomeni di trasporto: Introduzione alla modellazione matematica e simulazione numerica), Scuola Superiore
- 2017-pres. : Environmental transport phenomena (in English), M.S. Environmental & Energy Engineering
- 2017-2019 : Modelling of turbulent flows (Modellistica dei flussi turbolenti), M.S. Mechanical Engineering
- 2017-pres. : Numerical methods for transport equations (in English), PhD in Energy & Environmental Engineering Science
- 2013-pres. : Fluid mechanics (Fluidodinamica), B.S. Mechanical & Industrial Engineering
- 2012-2013 : Numerical methods for transport equations (Metodi numerici per le equazioni di trasporto), Scuola Superiore
- 2009-2011 : Adjoint Professor of Computational Fluid Mechanics (Fluidodinamica computazionale), Math. Phys. & Nat. Sci.
- 2002-2012 : Adjoint Professor of Fluid Mechanics (Fluidodinamica), Mechanical Engineering, CEPO

• Batchelor/Master/PhD Theses Supervised

- A.A. 1999-present : Co-Advisor of more than 80 B.S./M.S. Theses in Fluid Mechanics (Mechanical and Management Eng.), University of Udine, Italy
- A.A. 2003-present : Advisor of more than 40 B.S. Theses in Fluid Mechanics (Mechanical Engineering) Centro Polifunzionale di Pordenone, University of Udine, Italy

A.A. 2015-present : Advisor of 5 PhD students (D. Dotto, cycle XXXI; A. Hajisharifi, cycle XXXIII; P. Hadi Sichani, cycle XXXIV; Kevin Miranda, cycle XXXV; Davide di Giusto, cycle XXXV), PhD in Energy and Environmental Engineering Science, Univ. Udine, Italy

A.A. 2016-present : Co-Advisor of 2 PhD students (G. Soligo, cycle XXXII; M. Alipour, cycle XXXIII), PhD in Energy and Environmental Engineering Science, University of Udine, Italy

• Scientific Production

CITATION REPORT (as of 21/10/2020)	Source: Scopus	★	WoS
Results found:	69	★	61
Number of journal publications:	44	★	43
Sum of the times cited:	1852	★	1745
Without self-citations:	1620	★	1519
H-index:	24	★	22

REFERRED JOURNAL PUBLICATIONS (PUBLISHED OR SUBMITTED OR IN PREPARATION)

- J47 **Marchioli, C.** (2021) Modelling and simulation approaches to fiber suspension flows, *Rev. Chem. Eng.* In preparation (solicited paper).
- J46 Hajisharifi, A., **Marchioli, C.**, F., Soldati, A. (2020) Particle capture by drops in turbulent flow, *Phys. Rev. Fluids*, Under Review.
- J45 Hadi Sichani, P., **Marchioli, C.**, Zonta, F., Soldati, A. (2020) Shear effects on scalar transport in double diffusive convection, *J. Fluids Eng.*, **142**, FE-19-1794.
- J44 Campolo, M., **Marchioli, C.** (2020) Drag reduction in turbulent flows by polymer and fiber additives, *KONA Powder Part. J.* Article ID: 2021009 (solicited paper).
- J43 Dotto, D., Soldati, A., **Marchioli, C.** (2019) Deformation of flexible fibers in turbulent channel flow. *Meccanica*, **55**, 343-356.
- J42 Bhatia, H., **Marchioli, C.**, Sardina, G., Brandt, L., Soldati, A. (2019) Role of large-scale advection and small-scale turbulence on the vertical migration of gyrotactic swimmers. *Phys. Rev. Fluids*, **4**, 124304.
- J41 Qiu, J., **Marchioli, C.**, Andersson, H.I., Zhao, L. (2019) Settling tracer spheroids in vertical turbulent channel flows, *Int. J. Multiphase Flow*, **118**, 173-182.
- J40 **Marchioli, C.**, Vincent, S. (2019) Special issue on finite-size particles, drops and bubbles in fluid flows: advances in modelling and simulations. *Acta Mech.*, **230**, 381-386.
- J39 Dotto, D., **Marchioli, C.** (2019) On the dynamics of flexible fibers in turbulent channel flow. *Acta Mech.*, **230**, 597-621.
- J38 Mashayekpour, M., Nemati Lay, E., Lovecchio, S., **Marchioli, C.**, Soldati, A. (2019) Wind effect on gyrotactic micro-organism surfacing in free-surface turbulence. *Adv. Water Resour.*, **129**, 328-337.
- J37 Ravnik, J., **Marchioli, C.**, Soldati, A. (2018) Assessing the application limits of the Jeffery formulation for hydrodynamic torques acting on elongated particles in fluid turbulence, *Acta Mech.*, **229**, 827-839.
- J36 Lovecchio, S., Zonta, F., **Marchioli, C.**, Soldati, A. (2017) Thermal stratification hinders gyrotactic micro-organism rising in free-surface turbulence. *Phys. Fluids*, **29**, 053302.
- J35 Soligo, G., Wu, W., **Marchioli, C.**, Soldati, A., Piomelli, U. (2017) Particle resuspension by a periodically-forced impinging jet, *J. Fluid Mech.*, **820**, 284-311.
- J34 **Marchioli, C.** (2017) Large-eddy simulation of turbulent dispersed flow: A review of modelling approaches, *Acta Mech.*, **228**, 738-768 (solicited paper).
- J33 Innocenti, A., **Marchioli, C.**, Chibbaro, S. (2016) Lagrangian filtered density function for LES-based stochastic modelling of turbulent dispersed flows, *Phys. Fluids*, **28**, 115106.

- J32 **Marchioli, C.**, Zhao, L., Andersson, H.I. (2016) On the relative rotational motion between rigid fibers and fluid in turbulent channel flow, *Phys. Fluids*, **28**, 013301.
- J31 **Marchioli, C.**, Soldati, A. (2015) Turbulent breakage of ductile aggregates, *Phys. Rev. E*, **91**, 053003.
- J30 Babler, M.U., Biferale, L., Brandt, L., Feudel, U., Guseva, K., Lanotte, A.S., **Marchioli, C.**, Pecile, E., Picano, F., Sardina, G., Soldati, A., Toschi, F. (2015) Breakup of small aggregates in bounded and unbounded turbulent flows, *J. Fluid Mech.*, **766**, 104-128.
- J29 Zhao, L., **Marchioli, C.**, Andersson, H.I. (2014) Slip velocity of rigid fibers in wall-bounded turbulence, *Phys. Fluids*, **26**, 063302.
- J28 Chibbaro, S., **Marchioli, C.**, Salvetti, M.V., Soldati, A. (2014) Particle tracking in LES flow fields: Lagrangian conditional statistics of filtering error, *J. Turbul.*, **15**, Issue 1, 22-33.
- J27 **Marchioli, C.**, Soldati, A. (2013) Rotation statistics of fibers in wall shear turbulence, *Acta Mech.*, **224**, 2311-2329.
- J26 Zonta, F., **Marchioli, C.**, Soldati, A. (2013) Particle and droplet deposition in turbulent swirled pipe flow, *Int. J. Multiphase Flow*, **56**, 172-183.
- J25 Lovecchio, S., **Marchioli, C.**, Soldati, A. (2013) Time persistence of floating-particle clusters in free-surface turbulence, *Phys. Rev. E*, **88**, 033003.
- J24 **Marchioli, C.**, Soldati A. (2012) Sediment transport in steady turbulent boundary layers: Potentials, limitations, and perspectives for Lagrangian tracking in DNS and LES, *Adv. Water Resour.*, **48**, 18-30.
- J23 Pitton, E., **Marchioli, C.**, Lavezzo, V., Soldati, A., Toschi, F. (2012) Anisotropy in pair dispersion of inertial particles in turbulent channel flow, *Phys. Fluids*, **24**, 073305
- J22 Bianco, F., Chibbaro, S., **Marchioli, C.**, Salvetti, M.V., Soldati A. (2012) Intrinsic filtering errors of Lagrangian particle tracking in LES flow fields, *Phys. Fluids*, **24**, 045103.
- J21 Molin D., **Marchioli, C.**, Soldati, A. (2012) Turbulence modulation and microbubble dynamics in vertical channel flow, *Int. J. Multiphase Flow*, **42**, 80-95.
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