

# Mohammad Daliri

## PERSONAL DATA

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## WORK EXPERIENCE

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Dec 2020 – Sep2023

• **Postdoctoral fellow**

MeteOcean Research Group |Department of Civil, Chemical and Environmental Engineering (DICCA) |University of Genova, Genova, Italy.

Research projects:

**[Snam Projects](#) (Gas Supply Terminal)**

**[BE-READY](#) (Best Rapid Environmental Assessment Decision System)**

**[GEREMIA](#) (Waste management for the improvement of port waters)**

- Near shore hydrodynamics and circulations
- Analysis and characterization of pollutant dispersion in harbor waters
- Spatial and temporal variation of thermal/chemical properties in marine environments.

Mar 2018 – Dec 2020

• **Postdoctoral fellow**

Department of Civil, Architectural and Environmental Engineering (DICEA) |University of Napoli Federico II, Napoli, Italy.

Research project:

**[ABBaCo](#) (Environmental Restoration of Bagnoli Bay)**

MIUR - Special Integrative Fund for Research

- Near shore hydrodynamics and circulations
- Arsenic dispersion in the marine sediments of Bagnoli bay due to the combined effect of wind, tides, and waves.
- Numerical modeling of Advection and diffusion of polluted sediments caused by dredging activities in Bagnoli bay.

## EDUCATION

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- Nov 2014 – Feb 2018 • **PhD Civil Systems Engineering (Hydraulic and Maritime Constructions and Hydrology)**  
Department of Civil, Architectural and Environmental Engineering (DICEA)  
|University of Napoli Federico II, Napoli, Italy.
- Dissertation: A CFD Study on the Structural Response of a Sloping Top Caisson Subject to Wave Overtopping.
  - Advisor: Prof. Maraino Buccino
- Sep 2011 – Dec 2013 • **MSc Marine Structures**  
Department of Civil Engineering| University of Guilan, Rasht, Iran
- Thesis: “Experimental studies of tsunami waves and its effect on a sandy beach”
  - Advisor: Prof. A.H.N Chegini
- Feb 2007 – Sep 2011 • **BS Civil Engineering**  
Department of Civil Engineering| Islamic Azad University of Mashhad, Mashhad, Iran

## SKILLS

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### Programming

- MATLAB/Python

### Tools and Applications

- Delft3D / Flow3D

### Operating Systems

- Windows/ Linux

## TEACHING & STUDENTS SUPERVISION

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### Co-Supervisor of Master theses

Nov 2021 – Apr 2022 - University of Genova, Genova, Italy

- Master thesis on: Application of an unstructured numerical model to circulation and hydrodynamic port of Genova.

Feb 2021 – Jul 2021 - University of Napoli Federico II, Napoli, Italy

- Master thesis on: A numerical study of arsenic contamination at the Bagnoli bay seabed by a semi-anthropogenic source

Feb 2018 – Jul 2018 - University of Napoli Federico II, Napoli, Italy

- Master thesis on: “CFD based analysis of impulsive wave forces at the rear of a breakwater

## Lecturer

Jun 2014 – Aug 2014 - Vocational school, Mashhad, Iran.

- Surveying and Steel Structures

Sep 2012 – July 2013 - University of Guilan, Rasht, Iran.

- Hydraulics and Fluid Mechanics (undergraduate students)

## RESEARCH PROJECTS

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Dec 2020 – Current

**BE-READY (Best Rapid Environmental Assessment Decision System)**  
DG-ECHO Project

- Numerical hydrodynamic modelling and water quality in the port areas (Italy, Jordan, and Lebanon)

Dec 2020 – Aug 2021

**GEREMIA (Waste management for the improvement of port waters)**  
Iterreg Italy-France Maritime Cooperation Project

- Analyzing the characteristics of mass transport within the ports due to the currents generated by wind, waves and tides.

Apr 2021 – Current

**LNG Gas Supply Terminals**

Joint cooperation between the University of Genoa (DICCA) and SNAM Rete Gas Company in establishing gas supply terminals in commercial ports for storage and vaporization of Liquefied Natural Gas.

- Thermal and chemical dispersion in the marine environment during operation of floating storage regasification unit in Italian commercial ports (Vesme, Torres, Piombino and Ravenna)

Mar 2021 – Jul 2021

**Dispersion of fine non-cohesive material caused by pile driving operations.**  
Joint collaboration between the University of Genova (DICCA) and SNAM Rete Gas Company

- Simulation of the diffusion of turbidity in the surrounding of the concession Snam-Panigaglia main pier, Gulf of La Spezia, Italy

Dec 2019 – Apr 2020

**Pre-feasibility study of urban interventions for the eastward expansion of the Port of Naples.**

Joint collaboration between the University of Napoli Federico II (DICEA) and Port System Authority of the Central Tyrrhenian Sea, port of Naples.

- Study of the wave-, wind-, and tide-driven circulation within the port and analysis of the sediments and effluent dispersion released from the collectors in the various scenarios/phases of the project expansion.

Dec 2019 – Dec 2020

**ABBaCo (environmental restoration of Bagnoli-Coroglio Bay)**

Joint collaboration between the University of Napoli Federico II (DICEA), Anton Dohrn Zoological Station, and National Institute of Geophysics and Volcanology (INGV).

- Arsenic dispersion in the marine sediments of Bagnoli bay due to the combined effect of wind, tides, and waves.

- Sep 2015 – Dec 2015 **Malecòn Traditional seawall project.**  
Inter-University (Unina and Unisa) Consortium for the prediction and prevention of Major Risks (CUGRI)
- Study of two-dimensional physical modeling with irregular wave motion for the optimization of the defense of the Malecòn Tradicional de la Habana (Cuba)
- Apr 2015 – Aug 2015 **Sheikh Jaber Al-Ahmad Al-Sabah Causeway Project**  
Inter-University (Unina and Unisa) Consortium for the prediction and prevention of Major Risks (CUGRI)
- Two-dimensional physical modeling of breakwaters to protect the Al-Sabah Causeway
- Nov 2013 – Jan 2014 **Experimental study of the Anzali port rubble mound breakwater deformation due to storm waves**  
University of Guilan, Iran.
- May 2013 – Aug 2013 **A fieldwork research: Sediment transport estimation and its effect on life expectancy and the environment of the Anzali estuary**  
University of Guilan and Ports and Maritime Organization, Rasht, Iran.

## PRESENTATIONS AND INVITED LECTURES

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- 17/12/2021 AIOM - Offshore and Marine Engineering Association,  
Università degli Studi di Napoli Parthenope Napoli, Italy
- 30/09/2020 ISMAR Institute of Marine Sciences, Venezia, Italy
- 28/11/2019 i giovedì del dottorato, University of Campania Luigi Vanvitelli,

## PUBLICATIONS

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Khoshkonesh,A.; Daliri,M; Riaz,k.; Ahmadi Dehrashid,F.; Bahmanpouri,F.; Di Francesco,S.  
Dam-break flow dynamics over a stepped channel with vegetation  
Journal of Hydrology. [DOI: 10.1016/j.jhydrol.2022.128395](https://doi.org/10.1016/j.jhydrol.2022.128395)

Buccino,M.; Daliri,M.; Buttarazzi,N.;Del Giudice,G.; Calabrese,M.; Somma,R.  
Arsenic Contamination at the Bagnoli Bay Seabed (South Italy) Via Particle Tracking Numerical  
Modeling: Pollution Patterns from Stationary Climatic Forcings. Chemosphere  
[doi.org/10.1016/j.chemosphere.2022.134955](https://doi.org/10.1016/j.chemosphere.2022.134955)

Daliri,M.;Loarca,A.;Cremonini,G.; De Leo,F.;G.;Curtrone,L.;Reboa,A.;Capello,M.;Stocchino,A.;Besio,G.  
Hydrodynamic and Water Quality Modeling of Genova Harbor.  
Proceedings of 37th Conference on Coastal Engineering, Sydney, Australia, 2022.

Daliri,M.; Cremonini,G.;Besio,G..  
Marine Circulation and Pollutant Dispersion in La Spezia Harbor  
Proceedings of the XXXVIII Conference on Hydraulics and Hydraulic Structures. IDRA 2022, Calabria, Italy.

Buccino,M.; Daliri,M.; Calabrese,M.; Somma,R.  
A numerical study of arsenic contamination at the Bagnoli bay seabed by a semi-anthropogenic source. Analysis of current regime.  
Science of the Total Environment 2021, 782, 146811  
[doi.org/10.1016/j.scitotenv.2021.146811](https://doi.org/10.1016/j.scitotenv.2021.146811)

Bahmanpouri, F., Daliri, M., Khoshkonesh, A., Montazeri, M., Buccino,M.  
Bed compaction effect on dam break flow over erodible bed; experimental and numerical modeling  
Journal of Hydrology. DOI:[10.1016/j.jhydrol.2020.125645](https://doi.org/10.1016/j.jhydrol.2020.125645)

Daliri, M., Somma, R., Buccino, M., Troise, C., Molisso,F., De Natale, G.  
Numerical Analysis of Arsenic Concentration in the marine sediments of Bagnoli Bay  
Proceedings of the 30th International Offshore and Polar Engineering Conference, ISOPE, 2020.  
[http://publications.isopec.org/proceedings/ISOPE/ISOPE%202020/data/toc\\_vol1.html](http://publications.isopec.org/proceedings/ISOPE/ISOPE%202020/data/toc_vol1.html)

Buccino, M., Daliri, M., Dentale, F., Di Leo, A., Calabrese, M.  
CFD Experiments on A Low Crested Sloping Top Caisson Breakwater. Part 1 Nature of Loadings and Global Stability  
Journal of Ocean Engineering. DOI: [10.1016/j.oceaneng.2019.04.017](https://doi.org/10.1016/j.oceaneng.2019.04.017)

Buccino, M., Daliri, M., Dentale, F., Calabrese, M.  
CFD Experiments on A Low Crested Sloping Top Caisson Breakwater. Part 2 Analysis of Plume Impact  
Journal of Ocean Engineering. DOI: [10.1016/j.oceaneng.2018.12.065](https://doi.org/10.1016/j.oceaneng.2018.12.065)

Buccino, M., Daliri, M., Dentale, F., Salerno, D., Di Leo, A.  
A CFD study on impact wave loadings exerted behind overtopping type WECs.  
Proceedings of the 28th International Offshore and Polar Engineering Conference, ISOPE, 2018.  
<https://www.onepetro.org/conference-paper/ISOPE-I-18-606>

Daliri, M., Buccino, M., Dentale, F., Salerno, D., Di Leo, A.  
Numerical Simulation of Wave Loads Acting On a Sloping Top Caisson.  
Proceedings of the XXXVI Conference on Hydraulics and Hydraulic Structures. IDRA 2018, Ancona, Italy.  
[https://www.researchgate.net/publication/327894429\\_Numerical\\_Simulation\\_of\\_Wave\\_Loads\\_Acting\\_On\\_a\\_Sloping\\_Top\\_Caisson](https://www.researchgate.net/publication/327894429_Numerical_Simulation_of_Wave_Loads_Acting_On_a_Sloping_Top_Caisson)

Daliri, M., Dentale, F., Salerno, D., Buccino,M.  
A CFD study on the structural response of a sloping top caisson subject to wave overtopping,  
Proceedings of 35th Conference on Coastal Engineering, Antalya, Turkey, 2016.  
DOI: <https://doi.org/10.9753/icce.v35.structures.41>

Nezamivand Chegini, A.H.N, Daliri, M., Daghighi, N.  
Experimental study of the stability of sandy beach with several different materials types under solitary waves attack. (In Persian).

International Conference on Architecture, Urbanism, Civil Engineering, Art, Environment Future Horizons & Retrospect , ICAUCAE 2016, Tehran, Iran

[https://www.civilica.com/Paper-ICAUCAE01-ICAUCAE01\\_0363.html](https://www.civilica.com/Paper-ICAUCAE01-ICAUCAE01_0363.html)

Daghighi, N., Nezamivand Chegini, A.H.N., Daliri, M., Hedayati, D.

Experimental Assessment of Sediment Transport and Bed formation of Sandy Beaches by Tsunami Waves. International Journal of Environmental Research. Volume 9, Issue 3, summer 2015, Page 795-804.

[https://ijer.ut.ac.ir/issue\\_41\\_44.html](https://ijer.ut.ac.ir/issue_41_44.html)

Daliri, M., Nezamivand Chegini, A.H.N., Experimental assessment of changes of sandy beach profile and sediment transport caused by tsunami waves.

Turkish Journal of Engineering and Environmental Sciences, 38, 2014, 392-403.

<http://journals.tubitak.gov.tr/engineering/issue.htm?id=2261>

Daliri, M., Nezamivand Chegini, A.H.N., Poor zeynali, S., Experimental study of sandy beach deformation affected by tsunami waves. (In Persian). 12th Iranian Hydraulic Conference, 2013, Tehran, Iran.

[https://www.civilica.com/Paper-IHC12-IHC12\\_067.html](https://www.civilica.com/Paper-IHC12-IHC12_067.html)