

Marissa L. Yates

Education

- 2020 **Habilitation à Diriger des Recherches**, *Université Paris-Est*, Marne La Vallée, France, *Coastal Wave Hydrodynamics and Morphological Evolution*
- 2009 **PhD Oceanography**, *Scripps Institution of Oceanography, UCSD*, La Jolla, CA, USA, *Seasonal Sand Level Changes on Southern California Beaches : Observations and Modeling*
Thesis director : Dr. Bob Guza
- 2003 **B.S. Environmental Engineering**, *MIT*, Cambridge, Massachusetts, USA

Positions

- 2023–present **Researcher**, *Laboratoire d'Hydraulique Saint-Venant, École des Ponts, EDF R&D*, Chatou, France
- 2021–2022 **Associated researcher**, *Saint Venant Hydraulics Laboratory, DTecREM, Cerema*, Chatou, France
- 2011–2021 **Researcher**, *Saint Venant Hydraulics Laboratory, DTecREM, Cerema*, Chatou, France
- 2017–2020 **Interim head of Risques, Environment and Hydraulics Laboratory**, *Saint Venant Hydraulics Laboratory, DTecEMF, Cerema*, Chatou, France
- 2017 **Visiting academic**, *Cambridge Coastal Research Unit, Department of Geography, University of Cambridge*, Cambridge, UK
- 2010–2011 **Research engineer**, *Coastal Risks Group, BRGM*, Orléans, France
- 2009–2010 **Postdoctoral researcher**, *Scripps Institution of Oceanography*, La Jolla, CA, USA
- 2003–2009 **Graduate student researcher**, *Scripps Institution of Oceanography*, La Jolla, CA, USA
- 2002 **Research internship**, *Research Experience for Undergraduates, Horn Point Laboratory, University of Maryland*, Cambridge, MD, USA
- 2002 **Research internship**, *MIT*, Cambridge, MA, USA
- 2001 **Research internship**, *Consorzio Venezia Nuova*, Venice, Italy

Teaching experience

- 2021-present **Coastal Engineering, Anchoring and Cables**, *Coordinator and lecturer*, ENSTA (L3), IP Paris (M2), Palaiseau, France
- 2020-present **Sea States, Wave Propagation, and Ocean Wave Energy**, *Coordinator and lecturer*, ENSTA (L3), IP Paris (M2), Palaiseau, France
- 2020-present **Costal and Port Project**, *Lecturer*, ENPC (L3), Champs-sur-Marne, France
- 2013-2019 **Sea State, Coastal Waves and Morphodynamics**, *Lecturer*, ENSTA (L3), Ecole Polytechnique, ENSTA (M2), Palaiseau, France
- 2016-2019 **Maritime Works**, *Lecturer*, ENPC (L2), Champs-sur-Marne, France
- 2016,2019 **LNHE and LHSV Free surface hydraulics training session : Waves and coastal hydrodynamics classes**, *Lecturer*, EDF R&D, Chatou, France
- 2011–2013 **Scientific English**, *Lecturer*, ENS Cachan (L2), Cachan, France
- 2007 **The Oceans**, *Teaching assistant*, University of California, San Diego, La Jolla, CA, USA
- 2003–2009 **Physics and mathematics tutor (high school level)**, *Breyer's Branches*, Solana Beach, CA, USA
- 2002 **Waste Containment and Remediation Technology**, *Teaching assistant*, MIT, Cambridge, MA, USA

Advising experience

Postdoctoral researchers

- 2021 **T. Chataigner**, *LHSV, Chatou, France*, Application du modèle de complexité réduite d'évolution des plages sur la plage de Vougot et validation avec des observations morphologiques (*co-advised with N. Le Dantec*)
- 2020-2021 **P. Balitsky**, *Cerema REM, Plouzané, France*, Improving spectral wave modeling of extreme and breaking wave sea states (*co-advised with F. Leclerc and J.-F. Filipot (France Energies Marines)*)
- 2017-2019 **B. Simon**, *IRPHE, Marseille, France*, Integrating the effects of wave breaking and optimizing a 3D deterministic, fully nonlinear potential flow wave propagation model (*co-advised with M. Benoit (IRPHE)*)
- 2017-2018 **C. Papoutsellis**, *IRPHE, Marseille & LHSV, Chatou, France*, Wave breaking in a fully nonlinear and dispersive potential flow model (*co-advised with M. Benoit (IRPHE)*)
- 2015 **M. Gervais**, *LHSV, Chatou, France*, Mitigating beach erosion in storm conditions with a submerged breakwater (*co-advised with D. Pham Van Bang*)

PhD students

- 2020–2023 **S. Mohanlal**, *LHSV, Chatou, France*, Improving 3D wave modelling in maritime environments and interaction in maritime environments (*co-advised with J. Harris, L. Pastur, C. Peyrard, E4C Fellowship*)
- 2021–2022 **M. Iigabel**, *Cerema, Plouzané, France*, Systems to protect against marine flooding (*PhD based on work experience, co-advised with Y. Diab*)
- 2018–2021 **T. Chataigner**, *LHSV, Chatou, France*, Integrating alongshore processes in the beach morphodynamic evolution (*co-advised with N. Le Dantec, N. Goutal, DGA/Cerema Fellowship*)
- 2014–2016 **C. Raoult**, *LHSV, Chatou, France*, Modeling nonlinear waves in the coastal zone (*co-advised with M. Benoit*)

Masters and engineering students

- 2022 **G. Dreysse**, *LHSV, Chatou, France*, Characterizing surface wave breaking statistics in an experimental study using machine learning (3DWaveBI) (*Masters, co-advised with J. Harris and L. Pastur*)
- 2022 **A. Guidel**, *LHSV, Chatou, France*, Characterizing wave breaking forces and classification in an experimental study (3DWaveBI) (*Engineer, co-advised with J. Harris and L. Pastur*)
- 2022 **J. Wang**, *LHSV, Chatou, France*, Modeling wave transformation and breaking over variable bathymetry in a numerical wave tank (3DWaveBI) (*Engineer, co-advised with J. Harris*)
- 2022 **C. Michelet**, *Cerema, Plouzané, France*, Development of a wave transfer function to force an empirical equilibrium beach change model (*Masters, co-advised with N. Le Dantec*)
- 2020 **S. Mohanlal**, *LHSV, Chatou, France*, Modeling nearshore wave shoaling and breaking in a fully nonlinear and dispersive potential flow theory model (*Masters*)
- 2020 **M. Gasmelseed**, *LHSV, Chatou, France*, Coastal morphological evolution near Authie Bay, France : Analysis and equilibrium modeling (*Masters*)
- 2019 **N. Cailler**, *LHSV, Chatou, France*, Empirical modeling of beach morphological evolution and shoreline dynamics : sea-level rise impacts (*Engineer, co-advised with N. Le Dantec*)
- 2019 **C. Petton**, *LHSV, Chatou, France*, Empirical modeling of beach morphological evolution and shoreline dynamics : wave climate change impacts (*Masters, co-advised with N. Le Dantec*)
- 2018 **M. Leary**, *LHSV, Chatou, France*, Extension of an equilibrium beach change model to include alongshore transport processes (*Masters, co-advised with N. Le Dantec, F. Floc'h*)
- 2017 **M. De Carlo**, *LHSV, Chatou, France*, Validating the morphological change model XBeach to simulate submerged breakwater beach erosion reduction experiments (*Masters, co-advised with D. Pham Van Bang*)

- 2017 **G. Bouvard**, *UBO, Brest, France*, Application and calibration of an equilibrium model applied to a beach-dune system at Guisseny beach (*Engineer, co-advised with N. Le Dantec, F. Floc'h*)
- 2016 **D. Tasing**, *LHSV, Chatou, France*, Optimization of the wave propagation model Misthyc (*Masters*)
- 2016 **C. Ghitui**, *LHNE, EDF R&D, Chatou, France*, Comparing wave propagation models (*Masters, co-advised with M. Andreevsky, A. Joly*)
- 2016 **M. C. Lemos Rodríguez**, *UBO, Brest, France*, Predicting shoreline change using equilibrium models : Porsmilin, France (*Masters, co-advised with N. Le Dantec, F. Floc'h*)
- 2011 **E. Salaï**, *BRGM, Orléans, France*, Multidecadal shoreline change of atolls : Manihi and Scilly (*co-advised with G. Le Cozannet*)

Undergraduate interns/projects

- 2023 **École des Ponts academic tutor**, *P. Alonso Alguacil, LNHE/LHSV*
- 2022 **IP Paris tutor for scientific internship**, *P. Bienvenue, FEM*
- 2022 **External internship reviewer**, *M. Traboulsi, University of Grenoble*
- 2021 **IP Paris tutor for scientific internship**, *S. Samatove, Blue Gem Wind*
- 2019-2020 **ENPC independent 3rd year project**, *G. Kanellaki, (co-advised with P. Tassi)*
- 2019-2020 **ENSTA independent research project**, *B. Poyer*
- 2019-2020 **ENPC tutor for professional internship**, *M. Queijeiro Rilo, EGIS*
- 2019 **ENSTA tutor for scientific internship**, *X. Lastiri, UPPA*
- 2013, 2015 **Tutor for internships abroad**, *2-3 students per year, ENPC*
- 2014 **Intern, ENPC**, *P. Desbrières, LHSV, Chatou, France, (co-advised with M. Benoit)*

Projects

- 2023-2026 **FEM, OROWSHI : OffshoRe wind turbine design : including jOint Wind-wave and climate change information in Standards for Hurricane-exposed sltes**, Research action contributor
- 2021-2022 **E4C : Energy 4 Climate, 3DWaveBI (3D breaking wave impacts) : Improving 3D numerical models of wave breaking, wave breaking statistics, and wave forces on structures and model validation with 3D wave basin experiments**, Research action contributor
- 2021-2022 **SeaEU, Observations and modeling of complex hydrodynamics and morphodynamics at Vougot beach (Guissény, Finistère, France)**, French participant
- 2020-2021 **E4C : Energy 4 Climate, FRICFLOAT : Improving numerical models predicting the dissipation of wave energy around a floating structure**, Research action contributor
- 2019 **ISblue, Interdisciplinary graduate School for the blue planet : Incoming PhD Student Mobility (2 months) for Jennifer Montano Munoz**, French co-host
- 2018-2021 **InterReg 2 Seas, ENDURE : ENSuring DUne RESilience against Climate Change**, Participant, internship advisor
- 2018-2020 **Programme Hubert Curien (PHC) Sakura, Predicting decadal-scale shoreline evolution integrating the impacts of climate change**, French project leader
- 2017-2020 **ANR-France Energies Marines (FEM), Modeling and observation of extreme sea states with wave breaking for Renewable Marine Energy applications (DiMe)**, Cerema Scientific coordinator, post-doctoral researcher co-advisor
- 2017 **ANR Labex MEC, Wave breaking : physical, mathematical and numerical studies (DE-PHYMAN)**, Participant, post-doctoral researcher co-advisor
- 2015-2016 **Geocorail contract, Laboratory experiments of reducing storm-induced beach erosion with submerged strcutres**, Participant, post-doctoral researcher co-advisor
- 2011-2015 **National Project EMACOP, Marine, Coastal, and Port Energy**, Participant
- 2010-2013 **ANR CECILE, Coastal Environment Changes Impact of sea LLevel**, Participant

Refereed Publications

- [1] S. Mohanlal, J. C. Harris, **Yates, M. L.**, and S. T. Grilli. Unified depth-limited wave breaking detection and dissipation in fully nonlinear potential flow models. *Coastal Engineering*, 183 :104316, August 2023.
- [2] S. Suanez, **Yates, M. L.**, F. Floc'h, and M. Accensi. Using 17-years of beach-dune profile monitoring to characterize morphological dynamics related to significant extreme water level events in North Brittany (France). *Geomorphology*, page 108709, May 2023.
- [3] M. Iggabel, Y. Diab, and **Yates, M. L.** Exploring methodological approaches for strengthening the resilience of coastal flood protection system. *Front. Earth Sci.*, 9 :756936, 2022.
- [4] T. Chataigner, **M.L. Yates**, N. Le Dantec, M. D. Harley, K. D. Splinter, and N. Goutal. Sensitivity of a one-line longshore shoreline change model to the mean wave direction. *Coastal Engineering*, 172 :104025, 2022.
- [5] P. Dissanayake, **Yates, M. L.**, S. Suanez, F. Floc'h, and K. Krämer. Climate Change Impacts on Coastal Wave Dynamics at Vougot Beach, France. *Journal of Marine Science and Engineering*, 9(9), 2021.
- [6] J. Montaña, G. Coco, T. Chataigner, **Yates, M.**, N. Le Dantec, S. Suanez, L. Cagigal, F. Floc'h, and I. Townend. Time-Scales of a Dune-Beach System and Implications for Shoreline Modeling. *Journal of Geophysical Research : Earth Surface*, 126(11) :e2021JF006169, 2021.
- [7] A. Varing, J.-F. Filipot, S. Grilli, R. Duarte, V. Roeber, and **Yates, M. L.** A new definition of the kinematic breaking onset criterion validated with solitary and quasi-regular waves in shallow water. *Coast. Eng.*, 164 :103755, 2021.
- [8] B. Simon, C. Papoutsellis, M. Benoit, and **Yates, M. L.** Comparing methods of modeling depth-induced breaking of irregular waves with a fully nonlinear potential flow approach. *J. Ocean Eng. Mar. Energy*, 5 :365–383, 2019.
- [9] C. Papoutsellis, **Yates, M. L.**, B. Simon, and M. Benoit. Modeling of depth-induced wave breaking in a fully nonlinear free-surface potential flow model. *Coast. Eng.*, 154 :103579, 2019.
- [10] C. Raoult, **Yates, M. L.**, and M. Benoit. Development and validation of a 3D RBF-spectral model for coastal wave simulation. *J. Comp. Phys.*, 378 :278–302, 2019.
- [11] C. Lemos, F. Floc'h, **Yates, M. L.**, N. Le Dantec, V. Marieu, K. Hamon, V. Cuq, S. Suanez, and C. Delacourt. Equilibrium modeling of the beach profile on a Macrotidal Embayed Low Tide Terrace Beach. *Ocean Dynamics*, 68 :1207–1220, 2018.
- [12] R. Pedreros, D. Idier, H. Muller, S. Lecacheux, F. Paris, **Yates-Michelin, M.**, F. Dumas, L. Pineau-Guillou, and N. Sénéchal. Relative Contribution of Wave Setup to the Storm Surge : Observations and Modeling Based Analysis in Open and Protected Environments (Truc Vert beach and Tubuai island). *J. Coast. Res.*, SI 85 :1046–1050, 2018.
- [13] M. Benoit, C. Raoult, and **Yates, M. L.** Analysis of the linear version of a highly dispersive potential water wave model using a spectral approach in the vertical. *Wave Motion*, 74C :159–181, 2017.
- [14] A. Doria, R. T. Guza, W. C. O'Reilly, and **Yates, M. L.** Observations and modeling of San Diego beaches during El Niño. *Cont. Shelf Res.*, 124 :153–164, 2016.
- [15] C. Raoult, M. Benoit, and **Yates, M. L.** Validation of a fully nonlinear and dispersive wave model with laboratory non-breaking experiments. *Coast. Eng.*, 114 :194–207, 2016.
- [16] B. Ludka, R. Guza, W. C. O'Reilly, and **Yates, M. L.** Field evidence of beach profile evolution toward equilibrium. *J. Geophys Res.*, 120(11) :7574–7597, 2015.
- [17] **Yates, M. L.** and M. Benoit. Accuracy and efficiency of two numerical methods of solving the potential flow problem for highly nonlinear and dispersive water waves. *Intl. J. Num. Meth. Fluids*, 77 :616–640, 2015.
- [18] G. Le Cozannet, M. Garcin, **Yates, M.**, D. Idier, and B. Meyssignac. Approaches to evaluate the recent impacts of sea-level rise on shoreline changes. *Earth Science Reviews*, 138 :47–60, 2014.

- [19] G. Le Cozannet, M. Garcin, L. Petitjean, A. Cazenave, M. Becker, B. Meyssignac, P. Walker, C. Devilliers, O. Le Brun, S. Lecacheux, A. Baills, T. Bulteau, **Yates, M.**, and G. Wöppelmann. Exploring the relation between sea level rise and shoreline erosion using sea level reconstructions : an example in French Polynesia. *J. Coast. Res.*, SI 65 :2137–2142, 2013.
- [20] G. Le Cozannet, M. Garcin, T. Bulteau, **Yates, M. L.**, M. Méndez, A. Baills, D. Idier, and C. Oliveros. An AHP-derived method for mapping the physical vulnerability of coastal areas at regional scales. *Nat. Hazards Earth Syst. Sci.*, 13 :1209–1227, 2013.
- [21] **Yates, M. L.**, G. Le Cozannet, M. Garcin, E. Salai, and P. Walker. Multidecadal atoll shoreline change on Manihi and Manuae, French Polynesia. *J. Coast. Res.*, 29(4) :870–882, 2013.
- [22] **Yates, M. L.** and G. Le Cozannet. Evaluating European Coastal Evolution using Bayesian Networks. *Nat. Hazards Earth Syst. Sci.*, 12 :1173–1177, 2012.
- [23] **Yates, M. L.**, G. Le Cozannet, and N. Lenôtre. Quantifying Errors in Long-term Coastal Erosion and Inundation Hazard Assessments. *J. Coast. Res.*, SI 64 :260–264, 2011.
- [24] **Yates, M. L.**, R. T. Guza, W. C. O'Reilly, J. E. Hansen, and P. L. Barnard. Equilibrium Shoreline Response of a High Wave Energy Beach. *J. Geophys. Res.*, 116(C04014), 2011.
- [25] **Yates, M. L.**, R. T. Guza, and W. C. O'Reilly. Equilibrium Shoreline Response : Observations and Modeling. *J. Geophys. Res.*, 114(C09014), 2009.
- [26] **Yates, M. L.**, R. T. Guza, W. C. O'Reilly, and R. J. Seymour. Overview of seasonal sand level changes on southern California beaches. *Shore & Beach*, 77(1) :39–46, 2009.
- [27] **Yates, M. L.**, R. T. Guza, W. C. O'Reilly, and R. J. Seymour. Seasonal persistence of a small southern California beach fill. *Coast. Eng.*, 56 :559–564, 2009.
- [28] **Yates, M. L.**, R. T. Guza, R. Gutierrez, and R. Seymour. A Technique for Eliminating Water Returns from Lidar Beach Elevation Surveys. *J. Atmos. Oc. Tech.*, 25(9) :1671–1682, 2008.

Conference Proceedings

- Mohanlal, S., Harris, J.C., **Yates, M.L.**, Grilli, S.T., 2023. 3D depth-limited breaking waves in fully non-linear potential flow. IWWWFB, Ann Arbor, MI, USA, 4p.
- Floc'h, F., Cobac, Y., Suanez, S., Le Dantec, N., Ammann, J., Chataigner, T., **Yates, M.**, Noronha, A., Dissanayake, P., Michelet, C., 2022. Tidal influence on the littoral drift of a beach with complex bathymetry : example of the Vougot beach, Guissény (France). JNGCGC, Chatou, France, 9p.
- Chataigner, T., **Yates, M.**, Le Dantec, N., Suanez, S., Floc'h, F., Bouvard, G., 2019. Modélisation empirique de l'évolution morphologique de la plage de Vougot. Colloque SHF Littoral et Changement Climatique, Paris, France, 4p.
- Simon, B., Papoutsellis, C., Benoit, M., **Yates, M.**, 2018. Modélisation du déferlement du à la bathymétrie dans un code de simulation des vagues non-linéaires et dispersives en zone côtière. Proc. 16èmes Journée de l'Hydrodynamique, Marseille, France, 11p.
- Varing, A., Filipot, J. F., Roeber, V., Duarte, R., **Yates-Michelin, M.**, 2018. A Discussion on the Wave Breaking Criteria of Shallow Water Ocean Waves. Proc. 16èmes Journée de l'Hydrodynamique, Marseille, France, 11p.
- Christie, E. K., Möller, I., Spencer, T., **Yates, M.**, 2018. Modelling Wave Attenuation due to Salt Marsh Vegetation using a Modified SWAN Model. Proc. 36th International Conference on Coastal Engineering, Baltimore, MD, USA, 9p.
- Iggibel, M., **Yates, M.**, 2018. Cost study of coastal protection. Proc. 36th International Conference on Coastal Engineering, Baltimore, MD, USA, 12p.
- Michard, B., Bouland, S., **Yates, M.**, Varing, A., Filipot, J.-F., Sergent, P., 2018. Projet EMACOP : mesures in-situ de houle versus le modèle numérique SWASH sur le site d'Esquibien (Finistère). Proc. XVèmes Journées Nationales Génie Côtier – Génie Civil, La Rochelle, France, 12p.
- Lemos, C., Floc'h, F., **Yates, M.**, Le Dantec, N., Marieu, V., Hamon, K., Cuq, V., Suanez, S., Delacourt, C., 2017. *Equilibrium modeling of the shoreline position on a macrotidal embayed beach*, Proc. Coastal Dynamics, Helsingør, Denmark, 12p.
- Raoult, C., **Yates, M. L.**, Benoit, M., 2016. *Modeling viscous effects in a fully nonlinear and dispersive potential model*, Proc. 15èmes Journées de l'Hydrodynamique, Brest, France, 16p.
- Raoult, C., Benoit, M., **Yates, M. L.**, 2016. *Développement d'un modèle numérique non-linéaire et dispersif pour la propagation des vagues en zone côtière*, Proc. GCGC, Toulon, France, 12p.

- Gervais, M., Pham Van Bang, **Yates, M.**, D., Vidal, V., Benoit, M., 2016. *Réduire l'érosion des plages lors des tempêtes grâce à des structures immergées : une étude expérimentale comparative en canal à houle*, Proc. GCGC, Toulon, France, 9p.
- Gervais, M., Pham Van Bang, D., Vidal, V., **Yates, M.**, Benoit, M., 2015. *Mitigating beach erosion in storm conditions with a submerged breakwater : an experimental study*, Coastal and Maritime Mediterranean Conference, Ferrara, Italie, 5p.
- **Yates, M. L.**, Benoit, M., Raoult, C., 2015. *Fully nonlinear and dispersive of nearshore wave modeling : accuracy and efficiency of two methods of solving the potential flow problem*, Proc. IWWWFB, Bristol, UK, 4p.
- Raoult, C., Benoit, M., **Yates, M. L.**, 2014. *Etude et qualification d'un modèle numérique complètement non-linéaire et dispersif pour les vagues en zone côtière*, Proc. GCGC, Dunkerque, France, 10p.
- Benoit, M., Raoult, C., , **Yates, M. L.**, 2014. *Fully nonlinear and dispersive modeling of surf zone waves : non-breaking tests*, Proc. ICCE, Seoul, South Korea, 10p.
- Benoit, M., **Yates, M. L.**, Chazel, F., 2013. *A comparison of simulation approaches based on the Zakharov equations*, Proc. IWWWFB, Le Croisic, France, 4p.
- **Yates, M. L.**, Benoit, M., 2012. *Modélisation Non-linéaire et Dispersive des Vagues en Zone Côtière : Étude Comparative de Deux Méthodes de Simulation Précises*, Proc. 13èmes Journées de l'Hydrodynamique, Chatou, France, 13p.
- Le Cozannet, G., Cazenave, A., Garcin, M., Becker, M., Donato, V., Rogel, P., Salas Y Melia, D., Walker, P., Woppelmann, G., **Yates, M.**, 2011. *L'élévation récente du niveau marin et l'érosion côtière : le cas d'îles océaniques du Pacifique*. Geosciences, 14, 92-99.
- Le Cozannet, G., N. Lenôtre, **M. Yates**, P. Nacass, B. Colas, C. Pérherin, C. Peinturier, C. Vanroye, C. Hajji, B. Poupat, C. Azzam, J. Chemitte, and F. Pons, 2010. Climate Change impact, adaptation and associated costs for coastal risk in France. *Littoral 2010, Conference Proceedings*, London, UK, 21-23 September 2010.
- Sanford, L.P., P. Dickhudt, L. Rubiano-Gomez, **M. Yates**, S. Suttles, C.T. Friedrichs, D. Fugte, and H. Romaine, 2005. Variability of suspended particle concentrations, sizes and settling velocities in the Chesapeake Bay turbidity maximum. *In Flocculation in Natural and Engineered Environmental Systems*. I.G. Droppo, G. G. Leppard, P. Liss, and T. Milligan, Eds. Boca Raton, Florida, CRC Press, LLC : 221-236. UMCES Contribution No. 3597.

Conference Presentations

- **Yates, M. L.**, N. Le Dantec, T. Chataigner. Reduced-Complexity Modeling of Cross-shore and Longshore Beach Evolution, *International Conference on Coastal Engineering*, Sydney, Australia, 2022.
- Leclerc, B., Hédou, F., Le Dantec, N., **Yates, M. L.** (presenter). Mapping coastal erosion hazards in response to the French climate and resilience law, *SeaTechWeek*, Brest, France, 2022.
- **Yates, M. L.**, T. Chataigner, N. Le Dantec, M.D. Harley, K.D. Splinter. Exploring the Parameterization and Sensitivity of a Simple Hybrid Shoreline Change Model, *Coastal Dynamics*, online, 2021.
- Chataigner, T., **M. L. Yates** (presenter), N. Le Dantec, S. Suanez, F. Floc'h, G. Bouvard, M. Leary, C. Petton, N. Cailler. Equilibrium Modeling of Current and Future Beach Evolution : Vougot Beach, France, *International Conference on Coastal Engineering*, online, 2020.
- Raoult, C., **M. L. Yates** (presenter), Benoit, M. A Nonlinear and Dispersive 3D Model for Coastal Waves using Radial Basis Functions, *International Conference on Coastal Engineering*, Baltimore, MD, USA, 2018.
- De Carlo, M., **M. L. Yates** (presenter), D. Pham Van Bang, M. Gervais, V. Vidal. Evaluating Storm Erosion on Beaches Protected by Submerged Structures with XBeach, *XBeach X Users Conference*, Delft, Netherlands, 2017.
- **Yates, M. L.**, M. Benoit, C. Raoult. Fully nonlinear and dispersive nearshore wave modeling : accuracy and efficiency of two methods of solving the potential flow problem, *IWWWFB*, Bristol, UK, 2015.
- **Yates, M. L.**, M. Benoit. Accurate modeling of nonlinear and dispersive waves in the coastal zone, *WISE*, College Park, MD, USA, 2013.
- **Yates, M. L.**, M. Benoit. Modélisation Non-linéaire et Dispersive des Vagues en Zone Côtière : Étude Comparative de Deux Méthodes de Simulation Précises, *Journées de l'Hydrodynamique*, Chatou, France, 2012.
- **Yates, M. L.**, G. Le Cozannet, N. Lenôtre. Quantifying errors in long-term coastal erosion and inundation hazard assessments. *International Coastal Symposium*, Szczecin, Poland, 2011.

- Le Cozannet, G., N. Lenôtre, **M. Yates** (presenter), P. Nacass, B. Colas, C. Pérherin, C. Peinturier, C. Vanroye, C. Hajji, B. Poupat, C. Azzam, J. Chemitte, F. Pons. Climate change impact, adaptation and associated costs for coastal risks in France. *Littoral 2010*, London, UK, 2010.
- **Yates, M.L.**, J.E. Hanson, W.C. O'Reilly, P.L. Barnard, and R.T. Guza (presenter). Equilibrium Shoreline Change at Ocean Beach, San Francisco, CA. *Ocean Sciences Meeting*, Portland, OR, 2010.
- **Yates, M.L.**, R.T. Guza, R.J. Seymour, W.C. O'Reilly, and A. Young. Alongshore Variability of Shoreline Change and Geologic Factors. *AGU, Fall Meeting*, San Francisco, CA, 2008.
- **Yates, M.L.**, R.T. Guza, W.C. O'Reilly, and R.J. Seymour. Overview of Seasonal Sand Level Changes on Southern California Beaches, *ASBPA National Coastal Conference : Sustainable Shorelines*, Chicago, IL, 2008.
- **Yates, M.L.**, and R.T. Guza. Seasonal Sand Level Changes on Southern California Beaches : Observations and Modeling, *Physical Oceanography Dissertation Symposium*, Honolulu, HI, 2008.
- **Yates, M.L.**, R.T. Guza, R.J. Seymour, and W.C. O'Reilly. Sand Level Changes and Beach Equilibrium Concepts, *International Conference of Coastal Engineering*, Hamburg, Germany, 2008.
- **Yates, M.L.**, R.T. Guza, R.J. Seymour, and W.C. O'Reilly. Seasonal Beach Changes and Equilibrium Concepts. *AGU, Ocean Sciences Meeting*, Orlando, FL, 2008.
- **Yates, M.L.**, R.T. Guza, R.J. Seymour, and W.C. O'Reilly. Seasonal Sand Level and Wave Variability on Southern California Beaches. *California and the World Ocean*, Long Beach, CA, 2006.
- **Yates, M.L.**, R.T. Guza, R.J. Seymour, W.C. O'Reilly, and J.O. Thomas. Seasonal Sand Level and Wave Variability on Southern California Beaches. *International Conference of Coastal Engineering*, San Diego, CA, 2006.
- **Yates, M.L.**, R. Guza, R. Seymour, W. O'Reilly, and R. Gutierrez. Seasonal Changes in Sand Level and Wave Energy on Southern California Beaches. *Ocean Sciences Meeting*, Honolulu, HI, (poster), 2006.
- Madsen, O.S. and **Yates, M.L.**. On Wave Reflection from Beaches. *International Conference of Coastal Engineering*, Lisbon, Portugal, 2004.
- **Yates, M.L.**, Sanford, P. , Dickhudt, P., and Suttles, S. E. Video In Situ Settling Tube Apparatus Characterization of Sediments in the Estuarine Turbidity Maximum Zone of the Chesapeake Bay. *ASLO, Aquatic Sciences*, (poster), 2003.

Seminars

- 2022 **GIS HED2**, online presentation
- 2019 **IHCantabria**, Santander, Spain
- 2018 **PARI**, *Port and Airport Research Institute*, Kurihama, Japan
- 2017 **CCRU**, *Department of Geography, University of Cambridge*, Cambridge, UK
- 2016 **GDR TransNat**, Roscoff, France
- 2015 **ANGE Laboratory**, *Université Pierre et Marie Curie*, Paris, France
- 2012 **CETMEF**, Compiègne, France
- 2011 **LNHE**, *EDF R&D*, Chatou, France
- 2009 **BRGM**, Orléans, France
- 2009 **L'OCEAN**, *Université Pierre et Marie Curie*, Paris, France
- 2008 **COM**, *Université de la Méditerranée*, Marseille, France
- 2008 **EPOC**, *Université de Bordeaux 1*, Bordeaux, France

Workshops

- 2023 **B'WAVES 2023**, *Inria*, Bordeaux, France
- 2021 **B'WAVES 2021**, Virtual edition
- 2018 **B'WAVES 2018**, *IRPHE*, Marseille, France
- 2018 **GLADYS workshop**, *CNRS*, Saint Julien en Vercors, France
- 2017 **Delft Software Days 2017**, *Deltares*, Delft, The Netherlands
- 2016 **B'WAVES 2016**, *University of Bergen*, Bergen, Norway
- 2015 **GLADYS-Littoral workshop**, *CNRS*, Allègre-les-Fumades, France
- 2015 **Wave propagation in complex media**, Cargèse, Corse, France

- 2013 **HYDRALAB Young Researchers Conference on Floating Bodies**,
IFREMER, Plouzané, France
- 2012 **Parallel Computing : MPI**, *IDRIS*, Orsay, France
- 2010 **ArcGIS**, *BRGM*, Orléans, France

Field work

- 2022 **Vougot Beach Field Experiment**, Vougot Beach, Finistère, France, In situ and remote sensing (drone) measurements of wave transformation, breaking, and currents in the nearshore zone
- 2009 **Imperial Beach Field Experiment**, Imperial Beach, California, USA, Large scale observations of chlorophyll, bacteria, passive tracer and drifter dispersion in the surf zone
- 2006 **Huntington Beach Field Experiment**, Huntington Beach, California, USA, Observations of currents and chlorophyll, bacteria, passive tracer and drifter dispersion in the surf zone
- 2002 **R/V Cape Henlopen**, Chesapeake Bay, MD, USA, Cruise observations of suspended sediments in the turbidity maximum zone of the Chesapeake Bay

Awards and Honors

- 2008 American Shore and Beach Preservation Association Educational Award
- 2007–2008 Achievement Rewards for College Scientists Scholar
- 2007 California Shore and Beach Preservation Associate Weigel Scholarship
- 2004–2007 National Defense Science and Engineering Graduate Fellowship
- 2003–2004 T.R. and Edith Folsom Graduate Fellowship
- 2003 Outstanding Student Poster Award, ASLO Aquatic Sciences Meeting

Service

Examination Committees

- 2023 PhD, reporter & examiner, Ivana Mingo, Université Toulouse III Paul Sabatier
- 2022 HDR, examiner, Volker Roeber, UPPA
- 2022 PhD, reporter & examiner, Antoine Soloy, Université de Rouen Normandie
- 2022 PhD, examiner, Maurizio D'Anna, Université de Bordeaux
- 2021 PhD, reporter & examiner, Yan Xu, Danish Technical University
- 2021 PhD, reporter & examiner, Megan Cook, Université de Montpellier

Administrative responsibilities

- 2019- Organizer of LHSV Waves discussion group
- 2018-2021 Interim head of the Cerema LRHE laboratory
- 2015- Co-leader of the Waves and coastal and maritime risks research group of the LHSV
- 2016- Coordinator of the Journée des doctorants LHSV
- 2014- Co-contributor to the LHSV website

Editorial responsibilities

- 2021 Co-editor of Journal of Marine Science and Engineering Special Issue : *Morphodynamic evolution and sustainable development of coastal systems*

Reviewer

Delaware Sea Grant, Earth Surface, EWTEC, Geo-Marine Letters, Journal of Coastal Research, Journal of Geophysical Research–Earth Surface, Journal of Geophysical Research–Oceans, Journal of Marine Systems, Journal of Waterway, Port, Coastal, and Ocean Engineering, Marine Geology, Ocean Dynamics, Ocean Engineering, Ocean Modelling, Applied Ocean Research, Scientific Reports, International Journal of Sediment Research, Frontiers, Geomorphology, Journal of Offshore Mechanics and Arctic Engineering, German Research Foundation, EDENE (European Doctoral Program in Energy and Environment)