Curriculum Vitae

CLAUDIA ADDUCE

Address: Department of Engineering University Roma Tre via Vito Volterra 62 00146 Roma, Italy +390657333468 Phone: claudia.adduce@uniroma3.it e-mail:

EDUCATION

2004	Ph.D. in Civil Engineering, University Roma Tre.
2000	M.Sc. (cum laude) in Environmental Engineering, University of Rome "La Sapienza".

ACADEMIC APPOINTMENTS

2014-present	Associate Professor, University Roma Tre.
2006-2014	Assistant Professor, University Roma Tre.
2004-2006	Postdoctoral Investigator, University Roma Tre.

VISITING APPOINTMENTS

2019 July	Visiting professor, IHE Delft Institute for Water Education, Delft, Netherlands.
2018 May-July	Visiting Professor, Laboratory of Geophysical and Industrial Flows, France.
2017 January	Visiting Professor, Instituto Superior Tecnico, Portugal.
2016 June-July	Staff Member of the GFD Summer Program, Woods Hole Oceanographic Institution, USA.
2015 Apr-Jun	Guest Professor, Ecole Polytechnique Federale de Lausanne, Switzerland.
2013 Nov	Visiting Professor, Ecole Polytechnique Federale de Lausanne, Switzerland.
2013 July	Visiting Professor, Woods Hole Oceanographic Institution, USA.
2012 June	Visiting Professor, New University of Lisbon, Portugal.
2008 May	Visiting Professor, University of Coimbra, Portugal.
2004 Jun-Aug	Guest student, Woods Hole Oceanographic Institution, USA.
2002 Jun-Sep	Guest student, Woods Hole Oceanographic Institution, USA.
2001 Oct-Nov	Guest student, Ecole Polytechnique Federale de Lausanne, Switzerland.

SCIENTIFIC PUBLICATIONS

Author or co-author of 34 international journal papers, 60 papers published in conference proceedings, 49 conference abstracts. On July 2020, a Scopus search resulted in 49 documents, with 997 citations and h-index of 19.

TEACHING ACTIVITIES

TEACHING EXPERIENCE

2011-present	Professor of Environmental Hydraulics for master students in Civil Engineering, University
	Roma Tre.
2016- present	Professor of Hydraulics for bachelor students in Civil Engineering, University Roma Tre.
2017	Professor of Introduction to Geophysical Fluid Dynamics for PhD students in Civil and
	Environmental Engineering, Instituto Superior Tecnico, Portugal.
2015	Professor of Introduction to Geophysical Fluid Dynamics for PhD students in Civil and
	Environmental Engineering, EPFL, Switzerland.
2011-2013	Professor of Hydraulics for bachelor students in Civil Engineering, University Roma Tre

Professor of Hydraulics for bachelor students in Civil Engineering, University Roma Tre. 2011-2013

2008-2011 Professor of Introduction to Geophysical Fluid Dynamics for master students in Civil Engineering, University Roma Tre.
2008-2011 Professor of Hydraulics II for bachelor students in Civil Engineering, University Roma Tre.
2004-2008 Teaching assistant of Hydraulics I, Hydraulics II, Advanced Fluid Mechanics and Sediment Transport Hydrodynamics bachelor and master students in Civil Engineering, University Roma Tre.
2001-2004 Teaching assistant of Hydraulics for bachelor students in Civil Engineering, University Roma Tre.

ADVISING ACTIVITIES

Post Doctoral Advisor	for:
-----------------------	------

1 OSI DOCIOTAI II	<i>u u s o i s o i s o i s o i s o i s o s s s s s s s s s s</i>
2020-	Maria Chiara De Falco, University Roma Tre
2016-2018	Luisa Ottolenghi, University Roma Tre
PhD Student Advisor for:	
2019-	Maria Rita Maggi, University Roma Tre
2019-	Rossella Belloni, University Roma Tre
2019-	Jacopo Busatto, University Roma Tre
2016-2020	Maria Chiara De Falco, University Roma Tre
2014-2019	Mario Benincasa, University Roma Tre
2014-2018	Giovanni La Forgia, University Roma Tre
2014-2018	Roberto Inghilesi, University Roma Tre
2012-2015	Luisa Ottolenghi, University Roma Tre

2009-2013 Helena Nogueira, University of Coimbra (Co-advisor).

2008-2011 Valentina Lombardi, University Roma Tre (Co-advisor).

Master Student Advisor for:

2005-present Advisor of 15 master thesis in Civil Engineering, co-Advisor of 5 master thesis in Civil Engineering, advisor of 7 bachelor thesis in Civil Engineering, University Roma Tre.

MEMBERSHIP IN ACADEMIC COMMITTEES

- 2020 External reviewer of the PhD thesis of Marco Bracaglia at the University of Napoli Partenope, Italy.
- 2019 External reviewer and member of the final PhD exam committee of Sara Venuleo, EPFL, Switzerland
- 2019 Head of the final PhD exam committee at the University of Calabria, Italy.
- 2018 External reviewer and member, as opponent, of the final PhD exam committee of Monika Kollo, Tallin University of Technology, Estonia.
- 2017 External reviewer of the PhD thesis of Richard Ian Wilson at the University of Auckland, New Zealand.
- 2017 External reviewer of the PhD thesis of Beatriz Pérez Díaz at the University of Cantabria, Spain.
 2016 Member of the Candidacy exam of Sara Venuleo at the EPFL, Switzerland.
- 2014 Member of the final PhD exam committee for the doctoral school of "Fluid Dynamics and Processes of Environmental Engineering" at the University of Genova, Italy.
- 2011-present Member of the doctoral school in Civil Engineering at the University Roma Tre, Italy.
- 2011-2012 Member of the committee for professional engineering practice exam at the University Roma Tre, Italy.

RESEARCH ACTIVITIES

RESEARCH INTERESTS

Stratified Flows: Theoretical, numerical and laboratory modeling of stratified flows, as gravity currents and internal solitary waves.

Local Scouring: Theoretical and laboratory modeling of local scouring due to turbulent water jets.

Eddies: Laboratory modeling of eddies over bottom topography. Eddies interaction with seamounts and islands.

Sloshing: Theoretical and laboratory modeling of the sloshing due to stratified fluids inside a rectangular tank.

INVITED LECTURES

- 2019 "Gravity Currents propagating over complex topography: implications for fluid entrainment and sediment transport", 21st Ippen Lecture, IAHR World Congress, Panama City.
- 2019 "Dynamics of gravity currents flowing up a slope", IHE Delft Institute for Water Education, Delft, Netherlands.
- 2019 "The dynamics of bi-directional exchange flows: implication for morphodynamic change within estuaries and sea straits", Hydralab+ Joint User Meeting, Bucharest, Romania.
- 2018 "The dynamics of bi-directional exchange flows: implication for morphodynamic change within estuaries and sea straits" for the 5th Hydralab+ international workshop, University of Catania, Italy.
- 2017 "Gravity currents flowing up a slope" for the 4th SediTrans international workshop, Instituto Superior Tecnico of Lisbon, Portugal.
- 2015 "Mixing in density currents flowing up a slope" at the Laboratory of Geophysical and Industrial Flows (LEGI), France.
- 2015 "Gravity currents flowing up a slope: laboratory experiments, shallow-water and large eddy simulations" at the Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.
- 2013 "Mixing in Density Driven Currents" at the Institute for Atmosphere and Climate (ISAC) of the Italian National Centre for Research (CNR).
- 2013 "Mixing in Gravity Currents" at the Ecole Polytechnique Federale de Lausanne (EPFL), Switzerland.
- 2012 Keynote lecture "Gravity Currents" for the 3rd International workshop on river and reservoir hydrodynamics and morphodynamics at the New University of Lisbon, Portugal.

JOURNAL EDITORSHIP

2018-present	Editorial Board Member, Environmental Fluid Mechanics
2015-present	Editorial Board Member, Mathematical Problems in Engineering
2015-2018	Guest Editor, Environmental Fluid Mechanics

PROFESSIONAL SERVICE

Member of International Scientific and Professional Committees

Instrumentation Committee

- 2019-present Co-opted member of the Scientific Council of the Italian Hydraulics Group.
- 2018-present Elected member of the Leadership Team of the IAHR Europe Regional Division Committee Elected member of the Leadership Team of the IAHR Experimental Methods and

Member of International and National Congress Scientific Committees

- 2019-present 10th International conference on Fluvial Hydraulics River Flow 2020.
- 2018-2019 IAHR World Congress 2019.
- 2018-2019 HydroSenSoft 2019, International Symposium and Exhibition on Hydro-Environment Sensors and Software.
- 2017-2018 Idra2018, Italian National Congress of Hydraulics and Hydraulics Constructions.
- 2016-2017 HydroSenSoft 2017, International Symposium and Exhibition on Hydro-Environment Sensors and Software.
- 2014-2016 4th IAHR European Congress 2016.
- 2013-2014 7th International conference on fluvial hydraulics River Flow 2014.

Special Session Organizer in International Conferences

- 2020 Buoyancy-driven flows at IAHR Europe Congress 2020
- 2019 Non-intrusive measuring techniques for free-surface and pressurized flows at 38th IAHR World Congress
- 2018 Buoyancy-driven flows at IAHR Europe Congress 2018
- 2018 Investigation of sediment transport processes due to geophysical flows at EGU 2018 congress

2017 Investigation of sediment transport processes due to geophysical flows at EGU 2017 congress

- 2016 Environmetal Fluid Mechanics at Idra 2016
- 2016 Buoyancy-driven flows at River Flow 2016
- 2016 Buoyancy-driven flows at IAHR Europe Congress 2016

Chairwoman of sessions in International Conferences

- 2019 Chair of two sessions "Flow Interaction with Hydraulic Structure" and "Non-intrusive measuring techniques for free-surface and pressurized flows" at the IAHR World Congress
- 2018 Chair of two sessions "Buoyancy-Driven Flows" at the IAHR Europe Congress
- 2017 Chair of the session "Numerical Techniques" at ISSF 2017 Congress
- 2016 Chair of the session "Environmetal Fluid Mechanics 1" at Idra 2016 Congress
- 2016 Chair of the two sessions "Buoyancy-Driven Flows" at the IAHR Europe Congress
- 2016 Chair of the two sessions "Buoyancy-Driven Flows" at River Flow 2016 Congress
- 2015 Chair of the session "River Engineering" at the IAHR World Congress.
- 2014 Chair the session "Local scour and erosion processes" at River Flow 2014 congress.
- 2012 Chair the 3rd International workshop on river and reservoir hydrodynamics and morphodynamics.
- 2008 Chair the session "Physical and numerical modeling in river Engineering" at River Flow 2008 congress.
- 2006 Chair the session "Local scour" at River Flow 2006 congress.

PROFESSIONAL AFFILIATIONS

International Association of Hydraulic Engineering and Research (IAHR) European Mechanics Society (Euromech).

REFEREE

International journals:

Journal of Fluid Mechanics, Physics of Fluids, Journal of Hydraulic Engineering, Journal of Hydraulic Research, Journal of Engineering Mechanics, Environmental Fluid Mechanics, International Journal of Sediment Research, Mathematical Problems in Engineering, Water Management, Ain Shams Engineering Journal, Sedimentology, Ocean Modelling, Advances in Water Resources, Fluid Dynamics Research.

Research agencies:

European Commission

Agence Nationale de la Recherche (France)

Fund for Scientific Research - FNRS (Belgium)

National Research Council of the Romanian Government (Romania)

National Research Council of the Italian Government, MIUR (Italy)

PRAU Bolzano (Italy).

PRINCIPAL INVESTIGATOR OF SCIENTIFIC PROJECTS

- 2019-2022 ISMAR-CNR grant for a PhD fellowship within the project: *Investigation of oceanographic processes by means of satellite images, numerical simulations and laboratory experiments.*
- 2018-2019 CINECA ISCRA B (Italian Super Computing Resource Allocation) 2017 program: Gravity currents generated by Lock-exchange in Unconfined Environment (GLUE)
- 2017-2018 CINECA ISCRA (Italian Super Computing Resource Allocation) 2017 program: LES investigation of gravity currents over a steep slope.
- 2016-2018 EU HYDRALAB+ project: *The dynamics of bi-directional exchange flows: implication for morphodynamic change within estuaries and sea straits.*
- 2015 EU PRACE (Partnership for Advanced Computing in Europe) Preparatory access: *Large Eddy Simulation of unsteady gravity currents and implications for mixing*.
- 2014-2017 ISAC-CNR grant for a PhD fellowship within the project: *Investigation of oceanographic processes by means of satellite images, numerical simulations and laboratory experiments.*
- 2014-2015 CINECA ISCRA (Italian Super Computing Resource Allocation) 2014 program: LES investigation of 3D lock-released gravity currents.
- 2013 CINECA ISCRA (Italian Super Computing Resource Allocation) 2013 program: LES investigation of 3D and upsloping density currents.
- 2012-2013 International Projects funded by University Roma Tre: *Gravity currents: laboratory experiments and mathematical modeling.*

2012-2013 CASPUR Standard HPC Grant 2012: Investigation of gravity currents by LES.

2001 MIUR Young Researchers Grant: *Free surface flows with a local change in geometry*.

PARTECIPANT IN SCIENTIFIC PROJETCS

- 2013-2016 NSF support for Collaborative Research: *Entrainment in Dense Currents over a Rough Bottom* (PI: Cenedese).
- 2007-2009 PRIN 2007: Models and measurements of flow-sediment interactions at spatial and temporal scales of physical interest (PI: Marion).

2005-2007 PRIN 2005: Local scouring due to hydraulic structures (PI: Mele).

- 2002-2004 PRIN 2002: Influence of vorticity and turbulence on the interaction between flows and boundary elements, consequences on hydraulic projects (PI: Pulci Doria).
- 2001-2002 PRIN 2001: Interaction between hydraulic engineering structures and vortical and Turbulent flows (PI: Pulci Doria).

AWARDS AND PRIZES

2019	Ippen Award 2019 awarded by IAHR
2017	FFABR awarded to the top 5% Italian Associate Professors
2017	Willi Hager-Best Reviewer Award of the Journal of Hydraulic Research for the period 2015-2016
2010	Selected by the Italian Hydraulics Association (GII) as one of the top five young Italian researchers for the Torricelli prize.
2006	Selected by the Italian Hydraulics Association (GII) as one of the top five young Italian researchers for the Torricelli prize.
Mentoring	
2014	Marco Gatto was awarded the 'Supino' prize by the Italian Hydraulics Association (GII) for the outstanding Italian master thesis in water engineering.

PUBLICATIONS

JOURNAL PAPERS

^{*} indicates graduate and undergraduate students and postdocs involved in the publication.

- 1. La Forgia G^{*}., Ottolenghi L^{*}., Adduce C., Falcini F., 2020, Intrusions and Solitons: Propagation and Collision dynamics, Physics of Fluids, 32, 7, DOI: 10.1063/5.0011604 (in press).
- 2. De Falco M.C.*, Ottolenghi L.*, Adduce C., 2020, Dynamics of gravity currents flowing up a slope and implications for entrainment, Journal of Hydraulic Engineering, 146(4).
- 3. La Forgia G.*, Tokyay T., Adduce C., Constantinescu G., 2020, Bed shear stress and sediment entrainment potential for breaking of internal solitary waves, Advances in Water Resources, 135, 103475, DOI: 10.1016/j.advwatres.2019.103475.
- 4. Benincasa M.*, Falcini F., Adduce C., Santoleri R., Sannino G., 2019, Synergy of satellite remote sensing and numerical ocean modelling for coastal geomorphology diagnosis, Remote Sensing, 11, 2636, DOI:10.3390/rs11222636.
- 5. La Forgia G.*, Adduce C., Falcini F., Chris Paola, 2019, Migrating bedforms generated by solitary waves, Geophysical Research Letters. 46(9), 4738-4746.
- 6. La Forgia G.*, Tokyay T., Adduce C., Constantinescu G., 2018, Numerical investigation of breaking internal solitary waves, Physical Review Fluids 3(10), 104801. Selected as Editors' Suggestion (top 5% of papers published in PRF).
- La Forgia G.*, Adduce C., Falcini F., 2018, Laboratory investigation on internal solitary waves interacting with a uniform slope, Advances in Water Resources, 120, 4-18. DOI:10.1016/j.advwatres.2017.07.027.
- 8. Sciortino G., Adduce C., Lombardi V., 2018, A new front condition for non-Boussinesq gravity currents, Journal of Hydraulic Research, 56(4). DOI: 10.1080/00221686.2017.1395371.
- 9. Inghilesi R.*, Adduce C., Lombardi V., Roman F., Armenio V., 2018, Axisymmetric three-dimensional gravity currents generated by lock-exchange, Journal of Fluid Mechanics, 851, 507-544. DOI:10.1017/jfm.2018.500.
- Lombardi V.*, Adduce C., La Rocca M., 2018, Unconfined lock-exchange gravity currents with variable lock width: laboratory experiments and shallow-water simulations, Journal of Hydraulic Research, 56(3), DOI: 10.1080/00221686.2017.1372817.
- 11. Adduce C. & Franca M.J., 2018, Preface, Environmental Fluid Mechanics, 18(1), 1-2, DOI:10.1007/s10652-017-9539-7.

- Ottolenghi L.*, Prestininzi P., Montessori A.*, Adduce C., La Rocca M., 2018, Lattice Boltzmann simulations of gravity currents. European Journal of Mechanics-B/Fluids, 67, 125-136, DOI: 10.1016/j.euromechflu.2017.09.003.
- 13. Ottolenghi L.*, Adduce C., Roman F., Armenio V., 2017, Analysis of the flow in gravity currents propagating up a slope, Ocean Modelling, 115, 1-13, DOI:10.1016/j.ocemod.2017.05.001.
- 14. Ottolenghi L.*, Cenedese C., Adduce C., 2017, Entrainment in a dense current flowing down a rough sloping bottom in a rotating fluid, Journal of Physical Oceanography 47(3), 485-498.
- 15. Dodaro G.*, Tafarojnoruz A.*, Sciortino G., Adduce C., Calomino F., Gaudio R., 2016, Modified Einstein's sediment transport methodology to simulate the local scour evolution downstream of a rigid bed, Journal of Hydraulic Engineering, 142(11).
- 16. Ottolenghi L.*, Adduce C., Inghilesi R., Armenio V., Roman F., 2016, Entrainment and mixing in unsteady gravity currents, Journal of Hydraulic Research, 54(5), 541-557.
- 17. Ottolenghi L.*, Adduce C., Inghilesi R., Roman F., Armenio V., 2016, Mixing in lock-release gravity currents propagating up a slope. Phys. Fluids, 28(5), 056604.
- 18. Lombardi V.*, Adduce C., Sciortino G. & La Rocca M., 2015, Gravity currents flowing upslope: laboratory experiments and shallow-water simulations, Physics of Fluids, 27(1), 016602.
- 19. Nogueira H.I.S.*, Adduce C., Alves E. & Franca M.J., 2014, Dynamics of the head of gravity currents, Environmental Fluid Mechanics, 14(2), 519-540.
- 20. La Rocca M., Prestininzi P., Adduce C., Sciortino G., Hinkelmann R, 2013, Lattice Boltzmann simulation of 3D gravity currents around obstacles, International Journal of Offshore and Polar Engineering, 23(3), 178-185.
- 21. Nogueira H.I.S.*, Adduce C., Alves E. & Franca M.J., 2013, Analysis of lock-exchange gravity currents over smooth and rough beds, Journal of hydraulic Research, 51(4), 417-431.
- 22. Nogueira H.I.S.*, Adduce C., Alves E. & Franca M.J., 2013, Image analysis technique applied to lockexchange gravity currents, Measurements Science and Technology, Meas. Sci. Technol. 24(4), 047001.
- La Rocca M., Adduce C., Lombardi V.*, Sciortino G., Hinkermann R., 2012, Development of a lattice Boltzmann method for two-layered shallow-water flow, International Journal for Numerical Methods in Fluids, 70(8), 1048-1072.
- 24. La Rocca M., Adduce C., Sciortino G., Bateman Pinzon A. and Boniforti M.A., 2012, A two-layer shallow water model for 3D gravity currents, Journal of Hydraulic Research, 50 (2), 208-217.
- 25. Adduce C., Sciortino G. & Proietti S.*, 2012, Gravity currents produced by lock-exchanges: experiments and simulations with a two-layer shallow-water model with entrainment, Journal of Hydraulic Engineering, 138(2), 111-121.
- 26. Cenedese C. and Adduce C., 2010, A new parameterization for entrainment in overflows, Journal of Physical Oceanography, 40(8), 1835-1850.
- 27. Sciortino G., Adduce C and La Rocca M., 2009, Sloshing of layered fluid with a free surface as a Hamiltonian system, Physics of Fluids, 21(5).
- 28. La Rocca M., Adduce C., Sciortino G. and Bateman Pinzon A., 2008, Experimental and numerical simulation of three-dimensional gravity currents on smooth and rough bottom, Physics of Fluids, 20(10), 106603.
- 29. Cenedese C. and Adduce C., 2008, Mixing in a density driven current flowing down a slope in a rotating fluid, Journal of Fluid Mechanics, 604, 369-388.
- 30. Adduce C. and Sciortino G., 2006, Scour due to a horizontal turbulent jet: numerical and experimental investigation. Journal of Hydraulic Research, 44(5), 663-673.
- 31. Adduce C. and La Rocca M., 2006, Local scouring due to turbulent water jets downstream of a trapezoidal drop: laboratory experiments and stability analysis, Water Resources Research. 42(2), W02405.
- 32. Cenedese, C., Adduce C. and Fratantoni D., 2005, Laboratory experiments on mesoscale vortices interacting with two islands. Journal of Geophysical Research, Ocean, 110(9), 1-15, C09023.
- 33. La Rocca M., Sciortino G., Adduce C. and Boniforti M.A., 2005, Experimental and theoretical investigation on the sloshing of a two-liquid system with free surface. Physics of Fluids, 17(6), 062101, 1-17.
- 34. Adduce C. and Cenedese, C., 2004, An experimental study of a mesoscale vortex colliding with topography of varying geometry in a rotating fluid. Journal of Marine Research, 62, 611-638.

CONFERENCE PROCEEDINGS

1. De Falco M.C., Ottolenghi L., Adduce C., 2020, Entrainment in lock-release gravity currents propagating up a slope, River Flow 2020.

- 2. La Forgia G., Ottolenghi L., Adduce C., 2020, Breaking of internal solitary waves generated by intrusions, River Flow 2020.
- 3. Adduce C., De Falco M.C. & Maggi M.R., 2019, Gravity currents interacting with a triangular barrier: insights from non-intrusive density measurements, IAHR World Congress 2019.
- 4. Adduce C., Ferreira R., Solis G., Ricardo A. M., 2019, Non-intrusive density measurements in a gravity current over a porous bed, IAHR World Congress 2019.
- 5. Adduce C., De Falco M.C^{*}. & Maggi M.R^{*}., 2019, Image analysis technique applied to lock-exchange gravity currents interacting with an obstacle, HydroSenSoft, International Symposium and Exhibition on Hydro-Environment Sensors and Software.
- 6. Benincasa M^{*}., Falcini F., Adduce C., Santoleri R., Sannino G., Remote sensing and coastal morphodynamic modelling, 2018 IEEE International Workshop on Metrology for the Sea .
- 7. Ottolenghi L.*, Adduce C., Inghilesi R., Armenio V., Roman F., 2016, Density currents flowing up a slope, 4th IAHR Europe Congress.
- 8. Benincasa M.*, Falcini F., Adduce C., Santoleri L., 2016, Remote sensing of fluvial plumes in the Mediterranean area: review of current approaches and future perspectives, 4th IAHR Europe Congress.
- 9. La Forgia G.*, Adduce C. and Falcini F., 2016, Laboratory experiments on the generation and the breaking of internal solitary waves, River Flow 2016.
- 10. Ottolenghi L.*, Adduce C., Inghilesi R., Armenio V., Roman F., 2016, LES investigation on entrainment in gravity currents, River Flow 2016.
- 11. Lombardi V.*, Adduce C., La Rocca M. & Morganti M., 2015, Experimental and numerical simulations of 3D gravity currents, Proceedings of the 36th IAHR World Congress.
- 12. Dodaro G., Tafarojnoruz A., Stefanucci F.*, Adduce C., Calomino F., Gaudio R., Sciortino G., 2014, An experimental and numerical study on the spatial and temporal evolution of a scour hole downstream of a rigid bed, River Flow 2014.
- 13. Ottolenghi L.*, Adduce C., Inghilesi R., Roman F., Armenio V., 2014, Large Eddy Simulation of gravity currents moving on up-sloping boundaries, River Flow 2014.
- 14. Adduce C., Lombardi V.*, Sciortino G., La Rocca M, Morganti M., 2014, Laboratory experiments and shallow water simulations of gravity currents moving on flat and up-sloping beds, River Flow 2014.
- Adduce C., Lombardi V.*, Sciortino G., La Rocca M. & Morganti M., 2014, An improved two-layer shallow water model for the simulation of gravity currents moving on both flat and up-sloping beds. 3rd IAHR Europe Congress.
- 16. Nogueira H.I.S.^{*}, Adduce C., Alves E. and Franca M.J., 2013, Phase analysis of the stretching cycles of the head of unsteady gravity currents developing over smooth and rough bed, 35th IAHR World Congress.
- 17. Adduce C., Lombardi V.*, Sciortino G., La Rocca M., Morganti M., 2013, Entrainment effect on the simulation of density currents by a two-layer shallow water model, ISOPE 2013 congress.
- 18. Adduce C., Lombardi V.*, Sciortino G., La Rocca M. & Morganti M., 2012, Analisi preliminare di una corrente di gravita' su fondo acclive: misure di velocita' e simulazione numerica, Idra 2012.
- 19. Nogueira H.I.S.*, Adduce C., Alves E. & Franca M.J., 2012, The influence of bed roughness on the dynamics of gravity currents, River flow 2012.
- 20. Nogueira H.I.S.*, Adduce C., Alves E. and Franca M.J., 2012, Visualization and characterization of gravity currents over rough beds by means of PIV measurements, 2nd IAHR European Congress.
- 21. Adduce C., Lombardi V.*, Sciortino G., La Rocca M. & Morganti M., 2012, Lock exchange gravity currents on upsloping beds, 2nd IAHR Europe Congress.
- 22. La Rocca M., Prestininzi P., Adduce C., Sciortino G., Hinkelmann R, 2012, Lattice Boltzmann simulation of 3D gravity currents around obstacles, ISOPE 2012.
- 23. Nogueira H.I.S.*, Adduce C., Alves E. and Franca M.J., 2012, Dynamics of the head of gravity currents, 4th IAHR International Symposium on Hydraulic Structures, Porto, Portugal.
- 24. Adduce C., Lombardi V.*, Sciortino G., La Rocca M. & Morganti M., 2011, Analysis of lock release gravity currents by PIV, ISSF 2011.
- 25. Nogueira H.I.S.*, Adduce C., Alves E. & Franca M.J., 2011, Phase analysis of lock-exchange gravity currents, ISSF 2011.
- 26. Lombardi V.*, La Rocca M., Adduce C., Sciortino G., Mele P. & Bateman Pinzon A., 2011, Threedimensional gravity currents: laboratory experiments and numerical simulations, ISSF 2011.
- 27. La Rocca M., Adduce C., Mele P. & Sciortino G., 2010, Un approccio perturbativo per le equazioni di shallow water a doppio strato, Idra 2010.
- 28. Lombardi V.*, Sciortino G., Adduce C., La Rocca M. & Morganti M., 2010, Simulazioni sperimentali e numeriche di correnti di gravità su fondo inclinato, Idra 2010.
- 29. Adduce C., Lombardi V.*, Sciortino G & La Rocca M., 2010, Laboratory experiments on gravity currents moving on smooth and rough beds, River Flow 2010, 1, 605-611.

- 30. Lombardi V.*, Sciortino G. Adduce C. & La Rocca M., 2010, Experimental and numerical simulation of gravity currents on sloping beds, XVIII Conference on Computational Methods in Water Resources.
- 31. Adduce C., Sciortino G. & La Rocca M., 2010, Bed shear stress in an evolving local scour due to a submerged turbulent jet flow, 1st IAHR Europe Congress.
- 32. La Rocca M., Adduce C., Mele P., Sciortino G., 2009, Numerical simulation of 3D submarine turbidity currents, ISOPE 2009 Conference Proceedings.
- 33. Adduce C., Lombardi V.*, Sciortino G. and Morganti M., 2009, Roughness effects on gravity currents dynamics, Proceedings of the 33rd IAHR World Congress.
- 34. La Rocca M., Adduce C., Sciortino G. and Bateman Pinzon A, 2008, A simplified integral model for the dynamics of a 3D gravity current, River Flow 2008 Conference Proceedings, vol. 2.
- 35. Adduce C., Sciortino G., La Rocca M. & Mele P., 2008, Bed shear stress inside of a local scour due to a submerged turbulent jet, River Flow 2008 Conference Proceedings, vol. 2.
- 36. Nogueira H.I.S.*, Ferreira R.M.L., Franca M. J., Adduce C., 2008, PIV characterization of the horseshoe vortex in front of a wall-mounted cylinder in a developing turbulent boundary layer, River Flow 2008 Conference Proceedings, vol. 3.
- 37. Adduce C., G. Sciortino, La Rocca, P. Mele, 2008, Modellazione dello sforzo al fondo all'interno di uno scavo localizzato, Idra 2008 Conference Proceedings.
- 38. Adduce C. & Cenedese C., 2008, Influenza dei numeri di Froude e Reynolds sul mescolamento di una corrente di gravità, Idra 2008 Conference Proceedings.
- 39. La Rocca M., Adduce C., 2008, Morganti M., Sciortino G., Simulazione numerica ai volumi finiti di correnti di gravità tridimensionali, Idra 2008 Conference Proceedings.
- 40. Cenedese C. and Adduce C., 2007, Mixing induced in a dense plume flowing down a sloping bottom in a rotating fluid: a new entrainment parameterization?, International Symposium on Environmental Hydraulics, Tempe, Arizona.
- 41. Adduce C., La Rocca M. e Sciortino G., 2007, Indagine sperimentale e simulazione numerica di correnti di densità, AIMETA 2007 Conference Proceedings.
- 42. Adduce C., Sciortino G. and Mele P., 2007, Velocity and turbulence measurements in a scour hole at different scouring stages, XXXII IAHR Conference Proceedings.
- Adduce C., and Cenedese C., 2007, Experiments on mixing in a density current down a slope, 32nd IAHR World Congress.
- 44. Adduce C., La Rocca M. and Mele P., 2006, Stability analysis of turbulent water jets onto both rigid and mobile beds, River Flow 2006 Conference Proceedings.
- 45. Adduce C. & Cenedese C., 2006, Indagine sperimentale sul mescolamento di una corrente di gravità su un piano inclinato, Idra2006 Conference Proceedings.
- 46. Adduce C., Sciortino G., Morganti M., 2006, Caratterizzazione sperimentale dello sforzo di fondo relativo al campo idrodinamico a valle di una soglia, Idra2006 Conference Proceedings.
- 47. Adduce C., La Rocca M. e Mele P., 2006, Analisi di stabilità di getti turbolenti in alveo a fondo piatto ed eroso, Idra2006 Conference Proceedings.
- 48. Adduce C., Bateman A., La Rocca M., Morganti M., Sbarigia M.*, Sciortino G., 2006, Simulazione sperimentale e numerica di correnti di gravità, Idra2006 Conference Proceedings.
- 49. Adduce C., Sciortino G. e Morganti M., 2004, Evoluzione temporale di uno scavo localizzato a valle di una soglia: modello matematico e indagine sperimentale. Idra 2004 Conference Proceedings, 925-932.
- 50. Adduce C. and Cenedese C., 2004, Experimental investigation of a vortex interacting with an obstacle in a rotating fluid. Idra 2004 Conference Proceedings, 5-12.
- 51. Adduce C., Sciortino, G. Morganti M., 2004, Numerical and experimental investigation of local scour downstream of a sill, River Flow 2004 Conference Proceedings, 615-621.
- 52. Adduce C., La Rocca M., Mele P., 2004, Flow patterns in local scour holes downstream of a sill caused by turbulent water jets, River Flow 2004 Conference Proceedings, 623-630.
- 53. Adduce C. and Mele P., 2004, Local Scour by Submerged Turbulent Jets. ICHE 2004 Conference Proceedings, 262-269.
- 54. Adduce C. and Cenedese C., 2004, Laboratory experiments on eddy interaction with multiple islands. ICHE 2004 Conference Proceedings, 303-310.
- 55. Adduce C, La Rocca M. and Mele P., 2004, Local scour downstream of grade control structures, Hydraulics of Dams and River Structures Conference Proceedings.
- 56. Adduce C., La Rocca M., Sciortino G., 2003, Local scour downstream of grade control structures in urban stream restoration. NATO Advanced Research Workshop on Enhancing Urban Environment: Environmental Upgrading of Municipal Pollution Control Facilities and Restoration of Urban Waters. Roma. 287-297.
- 57. Adduce C. e Cenedese C., 2003, Indagine sperimentale sull'interazione fra vortici e isole, La Difesa Idraulica del Territorio 2003 Conference Proceedings, Trieste, 611-620.

- 58. Adduce C., La Rocca M. Sciortino G., 2003, Erosione localizzata a valle di una soglia, La Difesa Idraulica del Territorio 2003 Conference Proceedings, Trieste, 483-492.
- 59. Adduce C. and Cenedese C. 2003, Influence of Islands and Their 3-D Geometry on the Bifurcation of Eddies.30 IAHR World Congress, Theme A, 603-610.
- 60. Adduce C., Monti P., Cenedese A., 2002, Analisi di laboratorio del flusso di brezza, Conference Proceedings of "Scritti in onore di Lucio Tagliatatela", Napoli. 589-604. Gruppo Nazionale per la Difesa dalle Catastrofi Idrogeologiche, pubblicazione n° 2811.

CONFERENCE ABSTRACTS

- 1. La Forgia G., Falcini F., Paola C., Adduce C., Bergamasco A., Droghei R., Falco P. and Pirdomenico M., 2020, Internal solitary waves reshaping the seafloor, AGU 2020.
- 2. Cavaliere D., La Forgia G., Falcini F., Adduce C., Martorelli E. & Alpers W., 2020, An Analytical Study on Internal Solitary Waves Interacting with a Sloping Bathymetry: Propagation, Breaking Location and Mixing, AGU 2020.
- 3. Adduce C., De Falco M.C. and Maggi M.R., 2019, Gravity currents interacting with a bottom triangular obstacle, European Geophysical Union General Assembly 2019.
- 4. De Falco M.C., Adduce C., Cuthbertson A., Laanearu J., Malcangio D., 2019, The dynamics of bidirectional exchange flows: implication for morphodynamic change within estuaries and sea straits, European Geophysical Union General Assembly 2019.
- 5. La Forgia G., Falcini F., Paola C., Adduce C., Bergamasco A., Droghei R., Falco P., Chiocci F.L., and Pierdomenico M., 2019, Sediment resuspension and bedform generation induced by internal solitary waves, European Geophysical Union General Assembly 2019.
- 6. Cavaliere D., La Forgia G., Falcini F. and Adduce C., 2019, Analytical study on breaking location of Internal Solitary Waves over a sloping bottom, European Geophysical Union General Assembly 2019.
- 7. De Falco M.C^{*}., Ottolenghi L^{*}., Adduce C., 2018, Analisi dei processi di mescolamento in una corrente di gravità interagente con un fondo acclive, Idra 2018.
- 8. La Forgia G^{*}., Ottolenghi L^{*}., Monticelli Cuggiò S^{*}., Adduce C., 2018, Mescolamento in onde solitarie interne generate da intrusioni interagenti con un fondo acclive, Idra 2018.
- 9. Ottolenghi L^{*}., Cenedese C., Adduce C., 2018, Effetto della scabrezza sul mescolamento in correnti di gravita' in ambiente rotante, Idra 2018.
- 10. La Forgia G^{*}., Tokyay T., Adduce C., Constantinescu G., 2018, Large Eddy Simulations on breaking internal solitary waves, 5th IAHR Europe Congress.
- 11. De Falco M.C^{*}., Ottolenghi L., Adduce C., 2018, Laboratory experiments on gravity currents interacting with an upsloping bottom, 5th IAHR Europe Congress.
- 12. Benincasa M., Adduce C., Falcini F., Santoleri R., Sannino G., 2018, Remote sensing and coastal morphodynamic modelling, 5th IAHR Europe Congress.
- 13. La Forgia G^{*}., Tokyay T., Adduce C., Constantinescu G., 2018, Breaking of internal solitary waves over a sloping surface and implications for sediment entrainment, European Geophysical Union General Assembly 2018
- 14. La Forgia G.*, Adduce C., Falcini F., 2018, Sand-wave field generated by solitary waves, European Geophysical Union General Assembly 2018.
- 15. Inghilesi R.*, Adduce C., Lombardi V., Armenio V., Roman F., 2017, Axisymmetric gravity currents generated by lock-exchange, IUTAM/AmeriMech Symposium, Dynamics of Gravity Currents.
- 16. Inghilesi R.*, Adduce C., Lombardi V., Armenio V., Roman F., 2017, Three dimensional constantinflow axisymmetric gravity currents, 4th International Symposium on Shallow Flows.
- 17. La Forgia G.*, Adduce C., Falcini F., 2017, Breaking Solitary Internal Waves, 4th International Symposium on Shallow Flows.
- 18. La Forgia G.*, Adduce C., Falcini F., Paola C., 2017, Bedforms induced by solitary waves: laboratory studies on generation and migration rate, European Geophysical Union General Assembly 2017.
- 19. Gatto E.*, Adduce C., Ferreira R.M.L., 2017, Effect of roughness and porosity on geometry and kinematics of lock-exchange gravity currents, European Geophysical Union General Assembly 2017.
- 20. Ottolenghi L.*, Adduce C., Inghilesi R., Armenio V., Roman F., 2016, Mescolamento in correnti di densità su fondo acclive, Idra 2016 Congress.
- 21. La Forgia G.*, Adduce C. and Falcini F., 2016, Internal Gravity Waves: Generation and Breaking Mechanisms by Laboratory Experiments, European Geophysical Union General Assembly 2016.
- 22. La Forgia G.*, Adduce C. and Falcini F., 2015, Mixing and resuspension beneath shoaling gravity internal waves upon a sloping boundary, Yalin Memorial Colloquium 2015.
- 23. Nogueira H.I.S.*, Adduce C. and Franca M.J., 2015, PIV investigation on lock-exchange gravity currents propagating over smooth and rough beds, Yalin Memorial Colloquium 2015.

- 24. Ottolenghi L.*, Adduce C., Inghilesi R., Roman F., Armenio V., 2015, Mixing in density currents flowing up a slope, EUROMECH Colloquium 567: Turbulent mixing in stratified flows.
- 25. Ottolenghi L.*, Adduce C., Inghilesi R., Roman F., Armenio V., 2015, Bottom gravity currents interacting with an upsloping bed, International Workshop on Turbulence and Interactions in Marine Systems TURBINTERMARS with the main topics: Turbulence and Sedimentary Processes, ICTP, Trieste.
- 26. Cenedese C., Ottolenghi L.*, Adduce C., 2014, Entrainment in a density-driven current flowing down a rough slope in a rotating fluid, American Physical Society-Division of Fluid Dynamics meeting, San Francisco.
- 27. Lombardi V.*, Adduce C., Sciortino G., Mele P., Correnti di gravità su fondo acclive: esperimenti di laboratorio e simulazioni numeriche, Idra 2014.
- 28. Ottolenghi L.*, Adduce C., Inghilesi R., Roman F., Armenio V., Analisi dei processi di mescolamento in una corrente di gravità mediante esperimenti di laboratorio e simulazioni LES, Idra 2014.
- 29. Ottolenghi L.*, Adduce C., Armenio V., Inghilesi R., Roman F., 2013, Gravity Currents moving on up-Sloping Boundaries, ERCOFTAC SIG5 - Buoyancy Effects and Turbulent Mixing in Fluids.
- 30. Nogueira H.I.S.*, Adduce C., Alves E. and Franca M.J., 2012, Periodic cycle of stretching and breaking of the head of gravity currents, European Geosciences Union General Assembly.
- 31. Nogueira H.I.S.*, Adduce C., Alves E. and Franca M.J., 2011, Analysis of the entrainment on lockexchange density currents, European Geosciences Union General Assembly.
- 32. Lombardi V.*, Adduce C., Sciortino G. and La Rocca M., 2011, Gravity currents moving on smooth and rough beds, European Geosciences Union General Assembly.
- 33. Lombardi V.*, Adduce C., Sciortino G. and La Rocca M., 2010, Gravity currents moving on smooth and rough beds, XVIII A.I.VE.L.A. National Meeting, Rome.
- 34. Nogueira H.I.S.*, Adduce C., Alves E. and Franca M.J., 2010, Evaluation of time-space varying density distribution on gravity currents by image analysis technique, XVIII A.I.VE.L.A. National Meeting, Rome.
- 35. La Rocca M., Adduce C., Lombardi V.*, Mele P., Sciortino G., 2010, Experimental and numerical simulation of 3D gravity currents, XVIII A.I.VE.L.A. National Meeting, Rome.
- 36. Cenedese C. and Adduce C., 2009, Mixing in oceanic and laboratory overflows. MOCA-09, Montreal, Canada. (Invited).
- 37. Cenedese C. and Adduce C., 2009, A new entrainment parameterization for mixing in oceanic overflows and dense gravity currents. The Meeting of the Americas, Toronto, Canada. (Invited).
- 38. Cenedese C. and Adduce C., 2008, Mixing induced in oceanic overflows and dense gravity currents: a new entrainment parameterization. Ocean Sciences Meeting, Orlando, FL, USA.
- 39. Sciortino G., Adduce C. & La Rocca M., 2008, Formulazione Hamiltoniana di un sistema fluido stratificato: modellazione matematica e verifica sperimentale, Mathematica Italia, User group meeting, Roma.
- 40. Cenedese C. and Adduce C., 2007, Mixing induced in a dense plume flowing down a sloping bottom in a rotating fluid: a new entrainment parameterization?, 39th International Liège Colloquium on Ocean Dynamics and 3rd Warnemünde Turbulence Days, Liege, Belgium. (Invited).
- 41. Adduce C. and Cenedese, C., 2006, Mixing induced in a dense current flowing down a sloping bottom in a rotating fluid, 13th Ocean Sciences Meeting, Honolulu, Hawaii.
- 42. Adduce C. and Cenedese, C., 2005, Mixing induced in a dense current flowing down a sloping bottom in a rotating fluid, American Physical Society Division of Fluid Dynamics 58th Annual Meeting, Chicago.
- 43. Adduce C. and Cenedese C., 2005, Mixing induced in a dense current flowing down a sloping bottom in a rotating fluid, European Geosciences Union General Assembly, Vien.
- 44. Cenedese C. and Adduce C., 2004, Laboratory experiments on eddy interaction with multiple islands. APS56th Annual Meeting of the Division of Fluid Dynamics, East Rutherford, NJ, USA.
- 45. Cenedese C. and Adduce C., 2003, Laboratory experiments on eddy collisions with multiple islands, APS Division of Fluid Dynamics 56th Annual Meeting, East Rutherford.
- 46. Cenedese C. and Adduce C., 2003, Laboratory experiments on eddy collisions with seamounts of varying geometry, European Geophysical Society American Geophysical Union European Union Geosciences Join Assembly, Nice.
- 47. Adduce C. and Cenedese C., 2003, Laboratory experiments on eddy collisions with islands, European Geophysical Society American Geophysical Union European Union Geosciences Join Assembly, Nice.
- 48. Cenedese C. and Adduce C., 2002, Influence of Multiple Islands and Their 3-D Geometry on The Bifurcation of Eddies, AGU Fall Meeting, San Francisco.