

KÉVIN MARTINS - CURRICULUM VITAE

PERSONAL INFORMATION



📍 **UMRi 7266 Littoral ENvironnement et Sociétés (LIENSs)**

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WORK EXPERIENCE

from October 2023

CNRS Research Scientist at LIENSs (lienss.univ-larochelle.fr)

Main research activities: nearshore dynamics during storms

- Wave transformation in the nearshore : non-linear interactions, wave breaking & runup
- Remote sensing of nearshore processes, in particular based on lidar scanners
- Numerical modelling of wave-induced nearshore circulation

March 2021 to Aug. 2023

Marie Skłodowska-Curie Research Fellow at EPOC (epoc.u-bordeaux1.fr) and WRL – UNSW Sydney, Australia (wrl.unsw.edu.au)

EU Grant Agreement n°887867 *lidBathy* (funding granted: ~220 k€)

lidBathy: Nearshore bathymetric inversion from lidars during extreme events

Jan. 2019 to Feb. 2023

Excellence Initiative (IdEX) Research Fellow at EPOC (epoc.u-bordeaux1.fr)

2-year grant awarded by the University of Bordeaux, France (funding granted: ~120 k€)

HySurf: Hydrodynamics of the surf zone, from wave breaking to the nearshore circulation

Dec. 2017 to Dec. 2018

Post-Doctoral Researcher at LIENSs (lienss.univ-larochelle.fr)

Main topic: Numerical modelling of 3D wave-induced circulation in the nearshore region with the Vortex-Force formalism (SCHISM, ccrm.vims.edu/schismweb)

EDUCATION

Oct. 2014 to Nov. 2017

PhD at the Faculty of Architecture and Civil Engineering, University of Bath, UK

Topic: Wave transformation in the surf zone, supervised by Chris Blenkinsopp

Oct. 2010 to Sept. 2013

Engineer degree in Applied Mathematics (ENSEIRB-MATMECA), Talence, France

Sept. 2007 to June. 2010

Bachelor of Science in Mathematical Engineering at University of Bordeaux, Talence, France

SUPERVISION

Oct. 2018 to Jan. 2021

PhD co-supervisor of Laura Lavaud, supervised by Xavier Bertin (LIENSs)

Topic: The contributions of short waves to storm surges in coastal zones

Oct. 2018 to Feb. 2021

PhD co-supervisor of Marc Pezerat, supervised by Xavier Bertin (LIENSs)

Topic: Hydro-sedimentary dynamics of sandy shorefaces

(Co-)Supervisor of several Master and Bachelor students

SCIENTIFIC PRODUCTION

Synthesis

29 articles (IF>2), with 440+ citations : 10 articles as 1st author, and 4 by co-supervised PhD
H-index: 13 (Scopus) ; 15 (Google Scholar)

Significant contributions

MATLAB library for bispectral analysis – [ke-martins/bispectral-analysis](https://ke-martins.github.io/bispectral-analysis)

Co-developer of WWM, wave module of community-based modelling system SCHISM

5 major publications

1. Martins et al., 2023. New perspectives for nonlinear depth-inversion of the nearshore using Boussinesq theory. *Geophysical Research Letters* 50, e2022GL100498.
2. Martins et al., 2017. High-resolution monitoring of wave transformation in the surf zone using a LiDAR scanner array. *Coastal Eng.* 128, 37–43.
3. Lavaud, Bertin, Martins, et al., 2020. The contribution of short wave breaking to storm surges: the case Klaus in the Southern Bay of Biscay. *Ocean Model.* 156, 101710.
4. Bertin, Martins, et al., 2020. Energy transfers and reflection of infragravity waves at a dissipative beach under storm waves. *J. of Geophys. Res.: Oceans* 125, e2019JC015714.
5. Martins et al., 2021. Relation between orbital velocities, pressure and surface elevation in non-linear nearshore water waves. *Journal of Physical Oceanography* 51(11), 3539-3556.