

## Journal papers

1. Zannella, A., **Simonetti, I.**, Lubello, C., Cappiotti, L., 2025, *Hydrodynamics, Transport Time Scales and Water Temperature Dynamics in a Heavily Anthropized Eutrophic Coastal Lagoon*. Estuarine, Coastal and Shelf Science, Available online 17 January 2025, 109146, in press, <https://doi.org/10.1016/j.ecss.2025.109146>.
2. **Simonetti, I.**; Lubello, C.; Cappiotti, L. 2024. *On the use of hydrodynamic modelling and random forest classifiers for the prediction of hypoxia in coastal lagoons*. Science of the Total Environment, vol. 951, <https://doi.org/10.1016/j.scitotenv.2024.175424>.
3. Crema, I., Esposito, A., **Simonetti, I.**, Cappiotti, L., 2024. *Experimental Parametric Study on the Primary Efficiency of a Fixed Bottom-Detached Oscillating Water Column Wave Energy Converter in Short-Fetch Sea Conditions*, J. of Marine Science and Engineering, 12(12), 2167, <https://doi.org/10.3390/jmse12122167>
4. Raghavan, V., **Simonetti, I.**, Metrikine, A.V., Lavidas, G., Cappiotti, L. 2024, *A new numerical modelling framework for fixed oscillating water column wave energy conversion device combining BEM and CFD methods: Validation with experiments*, Ocean Engineering, 301, [117543](https://doi.org/10.1016/j.oceaneng.2024.117543), [10.1016/j.oceaneng.2024.117543](https://doi.org/10.1016/j.oceaneng.2024.117543).
5. **Simonetti, I.**; Cappiotti, L. 2024, *Projected Trends in Wave Energy Potentials along the European Coasts and Implications for Wave Energy Exploitation (1976–2100)*, J. of Marine Science and Engineering, 2024, 12, 239. <https://doi.org/10.3390/jmse12020239>.
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7. **Simonetti I.**, Cappiotti L., 2022, *Influence of Inlets Morphology and Forcing Mechanisms on Water Exchange between Coastal Basins and the Sea: A Hindcast Study for a Mediterranean Lagoon*. J. of Marine Science and Engineering, vol. 10, 1929, doi: 10.3390/jmse10121929.
8. **Simonetti, I.**, Esposito, A., Cappiotti, L., 2022, *Experimental Proof-of-Concept of a Hybrid Wave Energy Converter Based on Oscillating Water Column and Overtopping Mechanisms*, Energies, 2022 15, 8065. <https://doi.org/10.3390/en15218065>.
9. Ciappi, L., **Simonetti, I.**, Bianchini, L., Cappiotti, L., Manfreda, G., 2022, *Application of integrated wave-to-wire modelling for the preliminary design of oscillating water column systems for installations in moderate wave climates*, Renewable Energy, Volume 194, Pages 232-248, ISSN 0960-1481, <https://doi.org/10.1016/j.renene.2022.05.015>.
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11. **Simonetti, I.**, Cappiotti, L., 2021, *Hydraulic performance of oscillating water column structures as anti-reflection devices to reduce harbour agitation*, Coastal Engineering, 2021, 165, 103837, <https://doi.org/10.1016/j.coastaleng.2020.103837>.
12. Ciappi, L., Cheli, L., **Simonetti, I.**, Bianchini, A., Manfreda, G., Cappiotti, L. 2020, *Wave-to-Wire Model of an Oscillating-Water-Column Wave Energy Converter and Its Application to Mediterranean Energy Hot-Spots*. Energies, 13, 5582. <https://doi.org/10.3390/en13215582>
13. Cappiotti, L., **Simonetti, I.**, 2020, *Wave-induced Water-mass Flow Across Shore-defense Detached and Emergent Rubble-mound Breakwaters*, Journal of Coastal Reserach, Special Issue No 95, 197-201. <https://doi.org/10.2112/SI95-039.1>
14. Kisacik, D., Stratigaki, V., Wu, M., Cappiotti, L., **Simonetti, I.**, Troch, P., Crespo, A., Altomare, C., Domínguez, J., Hall, M., Gómez-Gesteira, M., Canelas, R.B., Stansby, P., 2020, *Efficiency and Survivability of a Floating Oscillating Water Column Wave Energy Converter Moored to the Seabed: An Overview of the EsfLOWC MaRINET2 Database*, Water, 12, 992. <https://doi.org/10.3390/w12040992>

15. **Simonetti, I.**, Cappiotti, L., Oumeraci, H., 2018, *An Empirical model as a supporting tool to optimize the main design parameters of a stationary oscillating water column wave energy converter*, Applied Energy, <https://doi.org/10.1016/j.apenergy.2018.09.100>
16. **Simonetti, I.**, Cappiotti, L., ElSafti, H., Oumeraci, H., 2018, *Evaluation of air compressibility effects on the performance of fixed OWC wave energy converters using CFD modelling*, Renewable Energy 119, 741-753 <https://doi.org/10.1016/j.renene.2017.12.027>
17. **Simonetti, I.**, Cappiotti, L., ElSafti, H., Oumeraci, H., 2017, *Optimization of the geometry and the turbine induced damping for fixed detached and asymmetric OWC devices: A numerical study*, Energy 139, 1197-1209, <https://doi.org/10.1016/j.energy.2017.08.033>.
18. **Simonetti, I.**, Maltagliati, S., Manfrida, G., 2015, *Air quality impact of a middle size airport within an urban context through EDMS simulation*. Journal of Transportation Research Part D Transport and Environment 10/2015; 40:144-154. <https://doi.org/10.1016/j.trd.2015.07.008>

## Conference papers

19. Zannella, A., Esposito, A., **Simonetti, I.**, Cappiotti, L., Adaptation of the coastal defence system in Marina di Pisa to extreme sea conditions: Experimental Analysis of the submerged breakwater and gravel beach, in Proceedings of the 10<sup>th</sup> International Symposium Monitoring of Mediterranean Coastal Areas: Problems and Measurement Techniques, 11-13 giugno 2024, Livorno.
20. Crespo et al., 2023, On the state-of-the-art of CFD simulations for WECs within the open-source numerical framework of DualSPHysics, Proceedings of the 15th European Wave and Tidal Energy Conference, Bilbao, Spain 4-7 Sept. 2023, DOI: <https://doi.org/10.36688/ewtec-2023-145>.
21. Raghavan, V., **Simonetti, I.**, Lavidas, G., Cappiotti, L., 2023, Numerical modelling of a box-type and bottom-detached oscillating water column wave energy conversion device: a comparison with experimental data and between BEM and CFD numerical modelling, Proceedings of the 15th European Wave and Tidal Energy Conference, Bilbao, Spain 4-7 Sept. 2023, DOI: <https://doi.org/10.36688/ewtec-2023-142>.
22. **Simonetti, I.**, Cappiotti, L., 2023, Effects of projected wave climate changes on the sizing and performance of OWCs: a focus on the Mediterranean and Atlantic European coastal waters, Proceedings of the 15th European Wave and Tidal Energy Conference, Bilbao, Spain 4-7 Sept. 2023, DOI: <https://doi.org/10.36688/ewtec-2023-155>.
23. **Simonetti, I.**, Esposito, A., Cappiotti, L., 2023, *Development of a hybrid Oscillating Water Column-Overtopping device: Preliminary results of laboratory tests at scale 1:25 on the O2WC WEC*, Trends in Renewable Energies Offshore: Proceedings of the 5th International Conference on Renewable Energies Offshore (RENEW 2022, Lisbon, Portugal, 8–10 November 2022) (1st ed.). CRC Press. <https://doi.org/10.1201/9781003360773>.
24. Ciappi, L., **Simonetti, I.**, Bianchini, A., Cappiotti, L., Manfrida, G., 2021, *Application of wave-to-wire modelling to optimise oscillating water column wave energy converters for small installations in the Mediterranean Sea*. 16th Conference on Sustainable Development of Energy, Water and Environment Systems, SDEWES 2021, 10-15 October 2021, Dubrovnik, Croatia.
25. Ciappi, L., Cheli, L., **Simonetti, I.**, Bianchini, A., Talluri, L., Manfrida, G., Cappiotti, L., 2020, *Analytical Models of Oscillating Water Column Systems Operating with Air Turbines in the Mediterranean Sea*, in: Proceedings of the 15th Conference on Sustainable Development of Energy System, Water and Environment Systems, 1-5 September 2020, Cologne, Germany.
26. Walker, S., Cappiotti, L., **Simonetti, I.**, Esposito, A., 2020, *Laboratory scale tests of a floating tidal turbine*, in: *Proceedings of the 4th Conference on Renewable Energies Offshore*, Developments in Renewable Energies Offshore – Guedes Soares (Ed.) © 2021 Taylor & Francis Group, London, ISBN 978-0-367-68131-9.
27. Cappiotti, L., Solari, S., **Simonetti, I.**, Crema, I., 2019, *Numerical modelling of Orbetello lagoon circulation in the XVIII century*, in 2019 IMEKO TC-19 International Workshop on Metrology for the Sea, 3-5 October 2019, Genova, Italy. ISBN: 978-92-990084-2-3.

28. Cappietti L., Ciappi L., Esposito A., Fiaschi D., Manfrida G., Melka B., Nowak M., **Simonetti I.**, Stebel M., Smolka J., Talluri L., 2019, *Experimental investigation of velocity-augmented barriers for tidal turbines*, in Proceedings of the 14th Conference on Sustainable Development of Energy, Water and Environment System, SDEWES2019, 1-6 October 2019, Dubrovnik, Croatia
29. Cappietti, L., **Simonetti, I.**, Crema, I., 2019, *Concept design of a Very Large Floating Structure and Laboratory Scale Physical Modelling*, in Proceedings of the ASME 2019 38th International Conference on Ocean, Offshore and Arctic Engineering, OMAE2019, June 9-14, Glasgow, Scotland, UK, OMAE2019-96259. <https://doi.org/10.1115/OMAE2019-96259>.
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31. Cappietti, L., **Simonetti, I.**, Crema, I., 2019, *Laboratory experiments on the performance of an OWC-WEC: fixed condition versus floating platform-embodied condition*, Proceedings of the 13th European Wave and Tidal Energy Conference, 1-6 Sept. 2019, Naples, Italy. ISSN 2309-1983
32. Walker, S., Cappietti, L., **Simonetti, I.**, 2019, *A laboratory study on the effects of waves on the performance and structural deflection of a tidal stream turbine*, in Proceedings of the 13th European Wave and Tidal Energy Conference, 1-6 Sept. 2019, Naples, Italy. ISSN 2309-1983
33. Cappietti, L., Crema, I., **Simonetti, I.**, 2018, *Assessing water exchange between sea and the Orbetello lagoon (Italy) by field measurements and numerical simulations*, Proceedings of the 2018 IEEE International Workshop on Metrology for the Sea (MetroSea 2018), Bari, Italy. pp 55-59, ISBN: 978-1-5386-7643-1
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35. Cappietti, L., **Simonetti, I.**, Penchev, V., Penchev, P., 2019, *Laboratory tests on an original wave energy converter combining oscillating water column and overtopping devices*, Advances in Renewable Energies Offshore – Guedes Soares (Ed.) © 2019 Taylor & Francis Group, London, ISBN 978-1-138-58535-5, Lisbon, Portugal. pp 791-796
36. Cappietti, L., **Simonetti, I.**, 2018, *On the effectiveness of Oscillating Water Column devices in reducing the agitation in front of vertical walls harbour structures*, ICCE2018, Abstract in Proceedings of the 36th International Conference on Coastal Engineering, Baltimore, <https://doi.org/10.9753/icce.v36.papers.112>
37. **Simonetti, I.**, Cappietti, L., *Quantificazione delle perdite di energia utile in dispositivi WEC-OWC*, memoria in: Atti del XXXVI Congresso Nazionale di Idraulica e Costruzioni Idrauliche, IDRA18, Bologna, 12-14 Settembre 2018, pp: 4, ISBN: 9788894379907
38. Cappietti, L., **Simonetti, I.**, Esposito, A., Streicher, M., Kortenhaus, A., *Esperimenti a grande scala su carichi da overtopping d'onda su pareti verticali: spessore e velocità della lama tracimante*, memoria in: Atti del XXXVI Congresso Nazionale di Idraulica e Costruzioni Idrauliche, IDRA18, Bologna, 12-14 Settembre 2018, pp: 4, ISBN: 9788894379907
39. Cappietti, L., **Simonetti, I.**, Esposito, A., Streicher, M., Kortenhaus, A., Scheres, B., Schuettrumpf, H., Hirt, M., Hofland, B., Xuexue, C., 2018, *Large-Scale Experiments of Wave-Overtopping Loads on Walls: Layer Thicknesses and Velocities*, Proceedings of the 37th International Conference on Ocean, Offshore and Arctic Engineering, OMAE 2018, Madrid, Spain. Paper No. OMAE2018-78104, pp. V07AT06A028; 6 pages [doi:10.1115/OMAE2018-78104](https://doi.org/10.1115/OMAE2018-78104)
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42. Bigozzi, L., El Basri. E., Iannicello, F., Marsili-Libelli, S., **Simonetti, I.**, 2016, *Assessing input-output relations in environmental data by means of fuzzy clustering and Bayesian inference*, In: Sauvage, Sánchez-Pérez, Rizzoli (Eds.), Proceedings of the 8th International Congress on Environmental Modelling and Software, Toluose, France, pp: 583-592, ISBN: 9788890357459
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