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Decreto Rettore Università di Roma "La Sapienza" n 3310/2020 del 28-12-2020

# GIOVANNI CANNATA
# Curriculum Vitae

Place: Roma
Date: 03-01-2020

## Part I – General Information

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|---|---|
| Full Name | Giovanni Cannata |
| Date of Birth | 01-10-1971 |
| Place of Birth | Roma |
| Citizenship | Italian |
| Spoken Languages | Italian, Spanish, English |

## Part II – Education

| Type | Year | Institution | Notes (Degree, Experience,…) |
|---|---|---|---|
| University graduation | 2000 | University of Rome "La Sapienza" | Laurea in "Ingegneria Ambientale" |
| PhD | 2005 | University of Rome "La Sapienza" | PhD in "Ingegneria Idraulica e Idraulica Ambientale" |

## Part III – Academic Appointments

| Start | End | Institution | Position |
|---|---|---|---|
| 2006 | 2008 | University of Rome "La Sapienza" | Post-doctoral researcher |
| 2008 | present | University of Rome "La Sapienza" | University researcher |

## Part IV – Teaching experience

| Acad. Year | Institution | Lecture/Course |
|---|---|---|
| 2008/2009 | University of Rome "La Sapienza" | Idraulica Numerica e Sperimentale (6 cfu) |
| 2009/2010 | University of Rome "La Sapienza" | Idraulica Numerica e Sperimentale (6 cfu) |
| 2009/2010 | University of Rome "La Sapienza" | Idraulica delle correnti a superficie libera e costruzioni marittime (6 cfu) |
| 2010/2011 | University of Rome "La Sapienza" | Idraulica Numerica e Sperimentale (6 cfu) |
| 2010/2011 | University of Rome "La Sapienza" | Idraulica delle correnti a superficie libera e costruzioni marittime (6 cfu) |

| | | |
|---|---|---|
| 2011/2012 | University of Rome "La Sapienza" | Idraulica Numerica e Sperimentale (6 cfu) |
| 2011/2012 | University of Rome "La Sapienza" | Idraulica delle correnti a superficie libera e costruzioni marittime (6 cfu) |
| 2012/2013 | University of Rome "La Sapienza" | Idraulica Numerica e Sperimentale (6 cfu) |
| 2012/2013 | University of Rome "La Sapienza" | Idraulica delle correnti a superficie libera e costruzioni marittime (6 cfu) |
| 2014/2015 | University of Rome "La Sapienza" | Idraulica Numerica e Sperimentale (6 cfu) |
| 2014/2015 | University of Rome "La Sapienza" | Idraulica fluviale e costruzioni idrauliche (6 cfu) |
| 2015/2016 | University of Rome "La Sapienza" | Idraulica fluviale e costruzioni idrauliche (6 cfu) |
| 2016/2017 | University of Rome "La Sapienza" | Idraulica fluviale e costruzioni idrauliche (6 cfu) |
| 2017/2018 | University of Rome "La Sapienza" | Idraulica applicata (6 cfu) |
| 2018/2019 | University of Rome "La Sapienza" | Idraulica applicata (6 cfu) |
| 2018/2019 | University of Rome "La Sapienza" | Idraulica fluviale (6 cfu) |
| 2018/2019 | University of Rome "La Sapienza" | Idraulica numerica e sperimentale (6 cfu) |
| 2019/2020 | University of Rome "La Sapienza" | Idraulica fluviale (6 cfu) |
| 2019/2020 | University of Rome "La Sapienza" | Idraulica applicata (6 cfu) |
| 2020/2021 | University of Rome "La Sapienza" | Idraulica fluviale (6 cfu) |

**Part V – Funding Information [Participation in Research Contracts between University of Rome "La Sapienza" and external entities]**

| Year | Description |
|---|---|
| 2006-2008 | Research contract between Dipartimento di Idraulica, Trasporti e Strade (University of Rome "La Sapienza") and Confindustria Toscana. Title: "*Convenzione per l'affidamento delle linee guida per la gestione della qualità delle acque, dei sedimenti dei serbatoi e del flusso minimo vitale dell'emissario*". Role played: Investigator. |
| 2012-2013 | Research contract between Dipartimento di Ingegneria Civile, Edile e Ambientale (University of Rome "La Sapienza") and Comune di San Mauro Cilento (SA). Title: "*Studio dei processi idrodinamici di simulazione dei campi di velocità e di elevazione della superficie libera del litorale del Comune di San Mauro Cilento (SA)*". Role played: Investigator. |
| 2013 | Research contract between Dipartimento di Ingegneria Civile, Edile e Ambientale (University of Rome "La Sapienza") and CO.LA.RI. – Consorzio Laziale Rifiuti. Title: "*definizione di un modello idrogeologico su un'area, sufficientemente vasta da includere i corpi idrici recettori e tutte le fonti di inquinamento potenziali o in atto, evidenziandone i possibili impatti, per verificare la eventuale presenza del pericolo di inquinamento della falda, in relazione al sito di ubicazione del progetto della discarica per rifiuti non pericolosi in località Monti dell'Ortaccio nel Comune di Roma*".Role played: Investigator. |
| 2015 | Research contract between Dipartimento di Ingegneria Civile, Edile e Ambientale (University of Rome "La Sapienza") and Ministero delle Infrastrutture e Trasporti, Provveditorato OO.PP Lazio, Abruzzo e la Sardegna. Title: "*Simulazione numerica di campi di velocità e di elevazione della superfice libera nel tratto di mare prospiciente il porto di Pescara*". Role played: Investigator. |

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| 2020 | Research contract between Dipartimento di Ingegneria Civile, Edile e Ambientale (University of Rome "La Sapienza") and ACEA ATO2 SpA. Title: "*Approfondimento tecnico-scientifico relativo alle diverse condizioni di esercizio e degli scenari dicmoto vario previsti nel Progetto del «Nuovo Tronco Superiore Acquedotto del Peschiera», con modellazione CFD*". Role played: Principal Investigator. |

## Part VI – Research Activities

| Keywords | Brief Description |
|---|---|
| Continuum Mechanics, turbulence models | The principle of material frame indifference and formulation of new turbulence models in Large Eddy Simulation. |
| Computational hydraulics | Formulation and development of high-order numerical schemes for the numerical integration of the governing equations in hydraulics. |
| Maritime hydraulics | Formulation of an original integral contravariant form of the Boussinesq equations. High order numerical schemes for the numerical integration of the Boussinesq equations expressed in generalized curvilinear coordinate systems. |
| Sediment transport | Formulation and development of numerical models for coastal sediment transport. |
| Computational fluid mechanics | Formulation of an original integral contravariant form of the Navier-Stokes equations in a time dependent generalized curvilinear coordinate system. |
| 3D numerical models | Numerical simulation of 3D free-surface flows in time varying boundary conforming curvilinear grids |

## Part VII – Summary of Scientific Achievements

| Product type | Number | Data Base | Start | End |
|---|---|---|---|---|
| Papers [international] | 38 | Scopus | 2003 | 2020 |

| | |
|---|---|
| Total Impact factor | 21.32 (Data Base: Journal Citation Reports Clarivate Analytics) |
| Average Impact factor* | 1.64 (Data Base: Journal Citation Reports Clarivate Analytics) |
| Total Citations | 289 (Data Base: Scopus) |
| Average Citations per Product | 7.6 (Data Base: Scopus) |
| Hirsch (H) index | 15 (Data Base: Scopus) |

*Total Impact factor divided by the number of papers in journals with available Impact factor

## Part IX– Selected Publications

1) A dynamic two-equation sub grid scale model. Gallerano, F., Pasero, E., **Cannata, G.** *Continuum Mechanics and Thermodynamics*. 17(2). 2005. pp. 101-123. Journal IF: **0.821**

(Data Base: Journal Citation Reports Clarivate Analytics). Citations: **15** (Data Base: Scopus).

2) Compatibility of Reservoir Sediment Flushing and River Protection. Gallerano, F., **Cannata, G.** *Journal of Hydraulic Engineering.* 137(10). 2011. pp. 1111-1125. Journal IF: **1.429** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **20** (Data Base: Scopus).

3) Central WENO scheme for the integral form of contravariant shallow-water equations. Gallerano, F., **Cannata, G**. *International Journal for Numerical Methods in Fluids*. 67(8). 2011. pp. 939-959. Journal IF: **1.176** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **16** (Data Base: Scopus).

4) Upwind WENO scheme for Shallow Water Equations in contravariant formulation. Gallerano, F., **Cannata, G.**, Tamburrino, M. *Computers and Fluids*. 62. 2012. pp. 1-12. Journal IF: **1.467** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **23** (Data Base: Scopus).

5) An integral contravariant formulation of the fully non-linear Boussinesq equations. Gallerano, F., **Cannata, G.**, Villani, M. *Coastal Engineering*. 83. 2014. pp. 119-136. Journal IF: **2.428** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **16** (Data Base: Scopus).

6) A new numerical model for simulations of wave transformation, breaking and long-shore currents in complex coastal regions. Gallerano, F., **Cannata, G.**, Lasaponara, F. *International Journal for Numerical Methods in Fluids*. 80(10). 2016. pp. 571-613. Journal IF: **1.652** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **19** (Data Base: Scopus).

7) Numerical simulation of wave transformation, breaking and runup by a contravariant fully non-linear Boussinesq equations model. Gallerano, F., **Cannata, G.**, Lasaponara, F. *Journal of Hydrodynamics.* 28(3). 2016. pp. 379-388. Journal IF: **1.174** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **16** (Data Base: Scopus).

8) Bottom changes in coastal areas with complex shorelines. Gallerano, F., **Cannata, G.**, Scarpone, S. *Engineering Applications of Computational Fluid Mechanics*. 11(1). 2017. pp. 396-416. Journal IF: **1.918** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **10** (Data Base: Scopus).

9) Numerical integration of the contravariant integral form of the Navier–Stokes equations in time-dependent curvilinear coordinate systems for three-dimensional free surface flows. Open Access. **Cannata, G.**, Petrelli, C., Barsi, L., Gallerano, F. *Continuum Mechanics and Thermodynamics.* 31(2). 2019. pp. 491-519. Journal IF: **2.139** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **16** (Data Base: Scopus).

10) Hydrodynamic effects produced by submerged breakwaters in a coastal area with a curvilinear shoreline. Gallerano, F., **Cannata, G.**, Palleschi, F. *Journal of Marine Science and Engineering.* 7(10). 2019. pp. 1-16. Journal IF: **2.033** (Data Base: Journal Citation Reports Clarivate Analytics). Citations: **2** (Data Base: Scopus).

**Part X– List of all publications**

**Conference proceeding papers**

1 Gallerano F., **Cannata G.**, Pasero E.: "L'equazione del trasporto degli sforzi di sottogriglia generalizzati e il terzo assioma di Noll nella Large Eddy Simulation", Atti del *XXVIII Convegno di Idraulica e Costruzioni Idrauliche*, 16-19 settembre 2002, Potenza.

2 Cioffi F., Pasero E., **Cannata G.**: "Three-dimensional simulation of pollutant dispersion phenomena in the sea induced by offshore aquaculture plant", atti de *Water Pollution VII: Modelling and Prediction,* luglio 2003, Cadiz, Spain. Ed. C.A. Brebbia & J.S. Antunes do Carmo.

3 Pasero E., **Cannata G.**, Gallerano F.: "On the Scale Similarity in Large Eddy Simulation. A proposal of a new model", Atti de *12° Annual Conference of the CFD Society of Canada,* maggio 2004, Ottawa, Canada.

4 Gallerano F., Pasero E., **Cannata G.**: "Scale Similarity Models For Large Eddy Simulations", Atti de *8$^{Th}$ National Congress on Hydraulics in Water engineering",* luglio 2004, Qeensland, Australia.

5 Gallerano F., **Cannata G.**, Pasero, E.: "On the Scale Similarity in Large Eddy Simulation", atti de *21$^{st}$ International Congress of Theoretical and Applied Mechanics, (Mechanics of 21$^{st}$ century)*, agosto 2004, Warsaw, Polonia. Ed. W. Gutkowsky & T.A. Kowalewski.

6 Gallerano F., Pasero E., **Cannata G.**: "Sulla procedura dinamica in prossimità delle pareti e la similitudine di scala nella Large Eddy Simulation. Un nuovo modello", atti del *XXIX Convegno di Idraulica e costruzioni idrauliche*, settembre 2004, Trento.

7 Cannata P.G., **Cannata G.**: "Land use as land protection", *Geophysical Research Abstracts,* Volume 7, 02077, 2005, © European Geosciences Union 2005.

8 Gallerano F. **Cannata G.**, Melilla, L.: "A new dynamic k-ε subgrid scale model", atti de *4th WSEAS International Conference on Fluid Mechanics and Aerodynamics*", Agosto 2006, Elounda, Greece.

9 Gallerano F., Melilla L., **Cannata G.**: "Large eddy simulation of re-suspension of solid particles from an erodible bed", atti de *4th WSEAS International Conference on Fluid Mechanics and Aerodynamics*", Agosto 2006, Elounda, Greece.

10 Cioffi F., **Cannata G.**: "Dynamics of lagoon ecosystems", atti de *8th International Conference on Modelling, Monitoring and Management of Water Pollution,* Settembre 2006, Bologna, Italia. Pubblicato sul volume *Water Pollution VIII,* WIT Transaction on Ecology and the Environment, Volume 95, 2006, pp 3-13. Ed. C.A. Brebbia & J.S. Antunes do Carmo. DOI: 10.2495/WP060011. ISBN: 184564042X; 978-184564042-2.

11 Gallerano F., Melilla L., **Cannata G.**: "Large eddy simulation of the two phase flow", atti de *River Flow 2006*, settembre 2006, Lisbona, Portogallo. Ed. Rui M.L. Ferreira, Elsa C.T.L. Alves, Joao G.A.B. Leal and Antonio H. Cardoso.

12 **Cannata G.**, Melilla L.: "Large eddy simulation della risospensione di particelle solide dal fondo", atti del *XXX Convegno di Idraulica e costruzioni idrauliche*, settembre 2006, Roma.

13 Cioffi F., **Cannata G.**: "Water anoxia and species selection in lagoons: an analysis of ecosystem dynamics", atti de *20$^{th}$ European Simulation and Modelling Conference*, Ottobre 2006, Tolouse, France.

14 Gallerano F., **Cannata G.**: "The Principle of Turbulent Frame Indifference and new closure relations in LES", atti de *2nd WSEAS International Conference on Applied and Theoretical Mechanic*", Novembre 2006, Venezia, Italia.

15 Gallerano F., Melilla L., **Cannata G.**: "Large eddy simulation and the filtered equation of a contaminant", *Multiphase Flow IV*, Volume 56, 2007.

16 Gallerano F., **Cannata G.**: "Numerical integration of the contravariant form of the two

phase flow motion equations", Atti de *Fifth International Conference on Sustainable Water Resources Management,* 9-11 September 2009, Ashurst Southampton, UK. Pubblicato sul volume W*ater Resources Management V*, WIT Transaction on Ecology and the Environment, Volume 125, 2009, pp 401-412. Ed. C.A. Brebbia & V. Popov. DOI: 10.2495/WRM090361. ISBN: 978-184564199-3.

17 Gallerano F., **Cannata G.**: "Form invariance and frame indifference of closure relations in LES", *Turbulence, Heat and Mass Transfer 6.* Atti de *6th International Symposium on Turbulence, Heat and Mass Transfer*, 14-18 September 2009, Roma, Italia. Ed. K. Hanjalic, Y. Nagano, S. Jakirlic. ISBN: 9781567002621.

18 Gallerano F., **Cannata G.**, Tamburrino M.: "La forma controvariante delle equazioni delle acque basse". Atti de *XXXII Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, 14-17 settembre 2010, Palermo, Italia. Ed. W. Farina. ISBN: 9788890389511.

19 Gallerano F., **Cannata G.**, Tamburrino M.: "Central WENO for Shallow water equations in contravariant formulation", *CMWR 2010.* Atti de *XVIII Conference on Computational Methods in Water Resources*, 21-24 Giugno 2010, Barcelona, Spain. Ed. J. Carrera.

20 Gallerano F., **Cannata G.**, Tamburrino M.: "A WENO scheme for the integral form of contravariant shallow water equations". Atti de *Numerical Methods for Hyperbolic Equations. Theory and Applications*, 4-8 Luglio 2011, Santiago de Compostela, Spain. Ed. Elena Vázquez-Cendón. ISBN: 978-84-9887-713-7.

21 Gallerano F., **Cannata G.**, Villani M.: "Uno schema Upwind Weno ed un solutore de problema di Riemann per la forma controvariante delle equazioni delle acque basse". Atti de *XXXIII Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, 10-15 settembre 2012, Brescia, Italia.

22 **Cannata G.,** Lasaponara F., Gallerano, F.: "A contravariant formulation of Non-linear Shallow Water Equations". Atti de *8th International Conference on APPLIED MATHEMATICS, SIMULATION, MODELLING (ASM '14).* November 22-24, 2014, Florence, Italy, pp 299-306. Ed. Nikos E. Mastorakis, Metin Demiralp, Nitis Mukhopadhyay, Francesco Mainardi. ISBN: 978-960-474-398-8.

23 Gallerano F., **Cannata G.,** De Gaudenzi O., Scarpone S. "A Contravariant Boussinesq equations for the simulation of wave transformation, breaking and run-up". Atti *de International Conference on Coastal Cities and their Sustainable Future,* July 7-9, 2015, New Forest, UK, pp 319-330. Wit Transaction on the Built Environment. Ed. G.R. Rodriguez, Universidad de Las Palmas de Gran Canaria, Spain and C.A. Brebbia, Wessex Institute of Technology, UK. ISSN: 1743-3509.

24 Gallerano F., **Cannata G.,** De Gaudenzi O., Petrelli C., Scarpone S. "A new numerical model for simulation of wave transformation, breaking and run-up in complex coastal regions". Atti *de 36th IAHR World Congress,* 28 June – 3 July, 2015, The Hague, the Netherlands, pp 3766-3777. Ed. Arthur Mynett, Madrid, Spain. ISBN: 978-90-824846-0-1.

25 Gallerano F., **Cannata G.,** Barsi L., Scarpone S. "Numerical investigation of fluid-structure interaction for long-span bridge decks". Atti *de 11th International Conference on Advances in Fluid Mechanics (AFM 2016), 5* – 7 Settembre 2016, Ancona, Italia, pp 15-26. Advances in Fluid Mechanics XI. Ed. C A Brebbia, New Forest, UK. ISBN: 9781784661052.

26 **Cannata G.,** Lasaponara F., Camilli F., Petrelli C., Gallerano F. "A 3D shock-capturing model for free surface flow". Atti *de 11th International Conference on Advances in Fluid Mechanics (AFM 2016), 5* – 7 Settembre 2016, Ancona, Italia, pp 213-222. Advances in Fluid Mechanics XI. Edited by C A Brebbia, New Forest, UK. ISBN: 9781784661052.

27 **Cannata G.**, Lasaponara F., Camilli F., Gallerano F. "Simulazione tridimensionale dei campi idrodinamici prodotti dall'interazione onda-correnti-struttura". Atti de *XXXV Convegno Nazionale di Idraulica e Costruzioni Idrauliche*, 14-16 Settembre 2016, Bologna, Italia. pp. 261-264. DICAM - Università di Bologna. ISBN: 9788898010400.

DOI: 10.6092/unibo/amsacta/5400.

28 **Cannata G.**, Scarpone S., Petrelli C., Gallerano F. "Numerical simulation of bed evolution dynamics: the Pescara harbor". In Atti de *XXXV Convegno Nazionale di Idraulica e Costruzioni Idrauliche*. Bologna, 14-16 Settembre 2016. pp 3-6. DICAM - Università di Bologna. ISBN: 9788898010400. DOI: 10.6092/unibo/amsacta/5400.

29 **Cannata G.**, Gallerano F., Palleschi F., Petrelli C., Barsi L. "Numerical investigation of the three-dimensional velocity fields induced by wave-structure interaction". Atti de *International Conference on Applied Mathematics, Computational Science and Systems Engineering (AMCSE 2018)*, 23-25 Novembre 2018. Pubblicati su ITM Web Conf. Volume 24, 2019 AMCSE 2018, pp. 1-10. DOI: 10.1051/itmconf/20192402011.

**Journal papers**

1 Gallerano F., Pasero E., **Cannata G.** (2005). "A dynamic two-equation Sub Grid Scale Model", *Continuum Mechanics and Thermodynamics,* Vol. 17, 2, 101-123. **ISSN**: 09351175. **DOI**: 10.1007/s00161-004-0190-4.

2 Gallerano F., **Cannata G.**, Melilla L. (2006). "New closure relations for the balance equation of SGS viscous dissipation in LES", *Wseas Transactions on Fluid Mechanics,* Issue 6, Vol. 1, pp. 558-565. **ISSN**: 17905087.

3 Gallerano F., Melilla L., **Cannata G.** (2006). "The dynamic procedure for closure relations in the equation of filtered concentration of suspended solid particles", *Wseas Transactions on Fluid Mechanics,* Issue 6, Volume 1, pp. 738-744. **ISSN**: 17905087.

4 Gallerano F., **Cannata G.** (2006). "Form Invariance and Frame Indifference of Closure Relations in LES", *Wseas Transactions on Applied and Theoretical Mechanics,* Issue 1, Vol. 1, pp. 47-54. **ISSN**: 1991-8747.

5 Gallerano F., **Cannata G.** (2007). "A new turbulence model for Large Eddy Simulation", *Advanced Studies in Theoretical Physics,* Volume 1, 6, pp. 247-270. **ISSN**: 1313-1311.

6 Gallerano F., **Cannata G.** (2007). "A New Rule of Turbulent Closure Relations in Large Eddy Simulation", *International Journal of Pure and Applied Mathematics*, Vol. 38, 4, pp. 445-465. **ISSN:** 1311-8080.

7 Gallerano F., **Cannata G.** (2011)."Central WENO scheme for the integral form of contravariant shallow-water equations", *International Journal for Numerical Methods in Fluids*, Vol. 67, 8 939-959, November 20, 2011. **ISSN**: 0271-2091. **DOI**: 10.1002/fld.2392.

8 Gallerano F., **Cannata G.** (2011). "Compatibility of Reservoir Sediment Flushing and River Protection", *Journal of Hydraulic Engineering*, Vol. 137, No. 10, 1111-1125, October 1, 2011, (published online: March 9, 2011). **ISSN**: 0733-9429/2011/10-1111-1125/$25.00. **DOI:** 10.1061/(ASCE)HY.1943-7900.0000419.

9 Gallerano F., **Cannata G.**, Tamburrino M. (2012). "Upwind WENO scheme for Shallow Water Equations in contravariant formulation", *Computers & Fluids*, Vol. 62, 1-12, 2012. **ISSN**: 0045-7930. **DOI:** 10.1016/j.compfluid.2012.03.004.

10 Gallerano F., **Cannata G.**, Villani M. (2014). "An integral contravariant formulation of the fully non-linear Boussinesq equations", *Coastal Engineering* Vol. 83, p. 119-136, **ISSN**: 0378-3839, **DOI**: 10.1016/j.coastaleng.2013.09.006

11 **Cannata G.**, Lasaponara F., Gallerano F. (2015). "Non-Linear Shallow Water Equations numerical integration on curvilinear boundary-conforming grids", *Wseas Transactions on Fluid Mechanics*, Vol. 10, pp. 13-25. **ISSN:** 17905087.

12 Gallerano F., **Cannata G.**, Lasaponara F. (2016). "A new numerical model for simulations of wave transformation, breaking and long-shore currents in complex coastal regions", *International Journal for Numerical Methods in Fluids,* Volume 80, Issue 10, pp. 571-613. **ISSN:** 02712091. **DOI**: 10.1002/fld.4164.

13 Gallerano F., **Cannata G.**, Lasaponara F. (2016). "Numerical simulation of wave transformation, breaking and runup by a contra-variant fully non-linear Boussinesq equations model", *Journal of Hydrodynamics,* Volume 28, Issue 3, pp. 379-388. **ISSN:** 10016058. **DOI:** 10.1016/S1001-6058(16)60641-8.

14 Gallerano F., **Cannata G.**, De Gaudenzi O., Scarpone S. (2016). "Modeling Bed Evolution Using Weakly Coupled Phase-Resolving Wave Model and Wave-Averaged Sediment Transport Model", *Coastal Engineering Journal,* Volume 58, Issue 3, 1 September 2016, Article number: 1650011. **ISSN:** 05785634. **DOI:** 10.1142/S057856341650011X.

15 **Cannata G.**, Barsi L, Gallerano F.. (2017). "Numerical simulation of the coupled flutter instability for closed-box bridge decks", *International Journal of Mechanics*, Vol. 11, pp. 128-140, 2017. **ISSN:** 19984448.

16 Gallerano F., **Cannata G.**, Scarpone S. (2017). "Bottom changes in coastal areas with complex shorelines", *Engineering Applications of Computational Fluid Mechanics,* Volume 11, Issue 1, pp. 396-416. **ISSN:** 19942060. **DOI:** 10.1080/19942060.2017.1307788.

17 **Cannata G.**, Barsi L, Gallerano F.. (2017). "Numerical investigation of the coupled flutter onset mechanism for streamlined bridge deck cross-sections", *WSEAS Transactions on Fluid Mechanics,* Vol. 12, pp. 43-52, 2017. **ISSN:** 17905087.

18 Gallerano F., **Cannata G.**, Lasaponara F., Petrelli C. (2017). "A new three-dimensional finite-volume non-hydrostatic shock-capturing model for free surface flow", *Journal of Hydrodynamics*, Volume 29, Issue 4, pp. 552-566. **ISSN:** 10016058. **DOI:** 10.1016/S1001-6058(16)60768-0.

19 **Cannata G.**, Petrelli C., Barsi L, Camilli F., Gallerano F. (2017). "On the integral form of the motion equations for free surface flows", *International Journal of Theoretical and Applied Mechanics,* Vol. 2, pp. 66-72, 2017. **ISSN:** 23678992.

20 **Cannata G.**, Petrelli C., Barsi L, Camilli F., Gallerano F. (2017). "3D free surface flow simulations based on the integral form of the equations of motion", *WSEAS Transactions on Fluid Mechanics,* Vol. 12, pp. 166-175, 2017. **ISSN:** 17905087.

21 **Cannata G.**, Petrelli C., Barsi L, Fratello F., Gallerano F. (2018). "Numerical simulation of the Rio Fucino dam-break flood.", *International Journal of Environmental Science,* Vol. 3, pp. 42-48, 2018. **ISSN:** 2367-8941.

22 **Cannata G.**, Petrelli C., Barsi L., Fratello F., Gallerano F. (2018). "A dam-break flood simulation model in curvilinear coordinates.", *WSEAS Transactions on Fluid Mechanics,* Vol. 13, pp. 60-70, 2018. **ISSN:** 1790-5087.

23 **Cannata G.**, Barsi L., Gallerano F. (2018). "Effects of Aerodynamic Appendices on the Flutter Characteristics of Long-span Bridge Decks.", *Journal of Engineering and Applied Sciences,* Vol. 13 (21), pp. 8955-8965, 2018. **ISSN:** 1816-949X.

24 **Cannata G.**, Barsi L., Petrelli C., Gallerano F. (2018). "Numerical investigation of wave fields and currents in a coastal engineering case study.", *WSEAS Transactions on Fluid Mechanics,* Vol. 13, pp. 87-94, 2018. **ISSN:** 1790-5087.

25 Yamasaki T.N., **Cannata G.**, Gallerano F, Barsi L, Janzen J.G. (2018). "Effects of a 3-D, Aquatic Vegetation Patch on the Flow: a Numerical Approach.", *WSEAS Transactions on Environment and Development,* Vol. 14, pp. 590-598, 2018. **ISSN:** 1790-5079.

26 **Cannata G.**, Petrelli C., Barsi L., Gallerano F. (2019). "Numerical integration of the contravariant integral form of the Navier–Stokes equations in time-dependent curvilinear coordinate systems for three-dimensional free surface flows", *Continuum Mechanics and Thermodynamics*. Vol 31(2), pp.491-519, 2019. **ISSN**: 0935-1175. **DOI**: 10.1007/s00161-018-0703-1.

27 **Cannata G.**, Gallerano F., Palleschi F., Petrelli C., Barsi L. (2019). "Three-dimensional numerical simulation of the velocity fields induced by submerged breakwaters", *International Journal of Mechanics*, Vol. 13, pp. 1-14, 2019. **ISSN:** 19984448.

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**Part XI– Reviewing of Journals**

| Journal | Year |
|---|---|
| Journal of Computational Science (ELSEVIER) | 2018 |
| International Journal of Environmental Research and Public Health (MDPI) | 2019, |
| Journal of Marine Science and Engineering (MDPI) | 2019, 2020 |
| Journal of Hydro-environment Research (ELSEVIER) | 2020 |
| Water (MDPI) | 2020 |
| Dynamics of Atmospheres and Oceans (ELSEVIER) | 2020 |

**Part XII– PhD Thesis Supervision (PhD in Environmental and Hydraulic Engineering)**

| Student | Period (Cycle) |
|---|---|
| Simone Scarpone | XIX |
| Flaminia Camilli | XXX |
| Chiara Petrelli | XXXI |
| Federica Palleschi | XXXIV |
| Benedetta Iele | XXXV |

**Part XIII– Academic Tasks**

| Description | Period |
|---|---|
| Member of the academic board of the PhD in Hydraulic Engineering | 2008 - 2011 |
| Member of the academic board of the PhD in Environmental and Hydraulic Engineering | 2011 - present |
| Member of the Junta of the Department of Civil, Constructional and Environmental Engineering (University of Rome "La Sapienza") | 2017 - present |

Roma, 03-01-2021

Giovanni Cannata