

Michel Benoit

EDF R&D - Laboratoire National d'Hydraulique et Environnement (LNHE)
Saint-Venant Hydraulics Laboratory – LHSV
(ENPC, Institut Polytechnique de Paris, EDF R&D)



Postal address: EDF Lab Chatou, 6 quai Watier, 78400 Chatou, France

Cell phone: +33 6 81 34 35 90

e-mail: michel.benoit@edf.fr ; michel.benoit@hotmail.fr

ORCID: <https://orcid.org/0000-0003-4195-2983>

ResearchGate: <https://www.researchgate.net/profile/Michel-Benoit>

Google Scholar: <https://scholar.google.com/citations?user=EiMB7SgAAAAJ&hl=fr>

Web of Science ResearcherID: <http://www.webofscience.com/wos/author/record/ABC-4047-2021>

Nationality: French

Born August 5th, 1966. Married, 4 children. Home: 52 rue Paul Doumer, 78420 Carrières-sur-Seine, France.

Current position Senior scientist at EDF R&D (Electricité de France) at the Laboratoire National d'Hydraulique et Environnement (LNHE) and Saint-Venant Hydraulics Laboratory (LHSV).

Previous positions

- Full Professor at Ecole Centrale Méditerranée (ECM) and senior researcher at IRPHE lab (Research Institute on Out-of-Equilibrium Phenomena) UMR 7342 (Aix Marseille Univ, CNRS, Ecole Centrale Méditerranée). Head of the team Structures-Atmosphere-Ocean (SAO) (01/09/2015 – 31/08/2020)
- Professor of Fluid Mechanics and Ocean Engineering at Ecole des Ponts, Marne-la-Vallée (France).
- Founder and head of Saint-Venant Hydraulics Laboratory (LHSV), Université Paris Est (EDF R&D, Ecole des Ponts, Cerema) (15/01/2008 – 31/08/2015).
- Research-engineer at EDF R&D LNHE (01/09/1990 – 31/08/2015)

Education and degrees

- Engineer diploma from Ecole Centrale Paris (speciality “ocean”) – Paris, France (1989)
- University degree of assistant professor (HDR) from the University of Toulon (2006) with speciality “Meteorology, physical oceanography and physics for geophysical applications”. Title: “Contribution to the study of waves and sea-states from the ocean to coastal structures”, Toulon (France).
- Full University Professor in Fluid Mechanics (2015). Ecole Centrale Méditerranée, Marseille (France).

Research activities and professional skills

- **Ocean and coastal waves:** free surface gravity waves, wind waves and oceanic sea states, tides and storm surges, tsunamis. Wave-current-atmosphere interactions. Nonlinear wave-wave interactions. Freak waves.
- **Fluid mechanics for geophysical flows:** river, coastal and marine hydrodynamics, physical oceanography (waves, tides, currents). Ocean hazards.
- **Wave-structure interaction** applied to various kinds of marine and coastal structures: rubble-mound breakwaters, monopiles and floaters for offshore wind turbines, jackets, jetties, quays, seawalls, etc.
- **Numerical modelling of water waves**, by using either phase-averaged approaches (developer of **Tomawac** spectral 3rd generation wave model) or phase-resolving approaches: Boussinesq and Serre-Green-Naghdi-type models, high-order spectral method (**HOS**), fully nonlinear potential flow solver **whispers3D**, etc.
- **Analysis and characterization of multidirectional sea states** in wave basins and in the ocean.

Publications. Author or co-author of:

75 journal articles

1 collective book (textbook on fluid mechanics)

8 book chapters

130+ articles in conference proceedings.

Current H-index: **33**

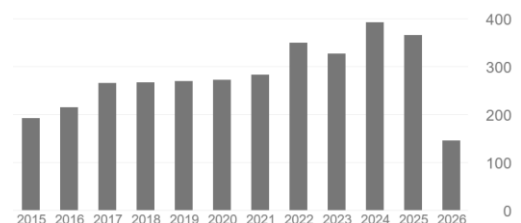
I10 index: **79**

(Google Scholar, 12/05/2026)

Total number of citations: **4343**

(300-350 citations/year over the last 5 years).

	Toutes	Depuis 2021
Citations	4343	1874
indice h	33	22
indice i10	79	54



Citations per year (Google Scholar, 12/05/2026)

Selected recent journal articles (period 2009-2026 only):

- Zhang J., Ma Y., Sun J., Huang L., **Benoit M.**, Mendes S. (2026) Effect of directionality on extreme wave formation during nonlinear shoaling. *Journal of Fluid Mechanics*, 1031, R2. <https://doi.org/10.1017/jfm.2026.11352>
- Villefer A., Violeau D., Teles M. J., Luneau C., **Benoit M.** (2026) Wave overtopping of rock-armored breakwaters in bimodal long-crested sea state conditions. *Coastal Engineering Journal*, <https://doi.org/10.1080/21664250.2026.2638069>
- Zhang J., **Benoit M.**, Mendes S. (2026) Nonlinear statistics evolution of extreme wave fields over strongly reflective plane beaches. *Ocean Engineering*, 350, 124183. <https://doi.org/10.1016/j.oceaneng.2026.124183>
- Coulaud G., Teles M., **Benoit M.** (2026) Numerical modelling of nearshore wave transformation, breaking and overtopping of coastal protections with the enhanced Serre-Green-Naghdi equations. *Coastal Engineering*, 203, 104857. <https://doi.org/10.1016/j.coastaleng.2025.104857>
- Barcet M., Benguigui W., Laviéville J., **Benoit M.**, Wachs A., Fede P., Bonometti T. (2025) Resolved DEM-CFD coupling for wave-armour blocks interactions. *Ocean Engineering*, 337, 121865. <https://doi.org/10.1016/j.oceaneng.2025.121865>
- Papoutsellis C.E., **Benoit M.** (2025) On a high-order shallow-water wave model with canonical non-local Hamiltonian structure. *Physica D: Nonlinear Phenomena*, 479, 134691. <https://doi.org/10.1016/j.physd.2025.134691>
- Yu S., Ransley E., Qian L., Zhou Y., Brown S., Greaves D., Hann M., Holcombe A., Edwards E., Tosdevin T., Jagdale S., Li Q., Zhang Y., Zhang N., Yan S., Ma Q., Tagliaferro B., Capasso S., Martínez-Estévez I., Götteman M., Bernhoff H., Karimirad M., Domínguez J.M., Altomare C., Viccione G., Crespo A.J.C., Gómez-Gesteira M., Eskilsson C., Verao Fernandez G., Andersen J., Palm J., Niosi F., Dell'Edera O., Sirigu M., Ghigo A., Bracco G., Cui F., Chen S., Wang W., Zhuo Y., Li Y., Peyrard C., Benguigui W., Barcet M., Robaux F., **Benoit M.**, Teles M., Ntouras D., Manolas D., Papadakis G., Riziotis V., Zheng Z., Lei W., Wang R., Chen J., Shao Y., Visbeck J., Bingham H.B., Engsig-Karup A.P., Zhou Y., Cai Y., Zhao H., Shi W., Li X., Zeng X., Xue Y., Zhuang T., Wan D., Engel G., Tierno M., Ducrozet G., Bouscasse B., Leroy V., Ferrant P., Barajas G., Lara J.L. (2025) Modelling the hydrodynamic response of a floating offshore wind turbine – a comparative study. *Applied Ocean Research*, 155, 104441. <https://doi.org/10.1016/j.apor.2025.104441>
- Coulaud G., Teles M., **Benoit M.** (2025) A comparison of eight weakly dispersive Boussinesq-type models for non-breaking long-wave propagation in variable water depth. *Coastal Engineering*, 195, 104645. <https://doi.org/10.1016/j.coastaleng.2024.104645>
- Zhang J., Mendes S., **Benoit M.**, Kasparian J. (2024) Effect of shoaling length on rogue wave occurrence. *Journal of Fluid Mechanics*, 997, A69. <https://doi.org/10.1017/jfm.2024.687>
- Zhang J., Ma Y., **Benoit M.** (2024) Kinematics of nonlinear waves over variable bathymetry. Part II: Statistical distributions of orbital velocities and accelerations in irregular long-crested seas. *Coastal Engineering*, 193, 104589. <https://doi.org/10.1016/j.coastaleng.2024.104589>
- Benoit M.**, Zhang J., Ma Y. (2024) Kinematics of nonlinear waves over variable bathymetry. Part I: Numerical modelling, verification and validation. *Coastal Engineering*, 193, 104577. <https://doi.org/10.1016/j.coastaleng.2024.104577>
- Villefer A., **Benoit M.**, Violeau D., Teles M., Luneau C. (2024) Etude expérimentale de submersion de protections côtières pour des états de mer combinant houle et clapot. *Revue Paralia*, 14, s02.1–s02.12. <https://doi.org/10.5150/revue-paralia.2024.s02>
- Landesman P., Harris J.C., Peyrard C., **Benoit M.** (2024) Wave-structure interaction by a two-way coupling between a fully nonlinear potential flow model and a Navier-Stokes solver. *Ocean Engineering*, 308, 118209. <https://doi.org/10.1016/j.oceaneng.2024.118209>
- Zhang J., Ma Y., **Benoit M.** (2024) Statistical distributions of free surface elevation and wave height for out-of-equilibrium sea-states provoked by strong depth variations. *Ocean Engineering*, 293, 116645. <https://doi.org/10.1016/j.oceaneng.2023.116645>
- Rongé E., Peyrard C., Venugopal V., Xiao Q., Johanning L., **Benoit M.** (2023) Evaluation of second and third-order numerical wave-loading models for floating offshore wind TLPs. *Ocean Engineering*, 288, 116064. <https://doi.org/10.1016/j.oceaneng.2023.116064>
- Benoit M.**, Benguigui W., Teles M., Robaux F., Peyrard C. (2023) Two-phase CFD simulation of breaking waves impacting a coastal vertical wall with a recurved parapet. *International Journal of Offshore and Polar Engineering*, 33(2), 123-131. <https://doi.org/10.17736/ijope.2023.sv03>
- Saincher S., Sriram V., Ravindar R., Yan S., Stagonas D., Schimmels S., Xie Z., **Benoit M.**, Benguigui W., Teles M., Robaux F., Peyrard C., Asiikkis A.T., Frantzis C., Vakis A.I., Grigoriadis D.G.E., Li Q., Ma Q., Zhang N., Zheng K., Zhao X., Hu X., Chen S., Meng Q., Zhao W., Wan D. (2023) Comparative study on breaking waves

- interaction with vertical wall retrofitted with recurved parapet in small and large scale. *International Journal of Offshore and Polar Engineering*, 33(2), 113-122. <https://doi.org/10.17736/ijope.2023.jc890>
- Villefer A., **Benoit M.**, Violeau D., Teles M. (2023) Spectral wave modelling of bimodal sea states at laboratory and coastal scales. *Ocean Modelling*. <https://doi.org/10.1016/j.ocemod.2023.102182>
- Zhang J., Ma Y., Tan T., Dong G., **Benoit M.** (2023) Enhanced extreme wave statistics of irregular waves due to accelerating following current over a submerged bar. *Journal of Fluid Mechanics*. 954, A50. <https://doi.org/10.1017/jfm.2022.1022>
- Robaux F., **Benoit M.** (2022) Assessment of one-way coupling methods from a potential to a viscous flow solver based on domain- and functional-decomposition for fixed submerged bodies in nonlinear waves. *European Journal of Mechanics B/Fluids*. 95, 315-334. <https://doi.org/10.1016/j.euromechflu.2022.05.011>
- Zhang J., **Benoit M.**, Ma Y. (2022) Equilibration process of out-of-equilibrium sea-states induced by strong depth variation: Evolution of coastal wave spectrum and representative parameters. *Coastal Engineering*, 174, 104099. <https://doi.org/10.1016/j.coastaleng.2022.104099>
- Harris J.C., Dombre E., **Benoit M.**, Grilli S.T., Kuznetsov K.I. (2022) Nonlinear time-domain wave-structure interaction: a parallel fast integral equation approach. *International Journal for Numerical Methods in Fluids*, 94(2), 188-222. <https://doi.org/10.1002/flid.5051>
- Pinguet R., **Benoit M.**, Molin B., Rezende F. (2022) CFD analysis of added mass, damping and induced flow of isolated and cylinder-mounted heave plates at various submergence depths using an overset mesh method. *Journal of Fluid and Structures*, 109, 103442. <https://doi.org/10.1016/j.jfluidstructs.2021.103442>
- Villefer A., **Benoit M.**, Violeau D., Luneau C., Branger H. (2021) Influence of following, regular and irregular long waves on wind-wave growth with fetch: an experimental study. *Journal of Physical Oceanography*, 51(11), 3435-3448. <https://doi.org/10.1175/JPO-D-21-0050.1>
- Robaux F., **Benoit M.** (2021) Development and validation of a numerical wave tank based on the Harmonic Polynomial Cell and Immersed Boundary methods to model nonlinear wave-structure interaction. *Journal of Computational Physics*, 446, 110560. <https://doi.org/10.1016/j.jcp.2021.110560>
- Zhang J., **Benoit M.** (2021) Wave-bottom interaction and extreme wave statistics due to shoaling and de-shoaling of irregular long-crested wave trains over steep seabed changes. *Journal of Fluid Mechanics*, 912, A28. <https://doi.org/10.1017/jfm.2020.1125>
- Athanassoulis G.A., **Benoit M.**, Clamond D., Grilli S.T. (2019) Foreword to the special issue on nonlinear waves over variable bathymetry. *Journal of Ocean Engineering and Marine Energy*, 5, 307-310. <https://doi.org/10.1007/s40722-019-00158-3>
- Simon B., Papoutsellis C.E., **Benoit M.**, Yates M.L. (2019) Comparing methods of modeling depth-induced breaking of irregular waves with a fully nonlinear potential flow approach. *Journal of Ocean Engineering and Marine Energy*, 5, 365-383. <https://doi.org/10.1007/s40722-019-00154-7>
- Papoutsellis C., Yates M.L., Simon B., **Benoit M.** (2019) Modeling of depth-induced wave breaking in a fully nonlinear free-surface potential flow model. *Coastal Engineering*, 154, 103579. <https://doi.org/10.1016/j.coastaleng.2019.103579>
- Zhang J., **Benoit M.**, Kimmoun O., Chabchoub A., Hsu H.-C. (2019) Statistics of extreme waves in coastal waters: Large scale experiments and advanced numerical simulations. *Fluids*, 4(2), 99. <https://doi.org/10.3390/fluids4020099>
- Zhang J., **Benoit M.** (2019) Effect of finite amplitude of bottom corrugations on Fabry-Perot resonance of water waves. *Physical Review E*, 99(5), 053109. <https://doi.org/10.1103/PhysRevE.99.053109>
- Raoult C., **Benoit M.**, Yates M.L. (2019) Development and validation of a 3D RBF-spectral model for coastal wave simulation. *Journal of Computational Physics*, 378, 278-302. <https://doi.org/10.1016/j.jcp.2018.11.002>
- Dombre E., Harris J.C., **Benoit M.**, Violeau D., Peyrard C. (2019) A 3D parallel boundary element method on unstructured triangular grids for fully nonlinear wave-body interactions. *Ocean Engineering*, 171, 505-518. <https://doi.org/10.1016/j.oceaneng.2018.09.044>
- Raoult C., **Benoit M.**, Yates M.L. (2018) Développement d'un modèle numérique non-linéaire et dispersif pour la propagation des vagues en zone côtière. *Revue Paralia*, 11, 1.1-1.14. (in French). <https://doi.org/10.5150/revue-paralia.2018.n01>
- Benoit M.**, Raoult C., Yates M.L. (2017) Analysis of the linear version of a highly dispersive potential water wave model using a spectral approach in the vertical. *Wave Motion*, 74, 159-181. <https://doi.org/10.1016/j.wavemoti.2017.07.002>
- Le Gal M., Violeau D., **Benoit M.** (2017) Influence of timescales on the generation of seismic tsunamis. *European Journal of Mechanics. B/Fluids*, 65, 257-273. <https://doi.org/10.1016/j.euromechflu.2017.03.008>

- Carmigniani R.A., **Benoit M.**, Violeau D., Gharib M. (2017) Resonance wave pumping with surface waves. *Journal of Fluid Mechanics*, 811, 1–36. <https://doi.org/10.1017/jfm.2016.720>
- Raoult C., **Benoit M.**, Yates M.L. (2016) Validation of a fully nonlinear and dispersive wave model with laboratory non-breaking experiments. *Coastal Engineering*, 114, 194–207. <https://doi.org/10.1016/j.coastaleng.2016.04.003>
- Zentner I., Ferré G., Poirion F., **Benoit M.** (2016) A biorthogonal decomposition for the identification and simulation of non-stationary and non-Gaussian random fields. *Journal of Computational Physics*, 314, 1–16. <https://doi.org/10.1016/j.jcp.2016.02.067>
- Tiberi-Wadier A.-L., Laugel A., **Benoit M.** (2016) Construction of the numerical wave databases Anemoc-2 on the Mediterranean Sea and the Atlantic Ocean through hindcast simulations over the period 1979–2010. *Advances in Hydroinformatics*, P. Gourbesville et al. (eds). Springer Water. pp 127–143. ISBN 978-981-287-615-7_9. https://doi.org/10.1007/978-981-287-615-7_9
- Yates M.L., **Benoit M.** (2015) Accuracy and efficiency of two numerical methods of solving the potential flow problem for highly nonlinear and dispersive water waves. *International Journal for Numerical Methods in Fluids*, 77(10), 616–640. <https://doi.org/10.1002/flid.3992>
- Dombre E., **Benoit M.**, Violeau D., Peyrard C., Grilli S.T. (2015) Simulation of floating structure dynamics in waves by implicit coupling of a fully nonlinear potential flow model and a rigid body motion approach. *Journal of Ocean Engineering and Marine Energy*, 1, 55–76. <https://doi.org/10.1007/s40722-014-0006-y>
- Stratigaki V., Troch P., Stallard T., Forehand D., Folley M., Kofoed J.P., **Benoit M.**, Babarit A., Vantorre M., Kirkegaard J. (2015) Sea-state modification and heaving float interaction factors from physical modelling of arrays of wave energy converters. *Journal of Renewable and Sustainable Energy*, 7, 061705. <https://doi.org/10.1063/1.4938030>
- Laugel A., Menendez M., **Benoit M.**, Mattarolo G., Mendez F. (2014) Wave climate projections along the French coastline: dynamical versus statistical downscaling methods. *Ocean Modelling*, 84, 35–50. <https://doi.org/10.1016/j.ocemod.2014.09.002>
- Stratigaki V., Troch P., Stallard T., Forehand D., Kofoed J.P., Folley M., **Benoit M.**, Babarit A., Kirkegaard J. (2014) Wave basin experiments with large wave energy converter arrays to study interactions between the converters and effects on other users in the sea and the coastal area. *Energies*, 7, 701–734. <https://doi.org/10.3390/en7020701>
- Teles M.J., **Benoit M.**, Pires-Silva A.A. (2014) Modeling combined wave-current flows using a RANS CFD solver with emphasis on the effect of the turbulent closure model. *Advances in Hydroinformatics*. Springer Hydrogeology. Ph. Gourbesville et al. (Eds), pp 473–485. ISBN 978-981-4451-41-3. https://doi.org/10.1007/978-981-4451-42-0_38
- Weiss J., Bernardara P., **Benoit M.** (2014) Formation of homogeneous regions for regional frequency analysis of extreme significant wave heights. *Journal of Geophysical Research*, 119(5), 2906–2922. <https://doi.org/10.1002/2013JC009668>
- Sergent P., Prévot G., Mattarolo G., Brossard J., Morel G., Mar F., **Benoit M.**, Ropert F., Kergadallan X., Trichet J.-J., Mallet P. (2014) Adaptation of coastal structures to mean sea level rise. *La Houille Blanche*, 2014-6, 54–61. <https://dx.doi.org/10.1051/lhb/2014063>
- Andreewsky M., Kergadallan X., Bernardara P., **Benoit M.**, Gaufres P., Trmal C. (2014) Comparaison de différentes méthodes d'estimation des niveaux extrêmes en site à fort et faible marnage. *La Houille Blanche*, 2014-4, 26–36. <https://dx.doi.org/10.1051/lhb/2014035>
- Weiss J., Bernardara P., **Benoit M.** (2014) Modelling intersite dependence for regional frequency analysis of extreme marine events. *Water Resource Research*, 50(7), 5926–5940. <https://doi.org/10.1002/2014WR015391>
- Toffoli A., Fernandez L., Monbaliu J., **Benoit M.**, Gagnaire-Renou E., Lefèvre J.-M., Cavaleri L., Proment D., Pakozdi C., Stansberg C.-T., Waseda T., Onorato M. (2013) Experimental evidence of the modulation of a plane wave to oblique perturbations and generation of rogue waves in finite water depth. *Physics of Fluids*. 25(9), 091701. <https://doi.org/10.1063/1.4821810>
- Teles M.J., Pires-Silva A., **Benoit M.** (2013) Numerical modelling of wave current interactions at a local scale. *Ocean Modelling*, 68, 72–87. <https://doi.org/10.1016/j.ocemod.2013.04.006>
- Malleron N., Bernardara P., **Benoit M.**, Parey S., Perret C. (2013) Méthodologie de caractérisation et d'estimation des aléas climatiques extrêmes. *Revue Générale du Nucléaire*, 2013, 1, 42–47. <https://doi.org/10.1051/rgn/20131042>
- Teles M.J., **Benoit M.**, Pires-Silva A.A. (2013) Application d'un modèle CFD pour analyser la structure verticale de l'écoulement dans un environnement vagues-courant. *Revue Paralia*, 6, 10.1–10.12. <https://dx.doi.org/10.5150/revue-paralia.2013.010>

- Benoit M.**, Chazel F. (2013) Validation expérimentale d'un modèle double-couche pour des vagues côtières non-linéaires et fortement dispersives. *Revue Paralia*, 6, 7.1–7.16. <https://dx.doi.org/10.5150/revue-paralia.2013.007>
- Weiss J., Bernardara P., Andreewsky M., **Benoit M.** (2012) Seasonal autoregressive modelling of skew storm surge series. *Ocean Modelling*, 47, 41–54. <https://doi.org/10.1016/j.ocemod.2012.01.005>
- Ardhuin F., Roland A., Dumas F., Bennis A.-C., Sentchev A., Forget P., Wolf J., Girard F., Osuna P., **Benoit M.** (2012) Numerical wave modeling in conditions with strong currents: dissipation, refraction, and relative wind. *Journal of Physical Oceanography*, 42(12), 2101–2120. <https://doi.org/10.1175/JPO-D-11-0220.1>
- Guerber E., **Benoit M.**, Grilli S.T., Buvat C. (2012) A fully nonlinear implicit model for wave interactions with submerged structures in forced or free motion. *Engineering Analysis with Boundary Elements*, 36(7), 1151–1163. <https://doi.org/10.1016/j.enganabound.2012.02.005>
- Gagnaire-Renou E., **Benoit M.**, Forget P. (2012) Modélisation spectrale des états de mer par un calcul quasi-exact des interactions non-linéaires vague-vague. *La Houille Blanche*, 2012-3, 51–60, <https://dx.doi.org/10.1051/lhb/2012023>
- Bernardara P., Andreewsky M., **Benoit M.** (2011) Application of the Regional Frequency Analysis to the estimation of extreme storm surges. *Journal of Geophysical Research C (Oceans)*, 116(C2), C02008. <https://doi.org/10.1029/2010JC006229>
- Gagnaire-Renou E., **Benoit M.**, Badulin S. (2011) On weakly turbulent scaling of wind sea in simulations of fetch-limited growth. *Journal of Fluid Mechanics*, 669, 178–213. <https://doi.org/10.1017/S0022112010004921>
- Toffoli A., Cavaleri L., Babanin A.V., **Benoit M.**, Bitner-Gregersen E.M., Monbaliu J., Onorato M., Osborne A.R., Stansberg C.T. (2011) Occurrence of extreme waves in three dimensional mechanically generated wave fields propagating over an oblique current. *Natural Hazards and Earth System Sciences*, 11, 895–903. <https://doi.org/10.5194/nhess-11-895-2011>
- Guerber E., **Benoit M.**, Buvat C., Grilli S.T. (2011) Modélisation non-linéaire des interactions des vagues avec un corps mobile immergé. *Revue Paralia*, 4, 2.1–2.12. <https://dx.doi.org/10.5150/revue-paralia.2011.002>
- Gagnaire-Renou E., **Benoit M.**, Forget P. (2010) Ocean wave spectrum properties as derived from quasi-exact computations of nonlinear wave-wave interactions. *Journal of Geophysical Research C (Oceans)*, 115(C12), C12058. <https://doi.org/10.1029/2009JC005665>
- Issa R., Rougé D., **Benoit M.**, Violeau D., Joly A. (2010) Modelling algae transport in coastal areas with a shallow water equation model including wave effects. *Journal of Hydro-environment Research*, 3(4), 215–223. <https://doi.org/10.1016/j.jher.2009.10.004>
- Morellato D., **Benoit M.** (2010) Constitution d'une base de données d'états de mer le long des côtes françaises méditerranéennes par simulations rétrospectives couvrant la période 1979-2008. *Revue Paralia*, 3, 5.1–5.12. <https://dx.doi.org/10.5150/revue-paralia.2010.005>
- Chazel F., **Benoit M.**, Ern A., Piperno S. (2009) A double-layer Boussinesq-type model for highly nonlinear and dispersive waves. *Proceedings of the Royal Society, Series A*, 465, 2319–2346. <https://doi.org/10.1098/rspa.2008.0508>
- Nicolle A., Karpitchev M., **Benoit M.** (2009) Amplification of the storm surges in shallow waters of the Pertuis Charentais (Bay of Biscay, France). *Ocean Dynamics*, 59, 921–935. <https://doi.org/10.1007/s10236-009-0219-0>
- Toffoli A., **Benoit M.**, Onorato M., Bitner-Gregersen E.M. (2009) The effect of third-order nonlinearity on statistical properties of random directional waves in finite depth. *Nonlinear Processes in Geophysics*, 16, 131–139. <https://doi.org/10.5194/npg-16-131-2009>

Editorial responsibilities and duties

- Applied Ocean Research (Elsevier): **Associate Editor** 2023-2026
<https://www.sciencedirect.com/journal/applied-ocean-research/about/editorial-board>
- Journal of Ocean Engineering and Marine Energy (Springer): **Associate Editor** since 2015
<https://www.springer.com/journal/40722/editors>
- Frontiers in Marine Science: **Associate editor** in the section Coastal Ocean Processes
<https://loop.frontiersin.org/people/446245/overview>
- Member of the Scientific Committee of the online coastal engineering journal Paralia (www.paralia.fr)
- **Guest editor of special issues:**
 - “Nonlinear waves over variable bathymetry” with G.A. Athanassoulis, D. Clamond and S.T. Grilli in **Journal of Ocean Engineering and Marine Energy** (2019).
<https://link.springer.com/journal/40722/volumes-and-issues/5-4>

- “Nonlinear wave hydrodynamics. Volume 2” with A. Chabchoub and T. Waseda in **Fluids** (2022)
https://www.mdpi.com/journal/fluids/special_issues/nonlinear_wave_hydrodynamics_2
- “Breaking Waves and Wave-Structure Interaction: Integrating Theory, Laboratory Experiments and Field Studies - A tribute to Lili Kimmoun”, Lead Guest Editor, with S. Abadie, H. Branger, C. Kharif, B. Molin, M. Ricchiuto, V. Roeber, M. Yates, in **Water Waves** (2026)
<https://link.springer.com/collections/dbchiefcid>
- Reviewers for many international journals (4-8 articles/year): Coastal Engineering, Applied Ocean Research, Journal of Fluid Mechanics, Journal of Geophysical Research, Journal of Ocean Engineering and Marine Energy, Journal of Computational Physics, etc.

Responsibilities and involvement in the animation of research

- Evaluation for French ANR research projects (5 projects over the period 2014-2025)
- Participation to AERES visiting committees in 2008 (IFREMER, Dyneco lab) and 2012 (IFREMER, LOS lab).
- Member of the audit committee of the experimental facility of Météo-France/CNRM in 2010.
- Member of selection committees for university or research positions:
 - Associate professor at University of Toulon, France (2011)
 - Full professor at Ecole Centrale Nantes, France (2017)
 - Full professor at National Technical University of Athens (NTUA), Greece (2017)
 - Junior Researcher Chair program E2S (Energy Environment Solutions) of the University de Pau et des Pays de l'Adour (UPPA), France (2018)
 - Full professor at University of La Rochelle, France (2020)
- One of the two French members of the Management Committee of the European COST Action CA17105 "A pan-European Network for Marine Renewable Energy" (2018-2022).

Supervised PhD theses

- Number of defended PhD theses: **19** (11 as principal supervisor and 7 as co-supervisor).
- Number of PhD theses in progress: **6** (4 as principal supervisor and 1 as co-supervisor).