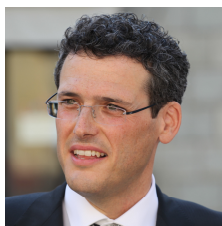


PERSONAL INFORMATION



Andrea Maranzoni

19, viale Cavour, San Secondo Parmense (PR), IT-43017, Italy

+39 0521906337

andrea.maranzoni@unipr.it

<https://personale.unipr.it/en/ugovdocenti/person/15757>

ORCID ID: 0000-0001-8841-1397

Scopus Author Identifier: 24478928900 Web of Science ResearcherID: C-4595-2011

Sex M | Date of birth 22/07/1973 | Nationality Italian

WORK EXPERIENCE

From February 2019 to present

Associate Professor of Hydraulics

University of Parma; 12, via Università, IT-43121, Parma (PR), Italy; <https://www.unipr.it/>

- Teaching and scientific research in the field of Hydraulic Engineering

Business or sector Higher education and scientific research

From December 2008 to
February 2019

Assistant Professor of Hydraulics

University of Parma; 12, via Università, IT-43121, Parma (PR), Italy; <https://www.unipr.it/>

- Scientific research and teaching in the field of Hydraulic Engineering

Business or sector Higher education and scientific research

From January 2005 to
December 2008

Assistant Professor of Hydraulic Structures

University of Brescia; 15, Piazza del Mercato, IT-25121 Brescia (BS), Italy; <https://www.unibs.it/>

- Scientific research and teaching in the field of Hydraulic Engineering

Business or sector Higher education and scientific research

From January 2004 to
December 2004

Research Fellow

University of Parma; 12, via Università, IT-43121, Parma (PR), Italy; <https://www.unipr.it/>

- Collaboration in research activities on the topic: "Numerical and physical modelling of two-dimensional free-surface flows with shocks"
- Activity concerning: "Definition of flood scenarios due to levee breaches in the Parma-Enza sector using a two-dimensional hydrodynamic model" in agreement between the Po River Basin Authority and the Department of Civil, Environmental, Land Engineering and Architecture, University of Parma

Business or sector Scientific research

EDUCATION AND TRAINING

From January 2001 to
December 2003

PhD in Civil Engineering

Title of the dissertation: "Numerical and physical modelling of 2D free-surface flows"

University of Parma, Italy

- Hydraulic engineering, hydraulic protection of the territory

From October 1992 to
February 2000

Degree in Civil Engineering (cum laude)

Title of the thesis: "Numerical simulation and experimental verification of unsteady mixed flows in pipes"

University of Parma, Italy

- Civil engineering, Hydraulic engineering

From September 1987 to
July 1992

High school leaving qualification in scientific studies (top grade)

High School "G. Ulivi", Parma, Italy

- Scientific studies

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	A2	B1	A2	A2	B1
English	A2	B1	A2	A2	B1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Independent user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

- Good command of Office suite (word processor, spread sheet, presentation software)
- Good command of photo editing software Adobe Photoshop
- Good programming skills with FORTRAN e Pascal languages
- Good command of software MATLAB e LabVIEW.
- Good command of automatic drawing software AutoCAD.
- Good knowledge of the main commercial hydraulic engineering software packages (HEC-RAS, SWMM, etc.)

Other skills

- Good skill in using various laboratory instruments for the measurement of hydraulic quantities

ADDITIONAL INFORMATION

Main scientific interests

- Numerical and physical modelling of unsteady free-surface flows
- Shallow water equations: theory, numerical schemes, and applications
- Flood hazard and risk assessment due to levee breaches and dam-break events
- Probabilistic flood hazard mapping and uncertainty analysis
- Mathematical modelling of mixed flows (free-surface and pressurized regimes)
- Flood routing in river networks and flood risk mitigation strategies
- Hydrodynamic loads and flood-induced actions on structures
- Finite volume methods for shallow water and hyperbolic flow models
- Computational Fluid Dynamics (CFD) applied to hydraulic and environmental flows
- Advanced imaging techniques for water surface measurement
- Seismic-induced flow motions
- Hydraulic performance and efficiency of side weirs
- Analysis and modelling of spatially varied free-surface flows
- Overland flows
- Numerical and experimental modelling of solid body water entry

Editorial activities

- Associate Editor for Frontiers in Water, Section Water and Built Environment (E-ISSN:2624-9375, <https://www.frontiersin.org/journals/water/sections/water-and-built-environment>); <https://loop.frontiersin.org/people/2234925/overview>
- Academic Editor for Modelling and Simulation in Engineering, Wiley (ISSN:1687-5591, <https://onlinelibrary.wiley.com/journal/8203>): <https://onlinelibrary.wiley.com/page/journal/8203/homepage/editorial-board>
- Guest Editor of the Special Issue “Advances in Dam-Break Modeling for Flood Hazard Mitigation: Theory, Numerical Models, and Applications in Hydraulic Engineering”, MDPI Water (ISSN 2073-4441). Co-Editors: Francesca Aureli and Gabriella Petaccia. https://www.mdpi.com/journal/water/special_issues/dam_model_flood_hydraulic

Referee activities

Reviewer for: Advances in Water Resources (Elsevier); Alexandria Engineering Journal (Elsevier); Applied Mathematical Modelling (Elsevier); Applied Sciences (MDPI); Bulletin of Engineering Geology and the Environment (Springer); Canadian Journal of Civil Engineering (Canadian Science Publishing); CATENA (Elsevier); Engineering Applications of Computational Fluid Mechanics (Taylor & Francis); Environmental Fluid Mechanics (Springer); Hydrological Sciences Journal (Taylor & Francis); International Journal for Numerical Methods in Fluids (Wiley); International Journal of Digital Earth (Taylor & Francis); International Journal of Disaster Risk Reduction (Elsevier); Iranian Journal of Science and Technology – Transactions of Civil Engineering (Springer); Journal of Flood Risk Management (CIWEM); Journal of Fluid Mechanics (Cambridge University Press); Journal of Hydraulic Engineering (ASCE); Journal of Hydrology: Regional Studies (Elsevier); Journal of Irrigation and Drainage Engineering (ASCE); Marine Systems & Ocean Technology (Springer); Natural Hazards (Springer); Physic of Fluids (AIP Publishing); PLOS ONE (Public Library of Science); Proceedings of the Institution of Civil Engineers – Water Management (ICE Publishing); Progress in Disaster Science (Elsevier); Urban Water Journal (Taylor & Francis); Water (MDPI); Water Science and Technology (IWA Publishing)
<https://www.webofscience.com/wos/author/record/808764>

Publications

- Aureli F., Maranzoni A., Petaccia, G. (2024). “Advances in dam-break modeling for flood hazard mitigation: Theory, numerical models, and applications in hydraulic engineering”. Water, 16(8), 1093. ISSN: 2073-4441, DOI: 10.3390/w16081093.
- Maranzoni A., Aureli F., Mignosa P. (2024). “Theoretical and experimental analysis of the water entry of decelerating hydrophobic spheres”. In: IDRA24, Proceedings of the XXXIX Italian Congress of Hydraulics and Hydraulic Structures. Department of Engineering and Architecture, University of Parma. Parma, 15-18 September 2024. ISBN: 979-12-210-6941-9. DOI: 10.5281/zenodo.13584918.
- Maranzoni, A. (2024). “Extension of the Galilean-invariant formulation of Bernoulli’s equation”. Journal of Hydraulic Engineering, 150(5), 06024004. ISSN: 0733-9429, DOI: 10.1061/JHEND8.HYENG-13827.
- Maranzoni A., D’Oria M., Rizzo, C. (2024). “Probabilistic mapping of life loss due to dam-break flooding”. Natural Hazards, 120(3), 2433-2460. ISSN: 0921-030X. DOI: 10.1007/s11069-023-06285-3.
- Savino M., Todaro V., Maranzoni A., D’Oria, M. (2023). “Combining hydrological modeling and regional climate projections to assess the climate change impact on the water resources of dam reservoirs”. Water, 15(24), 4243. ISSN: 2073-4441, DOI: 10.3390/w15244243.
- Maranzoni A., Tomirotti M. (2023). “Three-dimensional numerical modelling of real-field dam-break flows: Review and recent advances”. Water, 15(17), 3130. ISSN: 2073-4441, DOI: 10.3390/w15173130.
- Aureli F., Maranzoni A., Petaccia G., Soares-Frazão, S. (2023). “Review of experimental investigations of dam-break flows over fixed bottom”. Water, MDPI, 15(6), 1229. ISSN: 2073-4441, DOI: 10.3390/w15061229.
- Maranzoni A., Tomirotti M. (2023). “New formulation of the two-dimensional steep-slope shallow water equations. Part II: Numerical modeling, validation, and application”. Advances in Water Resources, Elsevier, 177, 104403. ISSN: 0309-1708, DOI: 10.1016/j.advwatres.2023.104403.
- Rizzo C., Maranzoni A., D’Oria M. (2023). “Probabilistic mapping and sensitivity assessment of dam-break flood hazard”. Hydrological Sciences Journal, Taylor & Francis, 68(5), 700-718. ISSN: 0262-6667, DOI: 10.1080/02626667.2023.2174026.
- Maranzoni A., D’Oria M., Rizzo C. (2023). “Quantitative flood hazard assessment methods: A review”. Journal of Flood Risk Management, Wiley, 16(1), e12855. ISSN: 1753-318X, DOI: 10.1111/jfr3.12855.
- D’Oria M., Maranzoni A., Rizzo C. (2022). “A probabilistic approach for dam-break flood hazard assessment”. Abstract presented at the AGU Fall Meeting, Chicago, USA, 12-16 December 2022.
- D’Oria M., Maranzoni A., Rizzo C. (2022). “Probabilistic flood risk associated with dam-break”. In: ICIRBM – 2022, Proceedings of the 43rd Italian Conference on Integrated River Basin Management, Vol. 43-2022, pp. 305-314. Cosenza: Edibios. Cosenza, 25-26 November 2022. ISSN: 2282-5517.

Publications

- D'Oria M., Maranzoni A., Rizzo C. (2022). "Valutazione probabilistica della pericolosità idraulica conseguente a dam-break [Probabilistic assessment of dam-break flood hazard]". In: IDRA22, Proceedings of the XXXVIII Italian Congress of Hydraulics and Hydraulic Structures. Reggio Calabria: Università Mediterranea. Reggio Calabria, 4-7 September 2022. ISBN: 9788894379921.
- Pilotti M., Milanesi L., Bacchi V., Tomirotti M., Maranzoni A., Bonomelli R. (2022). "Dam-break modeling in alpine areas: The Cancano dam test case". In: IDRA22, Proceedings of the XXXVIII Italian Congress of Hydraulics and Hydraulic Structures. Reggio Calabria: Università Mediterranea. Reggio Calabria, 4-7 September 2022. ISBN: 9788894379921.
- Maranzoni A., Tomirotti M. (2022). "New formulation of the two-dimensional steep-slope shallow water equations. Part I: Theory and analysis". *Advances in Water Resources*, Elsevier, 166, 104255. ISSN: 0309-1708, DOI: 10.1016/j.advwatres.2022.104255.
- Maranzoni A., D'Oria M., Mazzoleni M. (2022). "Probabilistic flood hazard mapping considering multiple levee breaches". *Water Resources Research*, Wiley, 58(4), e2021WR030874. ISSN: 0043-1397, DOI: 10.1029/2021WR030874.
- Aureli F., Maranzoni A., Petaccia G. (2022). "Reply to AlQasimi, E.; Mahdi, T.-F. comment on Aureli et al. Review of historical dam-break events and laboratory tests on real topography for the validation of numerical models. *Water*, 2021, 13, 1968". *Water*, MDPI, 14(2), 267. ISSN: 2073-4441, DOI: 10.3390/w13141968.
- Aureli F., Maranzoni A., Petaccia G. (2021). "Review of historical dam-break events and laboratory tests on real topography for the validation of numerical models". *Water*, MDPI, 13(14), 1968. ISSN: 2073-4441, DOI: 10.3390/w13141968.
- Maranzoni A., Tomirotti M. (2021). "New formulation of the 2D steep-slope shallow water equations". In: IDRA20, Proceedings of the XXXVII Italian Congress of Hydraulics and Hydraulic Structures. Reggio Calabria: Università Mediterranea. Online Edition: 14-16 June 2021.
- Maranzoni A. (2021). "Analysis of the water surface profiles of spatially varied flow with increasing discharge using the method of singular points". *Journal of Hydraulic Research*, IAHR, 59(5), 791-809. ISSN: 0022-1686, DOI: 10.1080/00221686.2020.1844812.
- Maranzoni A., Tomirotti M. (2021). "3D CFD analysis of the performance of oblique and composite side weirs in converging channels". *Journal of Hydraulic Research*, IAHR, 59(4), 586-604. ISSN: 0022-1686, DOI: 10.1080/00221686.2020.1818304.
- Pilotti M., Milanesi L., Bacchi V., Tomirotti M., Maranzoni A. (2020). "Dam-Break wave propagation in alpine valley with HEC-RAS 2D: Experimental Cancano test case". *Journal of Hydraulic Engineering*, ASCE, 146(6), 05020003. ISSN: 0733-9429, DOI: 10.1061/(ASCE)HY.1943-7900.0001779.
- Maranzoni A. (2020). "Galilean-invariant expression for Bernoulli's equation". *Journal of Hydraulic Engineering*, ASCE, 146(2), 04019061. ISSN: 0733-9429, DOI: 10.1061/(ASCE)HY.1943-7900.0001680.
- D'Oria M., Maranzoni A., Mazzoleni M. (2019). "Probabilistic assessment of flood hazard due to levee breaches using fragility functions". *Water Resources Research*, Wiley, 55(11), 8740-8764. ISSN: 0043-1397, DOI: 10.1029/2019WR025369.
- Maranzoni A., Mignosa P. (2019). "Seismic-generated unsteady motions in shallow basins and channels. Part I: Smooth analytical solutions". *Applied Mathematical Modelling*, Elsevier, 68, 696-711. ISSN: 0307-904X, DOI: 10.1016/j.apm.2018.07.046.
- Maranzoni A., Mignosa P. (2019). "Seismic-generated unsteady motions in shallow basins and channels. Part II: Numerical modelling". *Applied Mathematical Modelling*, Elsevier, 68, 712-731. ISSN: 0307-904X, DOI: 10.1016/j.apm.2018.07.045.
- Maranzoni A., Mignosa P. (2018). "Numerical modelling of seismic-generated waves in reservoirs: a case study". In: IDRA18, Proceedings of the XXXVI Italian Congress of Hydraulics and Hydraulic Structures. Ancona: Department of Civil, Building and Architecture Engineering (DICEA), Polytechnic University of Marche. Ancona, 12-14 September 2018. ISBN: 9788894379907.
- Maranzoni A., Mignosa P. (2018). "Numerical treatment of a discontinuous top surface in 2D shallow water mixed flow modeling." *International Journal for Numerical Methods in Fluids*, Wiley, 86(4), 290-311. ISSN: 1097-0363, DOI: 10.1002/flid.4418.
- Maranzoni A., Pilotti M., Tomirotti M. (2017). "Experimental and numerical analysis of side weir flows in a converging channel". *Journal of Hydraulic Engineering*, ASCE, 143(7), 04017009. ISSN: 0733-9429, DOI: 10.1061/(ASCE)HY.1943-7900.0001296.
- Dazzi S., Maranzoni A., Mignosa P. (2016). "Modellazione numerica 1D del sormonto di un ponte [1D numerical modeling of a flood surmounting a bridge]". In: IDRA16, Proceedings of the XXXV Italian Congress of Hydraulics and Hydraulic Structures, pp. 1095-1098. Bologna: Department of Civil, Chemical, Environmental and Materials Engineering (DICAM), Alma Mater Studiorum, University of Bologna. Bologna, 14-16 September 2016. ISBN: 9788898010400, DOI: 10.6092/unibo/amsacta/5400.

Publications

- Maranzoni A., Dazzi S., Aureli F., Mignosa P. (2016). "Modellazione numerica 2D del funzionamento in pressione di un ponte mediante slot di Preissmann [2D numerical modeling of a mixed flow under a bridge by means of the Preissmann slot approach]". In: IDRA16, Proceedings of the XXXV Italian Congress of Hydraulics and Hydraulic Structures, pp. 1095-1098. Bologna: Department of Civil, Chemical, Environmental and Materials Engineering (DICAM), Alma Mater Studiorum, University of Bologna. Bologna, 14-16 September 2016. ISBN: 9788898010400, DOI: 10.6092/unibo/amsacta/5400.
- Dazzi S., Maranzoni A., Mignosa P. (2016). "Local time stepping applied to mixed flow modelling". Journal of Hydraulic Research, IAHR, 54(2), 145-157. ISSN: 0022-1686, DOI: 10.1080/00221686.2015.1132276.
- Maranzoni A., Dazzi S., Aureli F., Mignosa P. (2015). "Extension and application of the Preissmann slot model to 2D transient mixed flows". Advances in Water Resources, Elsevier, 82, 70-82. ISSN: 0309-1708, DOI: 10.1016/j.advwatres.2015.04.010.
- Aureli F., Dazzi S., Maranzoni A., Mignosa P. (2015). "Validation of single- and two-equation models for transient mixed flows: a laboratory test case". Journal of Hydraulic Research, IAHR, 53(4), 440-451. ISSN: 0022-1686, DOI: 10.1080/00221686.2015.1038324.
- Longo S., Ungarish M., Di Federico V., Chiapponi L., Maranzoni A. (2015). "The propagation of gravity currents in a circular cross-section channel: experiments and theory". Journal of Fluid Mechanics, Cambridge University Press, 764, 513-537. ISSN: 0022-1120, DOI: 10.1017/jfm.2014.701.
- Aureli F., Dazzi S., Maranzoni A., Mignosa P., Vacondio R. (2015). "Experimental and numerical evaluation of the force due to the impact of a dam-break wave on a structure". Advances in Water Resources, Elsevier, 76, 29-42. ISSN: 0309-1708, DOI: 10.1016/j.advwatres.2014.11.009.
- Pilotti M., Maranzoni A., Milanesi L., Tomirotti M., Valerio G. (2014). "Dam-break modeling in alpine valleys". Journal of Mountain Science, Springer, 11(6), 1429-1441. ISSN: 1672-6316, DOI: 10.1007/s11629-014-3042-0.
- Aureli F., Maranzoni A., Mignosa P. (2014). "A semi-analytical method for predicting the outflow hydrograph due to dam-break in natural valleys". Advances in Water Resources, Elsevier, 63, 38-44. ISSN: 0309-1708, DOI: 10.1016/j.advwatres.2013.11.001.
- Aureli F., Dazzi S., Maranzoni A., Mignosa P. (2014). "A combined color-infrared imaging technique for measuring water surface over non-horizontal bottom". Experiments in Fluids, Springer, 55, 1701. ISSN: 0723-4864, DOI: 10.1007/s00348-014-1701-0.
- Aureli F., Maranzoni A., Mignosa P., Puma F. (2013). "Scenari di allagamento a seguito di rotte arginali di Po [Flooding scenarios following levee breaches in the Po River]". In: Giuseppe Frega (Ed.), Tecniche per la difesa dall'inquinamento [Techniques for defense against pollution]. pp. 529-551. Cosenza: Edibios, ISBN: 978-88-97181-24-8.
- Pilotti M., Maranzoni A., Milanesi L., Tomirotti M., Valerio G. (2013). "Hydraulic hazard mapping in alpine dam break prone areas: The Cancano dam case study". Proceedings of the XXXV IAHR World Congress, Chengdu, China, 8-13 September 2013.
- Aureli F., Maranzoni A., Mignosa P., Vacondio R. (2012). "Evaluation of the impact force caused by a dam-break flood on structures". In: IDRA2012, Proceedings of the XXXIII Italian Congress of Hydraulics and Hydraulic Structures, p. 5. Brescia: Department of Civil Engineering, Architecture, Land and Environment (DICATA), University of Brescia. Brescia, 10-14 September 2012. (Integral contribution on CD-Rom). Cosenza: Edibios, ISBN: 978-88-97181-18-7.
- Pilotti M., Maranzoni A., Tomirotti M., Valerio G. (2011). "1923 Gleno dam break: case study and numerical modeling". Journal of Hydraulic Engineering, ASCE, 137(4), 480-492. ISSN: 0733-9429, DOI: 10.1061/(ASCE)HY.1943-7900.0000327.
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2011). "An image processing technique for measuring free surface of dam-break flows". Experiments in Fluids, Springer, 50(3), 665-675. ISSN: 0723-4864, DOI: 10.1007/s00348-010-0953-6.
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2010). Closure to "Dam-break flows: acquisition of experimental data through an imaging technique and 2D numerical modelling". Journal of Hydraulic Engineering, ASCE, 136(7), 458-460. ISSN: 0733-9429, DOI: 10.1061/(ASCE)HY.1943-7900.0000208.
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2009). "An imaging technique for laboratory water depth measurement of rapidly varying flows". In: Abstracts of the 33rd IAHR Congress, Water Engineering for a Sustainable Environment, Vancouver, Canada, 9-14 August 2009, pp. 99-106. ISBN: 978-94-90365-01-1. IAHR, Madrid (Spain).
- Pilotti M., Maranzoni A., Tomirotti M., Valerio G. (2008). "Modellazione numerica dell'onda conseguente all'ipotetico crollo della prima diga di Cancano [Numerical modeling of the dam-break wave resulting from the hypothetical collapse of the first Cancano dam]". In: IDRA08, Proceedings of the XXXI Italian Congress of Hydraulics and Hydraulic Structures (Perugia, 9-12 September 2008), p. 222. ISBN/EAN: 978-88-6074-220-9. (Integral contribution on CD-Rom). Morlacchi Editor, Perugia (Italy).

Publications

- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2008). "2D numerical modelling for hydraulic hazard assessment: a dam-break case study". In: River Flow 2008, Proceedings of the International Conference on Fluvial Hydraulics (Ceşme, 3-5 September 2008), Vol. 1, pp. 729-736. ISBN: 978-605-60136-1-4. Kubaba Congress Department and Travel Services, Ankara (Turkey).
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2008). "A weighted surface-gradient method for the integration of 2D shallow water equations with topography". *Advances in Water Resources*, Elsevier, 31(7), 962-974. ISSN: 0309-1708, DOI: 10.1016/j.advwatres.2008.03.005.
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2008). "Dam-break flows: acquisition of experimental data through an imaging technique and 2D numerical modelling". *Journal of Hydraulic Engineering*, ASCE, 134(8), 1089-1101. ISSN: 0733-9429, DOI: 10.1061/(ASCE)0733-9429(2008)134:8(1089).
- Maranzoni A., Pilotti M., Tomirotti M., Valerio G. (2007). "Numerical and experimental modelling of the initial stages of dam-break flow". In: AIMETA 2007, XVIII AIMETA Congress of Theoretical and Applied Mechanics (11-14 September 2007), pp. 536-537. ISBN/ISSN: 978-88-89720-69-1. (Integral contribution on CD-Rom). Starrylink Editor, Brescia (Italy).
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2007). "A simple methodology for the dam-break wave evaluation". In: Abstracts of the 32nd IAHR Congress, Harmonizing the Demands of Art and Nature in Hydraulics (Venice, 1-6 July 2007), Vol. 1, p. 341. ISBN/ISSN: 88-89405-06-6. (Integral contribution on CD-Rom). CORILA, Venice (Italy).
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2007). "A weighted surface-depth gradient method for the solution of the 2D shallow water equations". In: Abstracts of the 32nd IAHR Congress, Harmonizing the Demands of Art and Nature in Hydraulics (Venice, 1-6 July 2007), Vol. 1, p. 179. ISBN/ISSN: 88-89405-06-6. (Integral contribution on CD-Rom). CORILA, Venice (Italy).
- Pilotti M., Maranzoni A., Tomirotti M. (2007). "An efficient tool for hydraulic hazard analysis in alpine valleys". In: Hydroinformatics 2006, Proceedings of the 7th International Conference on Hydroinformatics (Nice, 4-8 September 2006), Vol. 3, pp. 2276-2283. ISBN/ISSN: 81-903170-4-0. Research Publishing Services, Chennai (India).
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2006). "Fully-2D and quasi-2D modeling of flooding scenarios due to embankment failure". In: River Flow 2006, Proceedings of the International Conference on Fluvial Hydraulics (Lisbon, 6-8 September 2006), Vol. 2, pp. 1473-1482. ISBN/ISSN: 0-415-40815-6. Taylor & Francis, London (UK).
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2006). "Una metodologia per il calcolo dell'onda conseguente a dam-break [A methodology for calculating the flooding wave resulting from dam-break]". In: Idra2006, Proceedings of the XXX Italian Congress of Hydraulics and Hydraulic Structures (Rome, 10-15 September 2006), p. 242. ISBN/ISSN: 88-87242-81-X. (Integral contribution on CD-Rom). Casa Editrice Università La Sapienza, Rome (Italy).
- Pilotti M., Maranzoni A., Tomirotti M. (2006). "Modellazione matematica della propagazione dell'onda di piena conseguente al crollo della diga del Gleno [Mathematical modeling of the dam-break wave following the collapse of the Gleno dam]". In: Idra2006, Proceedings of the XXX Italian Congress of Hydraulics and Hydraulic Structures (Rome, 10-15 September 2006), p. 279. ISBN/ISSN: 88-87242-81-X. (Integral contribution on CD-Rom). Casa Editrice Università La Sapienza, Rome (Italy).
- Aureli F., Maranzoni A., Mignosa P., Ziveri C. (2006). "Flood hazard mapping by means of fully-2D and quasi-2D numerical modeling: a case study". In: Floods, from Defence to Management; Proceedings of the Third International Symposium on Flood Defence (Nijmegen, 25-27 May 2005), p. 252. ISBN/ISSN: 0 415 39119 9. (Integral contribution on CD-Rom). Taylor & Francis, Leiden (Netherlands).
- Aureli F., Maranzoni A., Mignosa P. (2004). "Verifica sperimentale di due schemi ai volumi finiti per la simulazione di fenomeni di moto rapidamente vario a pelo libero [Experimental verification of two finite volume schemes for the simulation of unsteady free-surface flows]". In: IdraTrento, Proceedings of the XXIX Italian Congress of Hydraulics and Hydraulic Structures (Trento, 7-10 September 2004), Vol. 1, pp. 765-772. ISBN/ISSN: 88-7740-382-9. Editoriale Bios, Cosenza (Italy).
- Aureli F., Maranzoni A., Mignosa P. (2004). "Simulation of flooding caused by an embankment breaking by means of a 2D finite volume numerical model". In: River Flow 2004, Proceedings of the 2nd International Conference on Fluvial Hydraulics. (Naples, 23-25 June 2004), Vol. 2, pp. 929-936. ISBN/ISSN: 90 5809 688 2. Taylor & Francis, London (UK).
- Aureli F., Maranzoni A., Mignosa P. (2004). "Experimental modeling of rapidly varying flows on wet bed and in presence of submersible obstacles". In: River Flow 2004, Proceedings of the 2nd International Conference on Fluvial Hydraulics. (Naples, 23-25 June 2004), Vol. 2, pp. 849-858. ISBN/ISSN: 90 5809 688 2. Taylor & Francis, London (UK).
- Aureli F., Maranzoni A., Mignosa P. (2004). "Two dimensional modeling of rapidly varying flows by finite volume schemes". In: River Flow 2004, Proceedings of the 2nd International Conference on Fluvial Hydraulics. (Naples, 23-25 June 2004), Vol. 2, pp. 837-847. ISBN/ISSN: 90 5809 688 2. Taylor & Francis, London (UK).

Publications

Aureli F., Maione U., Maranzoni A., Mignosa P. (2004). "Synthetic hydrographs as a design tool for flood routing evaluation". In: River Flow 2004, Proceedings of the 2nd International Conference on Fluvial Hydraulics. (Naples, 23-25 June 2004), Vol. 2, pp. 1049-1056. ISBN/ISSN: 90 5809 688 2. Taylor & Francis, London (UK).

Aureli F., Maranzoni A., Mignosa P. (2003). "Parma University simulations of the isolated building test case". In: 3rd IMPACT Project Workshop, Université catholique de Louvain (Louvain-la-Neuve, Belgium, 5-7 November 2003).

Research projects

- 2024 – "Electrical Resistivity Tomography to detect contaminant plumes in groundwater", funded by the University of Parma, Italy; participant
- 2022-2024 – "Understanding the dynamics of the human aorta for a new generation of vascular prostheses", funded by the University of Parma, Italy; participant
- "RELAID: REnaissance of LARge Italian Dams", funded by the Italian Ministry for Education, MIUR, 2020-2022 (total 600000 €). Participant in the Parma University Research Unit.
<https://relaid.wordpress.com/>
- 2018 - Annual funding for basic research (FFABR) of the Italian Ministry for Education, MIUR (€ 3000)

Teaching activities

- 2021-present: Fundamentals of Hydraulics (Bachelor's Degree, professionally oriented Course in Buildings, Infrastructure, and Land, University of Parma, Italy)
- 2017-present: Environmental and Coastal Hydraulics, 2nd Module (Master's Degree Course in Civil Engineering, University of Parma, Italy)
- 2016-present: Fluid Mechanics (Bachelor's Degree Course in Mechanical Engineering, University of Parma, Italy)
- 2009-2015: Hydraulics (Bachelor's Degree Course in Civil and Environmental Engineering, University of Parma, Italy)
- 2007-2008: Hydraulics AB, 1st Module (Bachelor's Degree Course in Civil Engineering, University of Parma, Italy)
- Environmental Hydraulics (Master's Degree Course in Environmental and Land Management Engineering, University of Brescia, Italy)
- Advising PhD students: Susanna Dazzi, PhD in Hydraulic Engineering, University of Parma, 2013-2015
- Advisor and co-advisor of 30 Bachelor's and Master's degree theses at the Universities of Parma and Brescia, Italy

Memberships

- 2023-present: Coordinator of the of the Bachelor's Degree, professionally oriented Course in Buildings, Infrastructure, and Land, University of Parma, Italy
- Member of the Faculty Board of the PhD Programme in Civil Engineering and Architecture, University of Parma, Italy. https://dia.unipr.it/en/Faculties_Board
- 2022-2023: RAQ – Quality Assurance Manager of the Bachelor's Degree, professionally oriented Course in Buildings, Infrastructure, and Land, University of Parma, Italy
- 2020-2022: Vice Coordinator of the PhD Programme in Civil Engineering and Architecture, University of Parma, Italy
- Member of HyLab (Parma Hydraulic Research Lab), University of Parma. <https://www.hylab.unipr.it/>
- Member of the Italian Hydraulic Group (GII). <https://www.gii-idraulica.net/>
- Member of CIDEA - Interdepartmental Center for Energy and the Environment, University of Parma, Italy. <https://www.centritecnopolo.unipr.it/cidea/>
- Member of the Order of Engineers of Parma, Italy, since 2000. <https://ordingparma.it/>