Stanford

Oliver Fringer

Professor of Civil and Environmental Engineering and of Oceans

Bio

BIO

Fringer's research focuses on the development and application of numerical models and high-performance computational techniques to the study of fundamental processes that influence the dynamics of the coastal ocean, rivers, lakes, and estuaries.

ACADEMIC APPOINTMENTS

- Professor, Civil and Environmental Engineering
- Professor, Oceans
- Member, Institute for Computational and Mathematical Engineering (ICME)
- Affiliate, Stanford Woods Institute for the Environment

HONORS AND AWARDS

- Presidential Early Career Award for Scientists and Engineers, Department of Defense (2009)
- Young Investigator Award, Office of Naval Research (2008)
- Frederick A. Howes Scholar in Computational Science, Department of Energy (2003)
- South Africa Teaching Fellow, Department of African and African-American Studies, Stanford University (2002-2003)

PROFESSIONAL EDUCATION

- PhD, Stanford University , Civil and Environmental Engineering (2003)
- MS, Stanford University , Aeronautics and Astronautics (1996)
- BSE, Princeton , Mechanical and Aerospace Engineering (1995)

LINKS

- https://web.stanford.edu/~fringer/: https://web.stanford.edu/~fringer/

Teaching

COURSES

2025-26

- Ocean Modeling: CEE 363C, OCEANS 363C (Aut)
- Rivers, Streams, and Canals: CEE 162E, CEE 262E (Spr)
- Sediment Transport Physics and Modeling: CEE 262G, OCEANS 262G (Win)

2024-25

- Hydrodynamics: CEE 262A (Aut)
- Rivers, Streams, and Canals: CEE 162E, CEE 262E (Spr)
- Seminar in Fluid Mechanics: ENGR 298 (Spr)

2023-24

- Coastal Processes: CEE 162F (Win)
- Environmental Engineering Seminar: CEE 269A (Aut)
- Get to Know Your Oceans: OCEANS 300A (Aut)
- Hydrodynamics: CEE 262A (Aut)
- Introduction to PHD Studies in Civil and Environmental Engineering: CEE 379 (Aut)
- Ocean Modeling: CEE 363C (Spr)

2022-23

- Coastal Processes: CEE 162F (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Sophie Bodek, Theodore MacMillan

Doctoral Dissertation Advisor (AC)

Chris Li, Brooke Pauken

Master's Program Advisor

Evan Dwyer, Lauren Owens, Daniel Paavola, Diane Richard

Postdoctoral Research Mentor

Maria Barros Alcalde

Doctoral (Program)

Sarah Chang, Devin Dollery, Maya Eley, Cage Mitchell, Brooke Pauken

Publications

PUBLICATIONS

- **Drag enhancement by the addition of weak waves to a wave-current boundary layer over bumpy walls** *JOURNAL OF FLUID MECHANICS*
  Patil, A., Fringer, O.
  2022; 947
- **Particle-resolved simulations of four-way coupled, polydispersed, particle-laden flows** *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS*
  Yao, Y., Biegert, E., Vowinckel, B., Koellner, T., Meiburg, E., Balachandar, S., Criddle, C. S., Fringer, O. B.
  2022
- **On Internal Tides Driving Residual Currents and Upwelling on an Island** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Rogers, J. S., Mayer, F. T., Davis, K. A., Fringer, O. B.
  2022; 127 (7)
- **On the Variability of Floc Characteristics in a Shallow Estuary** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Egan, G., Chang, G., Manning, A. J., Monismith, S., Fringer, O.
  2022; 127 (6)

- **A high-order spectral method for effective simulation of surface waves interacting with an internal wave of large amplitude** *OCEAN MODELLING*
  Hao, X., Wu, J., Rogers, J. S., Fringer, O. B., Shen, L.
  2022; 173
- **CFD-accelerated bioreactor optimization: reducing the hydrodynamic parameter space** *ENVIRONMENTAL SCIENCE-WATER RESEARCH & TECHNOLOGY*
  Yao, Y., Fringer, O. B., Criddle, C. S.
  2022
- **Long-Term Earth-Moon Evolution With High-Level Orbit and Ocean Tide Models** *JOURNAL OF GEOPHYSICAL RESEARCH-PLANETS*
  Daher, H., Arbic, B. K., Williams, J. G., Ansong, J. K., Boggs, D. H., Mueller, M., Schindelegger, M., Austermann, J., Cornuelle, B. D., Crawford, E. B., Fringer, O. B., Lau, H. C. P., Lock, et al
  2021; 126 (12)
- **Long-Term Earth-Moon Evolution With High-Level Orbit and Ocean Tide Models.** *Journal of geophysical research. Planets*
  Daher, H., Arbic, B. K., Williams, J. G., Ansong, J. K., Boggs, D. H., Müller, M., Schindelegger, M., Austermann, J., Cornuelle, B. D., Crawford, E. B., Fringer, O. B., Lau, H. C., Lock, et al
  2021; 126 (12): e2021JE006875
- **Seasonal particle responses to near-bed shear stress in a shallow, wave- and current-driven environment** *LIMNOLOGY AND OCEANOGRAPHY LETTERS*
  Chang, G., Egan, G., McNeil, J. D., McWilliams, S., Jones, C., Spada, F., Monismith, S., Fringer, O.
  2021
- **Competing flow and collision effects in a monodispersed liquid-solid fluidized bed at a moderate Archimedes number** *JOURNAL OF FLUID MECHANICS*
  Yao, Y., Criddle, C. S., Fringer, O. B.
  2021; 927
- **Comparison of the properties of segregated layers in a bidispersed fluidized bed to those of a monodispersed fluidized bed** *PHYSICAL REVIEW FLUIDS*
  Yao, Y., Criddle, C. S., Fringer, O. B.
  2021; 6 (8)
- **The effects of particle clustering on hindered settling in high-concentration particle suspensions** *JOURNAL OF FLUID MECHANICS*
  Yao, Y., Criddle, C. S., Fringer, O. B.
  2021; 920
- **Phase-Resolved Wave Boundary Layer Dynamics in a Shallow Estuary** *GEOPHYSICAL RESEARCH LETTERS*
  Cowherd, M., Egan, G., Monismith, S., Fringer, O.
  2021; 48 (8)
- **Cohesive Sediment Erosion in a Combined Wave-Current Boundary Layer** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Egan, G., Chang, G., McWilliams, S., Revelas, G., Fringer, O., Monismith, S.
  2021; 126 (2)
- **Improving Nonlinear and Nonhydrostatic Ocean Lee Wave Drag Parameterizations** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Mayer, F. T., Fringer, O. B.
  2020; 50 (9): 2417–35
- **Bottom Drag Varies Seasonally With Biological Roughness** *GEOPHYSICAL RESEARCH LETTERS*
  Egan, G., Chang, G., Revelas, G., Monismith, S., Fringer, O.
  2020; 47 (15)
- **Sediment-Induced Stratification in an Estuarine Bottom Boundary Layer** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Egan, G., Manning, A. J., Chang, G., Fringer, O., Monismith, S.
  2020; 125 (8)
- **Fate of Internal Waves on a Shallow Shelf** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Davis, K. A., Arthur, R. S., Reid, E. C., Rogers, J. S., Fringer, O. B., Decarlo, T. M., Cohen, A. L.

2020; 125 (5)

- **CONNECTING PROCESS MODELS OF TOPOGRAPHIC WAVE DRAG TO GLOBAL EDDYING GENERAL CIRCULATION MODELS** *OCEANOGRAPHY*
  Arbic, B. K., Fringer, O. B., Klymak, J. M., Mayer, F. T., Trossman, D. S., Zhu, P.
  2019; 32 (4): 146–55
- **A framework for seamless one-way nesting of internal wave-resolving ocean models** *OCEAN MODELLING*
  Rogers, J. S., Rayson, M. D., Ko, D. S., Winters, K. B., Fringer, O. B.
  2019; 143
- **The future of coastal and estuarine modeling: Findings from a workshop** *OCEAN MODELLING*
  Fringer, O. B., Dawson, C. N., He, R., Ralston, D. K., Zhang, Y.
  2019; 143
- **Modeling Environmental DNA Transport in the Coastal Ocean Using Lagrangian Particle Tracking** *FRONTIERS IN MARINE SCIENCE*
  Andruszkiewicz, E. A., Koseff, J. R., Fringer, O. B., Ouellette, N. T., Lowe, A. B., Edwards, C. A., Boehm, A. B.
  2019; 6
- **Observations of Near-Bed Shear Stress in a Shallow, Wave- and Current-Driven Flow** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Egan, G., Cowherd, M., Fringer, O., Monismith, S.
  2019; 124 (8): 6323–44
- **Internal Wave Breaking Dynamics and Associated Mixing in the Coastal Ocean** *ENCYCLOPEDIA OF OCEAN SCIENCES, VOL 3: OCEAN DYNAMICS, 3RD EDITION*
  Masunaga, E., Arthur, R. S., Fringer, O. B.
  edited by Cochran, J. K., Bokuniewicz, H. J., Yager, P. L.
  2019: 548–54
- **The effects of intensive aquaculture on nutrient residence time and transport in a coastal embayment** *ENVIRONMENTAL FLUID MECHANICS*
  Wang, B., Cao, L., Micheli, F., Naylor, R. L., Fringer, O. B.
  2018; 18 (6): 1321–49
- **Three-Dimensional Modeling of Fine Sediment Transport by Waves and Currents in a Shallow Estuary** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Chou, Y., Nelson, K. S., Holleman, R. C., Fringer, O. B., Stacey, M. T., Lacy, J. R., Monismith, S. G., Koseff, J. R.
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- **Modeling Sedimentation Dynamics of Sediment-Laden River Intrusions in a Rotationally-Influenced, Stratified Lake** *WATER RESOURCES RESEARCH*
  Scheu, K. R., Fong, D., Monismith, S. G., Fringer, O. B.
  2018; 54 (6): 4084–4107
- **A three-dimensional numerical study of river plume mixing processes in Otsuchi Bay, Japan** *JOURNAL OF OCEANOGRAPHY*
  Sasmal, K., Masunaga, E., Webb, A., Fringer, O. B., Gross, E. S., Rayson, M. D., Yamazaki, H.
  2018; 74 (2): 169–86
- **Resolving high-frequency internal waves generated at an isolated coral atoll using an unstructured grid ocean model** *OCEAN MODELLING*
  Rayson, M. D., Ivey, G. N., Jones, N. L., Fringer, O. B.
  2018; 122: 67–84
- **How we compute N matters to estimates of mixing in stratified flows** *JOURNAL OF FLUID MECHANICS*
  Arthur, R. S., Venayagamoorthy, S. K., Koseff, J. R., Fringer, O. B.
  2017; 831
- **Using an Isohaline Flux Analysis to Predict the Salt Content in an Unsteady Estuary** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Rayson, M. D., Gross, E. S., Hetland, R. D., Fringer, O. B.
  2017; 47 (11): 2811–28
- **Dynamics and Energetics of Trapped Diurnal Internal Kelvin Waves around a Midlatitude Island** *JOURNAL OF PHYSICAL OCEANOGRAPHY*

Masunaga, E., Fringer, O. B., Kitade, Y., Yamazaki, H., Gallager, S. M.
2017; 47 (10): 2479–98

- **Historical Analysis of Hydraulic Bridge Collapses in the Continental United States** *JOURNAL OF INFRASTRUCTURE SYSTEMS*
  Flint, M. M., Fringer, O., Billington, S. L., Freyberg, D., Diffenbaugh, N. S.
  2017; 23 (3)
- **Sediment resuspension and the generation of intermediate nepheloid layers by shoaling internal bores** *JOURNAL OF MARINE SYSTEMS*
  Masunaga, E., Arthur, R. S., Fringer, O. B., Yamazaki, H.
  2017; 170: 31-41
- **Behavior of a wave-driven buoyant surface jet on a coral reef** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Herdman, L. M. M., Hench, J. L., Fringer, O., Monismith, S. G.
  2017; 122 (5): 4088–4109
- **Local versus volume-integrated turbulence and mixing in breaking internal waves on slopes** *JOURNAL OF FLUID MECHANICS*
  Arthur, R. S., Koseff, J. R., Fringer, O. B.
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- **A coupled wave-hydrodynamic model of an atoll with high friction: Mechanisms for flow, connectivity, and ecological implications** *OCEAN MODELLING*
  Rogers, J. S., Monismith, S. G., Fringer, O. B., Koweek, D. A., Dunbar, R. B.
  2017; 110: 66-82
- **Modeling Intrajunction Dispersion at a Well-Mixed Tidal River Junction** *JOURNAL OF HYDRAULIC ENGINEERING*
  Wolfram, P. J., Fringer, O. B., Monsen, N. E., Gleichauf, K. T., Fong, D. A., Monismith, S. G.
  2016; 142 (8)
- **Time scales in Galveston Bay: An unsteady estuary** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Rayson, M. D., Gross, E. S., Hetland, R. D., Fringer, O. B.
  2016; 121 (4): 2268-2285
- **Strong turbulent mixing induced by internal bores interacting with internal tide-driven vertically sheared flow** *GEOPHYSICAL RESEARCH LETTERS*
  Masunaga, E., Fringer, O. B., Yamazaki, H., Amakasu, K.
  2016; 43 (5): 2094-2101
- **An observational and numerical study of river plume dynamics in Otsuchi Bay, Japan** *JOURNAL OF OCEANOGRAPHY*
  Masunaga, E., Fringer, O. B., Yamazaki, H.
  2016; 72 (1): 3-21
- **Transport by breaking internal gravity waves on slopes** *JOURNAL OF FLUID MECHANICS*
  Arthur, R. S., Fringer, O. B.
  2016; 789: 93-126
- **Three-dimensional wave-coupled hydrodynamics modeling in South San Francisco Bay** *COMPUTERS & GEOSCIENCES*
  Chou, Y., Holleman, R. C., Fringer, O. B., Stacey, M. T., Monismith, S. G., Koseff, J. R.
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- **Mixing and sediment resuspension associated with internal bores in a shallow bay** *CONTINENTAL SHELF RESEARCH*
  Masunaga, E., Homma, H., Yamazaki, H., Fringer, O. B., Nagai, T., Kitade, Y., Okayasu, A.
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- **Sediment transport dynamics near a river inflow in a large alpine lake** *LIMNOLOGY AND OCEANOGRAPHY*
  Scheu, K. R., Fong, D. A., Monismith, S. G., Fringer, O. B.
  2015; 60 (4): 1195-1211
- **Numerical investigation of split flows by gravity currents into two-layered stratified water bodies** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Cortes, A., Wells, M. G., Fringer, O. B., ARTHUR, R. S., Rueda, F. J.
  2015; 120 (7): 5254-5271

- **The formation and fate of internal waves in the South China Sea.** *Nature*
  Alford, M. H., Peacock, T., MacKinnon, J. A., Nash, J. D., Buijsman, M. C., Centuroni, L. R., Chao, S., Chang, M., Farmer, D. M., Fringer, O. B., Fu, K., Gallacher, P. C., Graber, et al
  2015; 521 (7550): 65-69
- **Modeling the tidal and sub-tidal hydrodynamics in a shallow, micro-tidal estuary** *OCEAN MODELLING*
  Rayson, M. D., Gross, E. S., Fringer, O. B.
  2015; 89: 29-44
- **The dynamics of breaking internal solitary waves on slopes** *JOURNAL OF FLUID MECHANICS*
  Arthur, R. S., Fringer, O. B.
  2014; 761
- **A nonhydrostatic, isopycnal-coordinate ocean model for internal waves** *OCEAN MODELLING*
  Vitousek, S., Fringer, O. B.
  2014; 83: 118-144
- **Improved parameterization of seagrass blade dynamics and wave attenuation based on numerical and laboratory experiments** *LIMNOLOGY AND OCEANOGRAPHY*
  Zeller, R. B., Weitzman, J. S., Abbett, M. E., Zarama, F. J., Fringer, O. B., Koseff, J. R.
  2014; 59 (1): 251-266
- **Mitigating horizontal divergence "checker-board" oscillations on unstructured triangular C-grids for nonlinear hydrostatic and nonhydrostatic flows** *OCEAN MODELLING*
  Wolfram, P. J., Fringer, O. B.
  2013; 69: 64-78
- **Numerical diffusion for flow-aligned unstructured grids with application to estuarine modeling** *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS*
  Holleman, R., Fringer, O., Stacey, M.
  2013; 72 (11): 1117-1145
- **Dynamics of barotropic low-frequency fluctuations in San Francisco Bay during upwelling** *CONTINENTAL SHELF RESEARCH*
  Sankaranarayanan, S., Fringer, O. B.
  2013; 65: 81-96
- **Stability and consistency of nonhydrostatic free-surface models using the semi-implicit theta-method** *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS*
  Vitousek, S., Fringer, O. B.
  2013; 72 (5): 550-582
- **Moving grid method for numerical simulation of stratified flows** *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS*
  Koltakov, S., Fringer, O. B.
  2013; 71 (12): 1524-1545
- **Nearshore internal bores and turbulent mixing in southern Monterey Bay** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Walter, R. K., Woodson, C. B., Arthur, R. S., Fringer, O. B., Monismith, S. G.
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- **Examining Breaking Internal Waves on a Shelf Slope Using Numerical Simulations** *OCEANOGRAPHY*
  Venayagamoorthy, S. K., Fringer, O. B.
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- **REGIONAL MODELS OF INTERNAL TIDES** *OCEANOGRAPHY*
  Carter, G. S., Fringer, O. B., Zaron, E. D.
  2012; 25 (2): 56-65
- **Frontogenesis and Frontal Progression of a Trapping-Generated Estuarine Convergence Front and Its Influence on Mixing and Stratification** *ESTUARIES AND COASTS*
  Giddings, S. N., Fong, D. A., Monismith, S. G., Chickadel, C. C., Edwards, K. A., Plant, W. J., Wang, B., Fringer, O. B., Horner-Devine, A. R., Jessup, A. T.

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- **Energetics of Barotropic and Baroclinic Tides in the Monterey Bay Area** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Kang, D., Fringer, O.
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  Simmons, H., Chang, M., Chang, Y., Chao, S., Fringer, O., Jackson, C. R., Ko, D. S.
  2011; 24 (4): 88-99
- **Large-eddy simulation of starting buoyant jets** *ENVIRONMENTAL FLUID MECHANICS*
  Wang, R., Law, A. W., Adams, E. E., Fringer, O. B.
  2011; 11 (6): 591-609
- **Numerical modeling of aquaculture dissolved waste transport in a coastal embayment** *ENVIRONMENTAL FLUID MECHANICS*
  Venayagamoorthy, S. K., Ku, H., Fringer, O. B., Chiu, A., Naylor, R. L., Koseff, J. R.
  2011; 11 (4): 329-352
- **Three-dimensional, nonhydrostatic numerical simulation of nonlinear internal wave generation and propagation in the South China Sea** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Zhang, Z., Fringer, O. B., Ramp, S. R.
  2011; 116
- **Modeling Exposure Close to Air Pollution Sources in Naturally Ventilated Residences: Association of Turbulent Diffusion Coefficient with Air Change Rate** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Cheng, K., Acevedo-Bolton, V., Jiang, R., Klepeis, N. E., Ott, W. R., Fringer, O. B., Hildemann, L. M.
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- **Modeling and understanding turbulent mixing in a macrotidal salt wedge estuary** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Wang, B., Giddings, S. N., Fringer, O. B., Gross, E. S., Fong, D. A., Monismith, S. G.
  2011; 116
- **Sensitivity analysis of three-dimensional salinity simulations in North San Francisco Bay using the unstructured-grid SUNTANS model** *OCEAN MODELLING*
  Chua, V. P., Fringer, O. B.
  2011; 39 (3-4): 332-350
- **Analysis of stratified flow and separation over complex bathymetry in a field-scale estuarine model**
  Fringer, O., B., Wang, B.
  2011
- **Reconstruction of vector fields for semi-Lagrangian advection on unstructured, staggered grids** *OCEAN MODELLING*
  Wang, B., Zhao, G., Fringer, O. B.
  2011; 40 (1): 52-71
- **Physical vs. numerical dispersion in nonhydrostatic ocean modeling** *OCEAN MODELLING*
  Vitousek, S., Fringer, O. B.
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- **On the Calculation of Available Potential Energy in Internal Wave Fields** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Kang, D., Fringer, O.
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- **A model for the simulation of coupled flow-bed form evolution in turbulent flows** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Chou, Y., Fringer, O. B.
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- **Mechanistic Modeling of Broth Temperature in Outdoor Photobioreactors** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Bechet, Q., Shilton, A., Fringer, O. B., Munoz, R., Guieysse, B.
  2010; 44 (6): 2197-2203

- **Consistent discretization for simulations of flows with moving generalized curvilinear coordinates** *INTERNATIONAL JOURNAL FOR NUMERICAL METHODS IN FLUIDS*
  Chou, Y. J., Fringer, O. B.
  2010; 62 (7): 802-826
- **Simulations of shear instabilities in interfacial gravity waves** *JOURNAL OF FLUID MECHANICS*
  Barad, M. F., Fringer, O. B.
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- **The Determination of Formation Number for Starting Buoyant Jets** *2nd International Symposium on Computational Mechanics*
  Wang, R., Law, A. W., Adams, E. E., Fringer, O. B.
  AMER INST PHYSICS.2010: 1636–1641
- **Buoyant formation number of a starting buoyant jet** *PHYSICS OF FLUIDS*
  Wang, R., Law, A. W., Adams, E. E., Fringer, O. B.
  2009; 21 (12)
- **Remotely sensed river surface features compared with modeling and in situ measurements** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Plant, W. J., Branch, R., Chatham, G., Chickadel, C. C., Hayes, K., Hayworth, B., Horner-Devine, A., Jessup, A., Fong, D. A., Fringer, O. B., Giddings, S. N., Monismith, S., Wang, et al
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- **The variability of the large-amplitude internal wave field on the Australian North West Shelf** *CONTINENTAL SHELF RESEARCH*
  Van Gastel, P., Ivey, G. N., Meuleners, M. J., Antenucci, J. P., Fringer, O.
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- **High-resolution simulations of a macrotidal estuary using SUNTANS** *OCEAN MODELLING*
  Wang, B., Fringer, O. B., Giddings, S. N., Fong, D. A.
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- **Towards Nonhydrostatic Ocean Modeling with Large-eddy Simulation** *Workshop on Oceanography in 2025*
  Fringer, O. B.
  NATL ACADEMIES PRESS.2009: 81–83
- **Modeling dilute sediment suspension using large-eddy simulation with a dynamic mixed model** *PHYSICS OF FLUIDS*
  Chou, Y., Fringer, O. B.
  2008; 20 (11)
- **High-Resolution Simulations of Nonlinear Internal Gravity Waves in the South China Sea** *Conference on High Performance Computer Modernization Program*
  Fringer, O. B., Zhang, Z.
  IEEE COMPUTER SOC.2008: 43–46
- **Effects of grid resolution on the simulation of internal tides** *16th International Offshore and Polar Engineering Conference (ISOPE 2006)*
  Jachec, S. M., Fringer, O. B., Street, R. L., Gerritsen, M. G.
  INT SOC OFFSHORE POLAR ENGINEERS.2007: 105–11
- **On the formation and propagation of nonlinear internal boluses across a shelf break** *JOURNAL OF FLUID MECHANICS*
  Venayagamoorthy, S. K., Fringer, O. B.
  2007; 577: 137-159
- **Internal wave energetics on a shelf break** *16th International Offshore and Polar Engineering Conference (ISOPE 2006)*
  Venayagamoorthy, S. K., Fringer, O. B.
  INT SOC OFFSHORE POLAR ENGINEERS.2007: 22–29
- **Simulations of mixing and transport of dissolved wasted discharged from an aquaculture pen**
  Venayagamoorthy, S., K., Fringer, O., B., Koseff, J., R., Naylor, R., L.
  2007

- **Modeling Sediment Suspension in High Reynolds Number Flow Using Large Eddy Simulation**
  Chou, Y., J., Fringer, O., B.
  2007
- **Numerical simulations of shear instabilities in open-ocean internal gravity waves**
  Barad, M., F., Fringer, O., B.
  2007
- **Numerical simulations of the interaction of internal waves with a shelf break** *PHYSICS OF FLUIDS*
  Venayagamoorthy, S. K., Fringer, O. B.
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- **Numerical simulation of internal tides and the resulting energetics within Monterey Bay and the surrounding area** *GEOPHYSICAL RESEARCH LETTERS*
  Jachec, S. M., Fringer, O. B., Gerritsen, M. G., Street, R. L.
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  Venayagamoorthy, S. K., Fringer, O. B.
  INTERNATIONAL SOCIETY OFFSHORE& POLAR ENGINEERS.2006: 473–480
- **Multiscale simulations of internal gravity waves**
  Barad, M., F., Fringer, O., B., Colella, P.
  2006
- **The Three-Dimensional, Time-Dependent Nature of Internal Waves Entering Monterey Submarine Canyon**
  Jachec, S., M., Fringer, O., B., Gerritsen, M., Street, R., L.
  2006
- **Coupled ROMS-SUNTANS simulations of highly nonlinear internal gravity waves on the Australian northwest shelf**
  Fringer, O., B., Gross, E., S., Meuleners, M., Ivey, G., N.
  2006
- **A Numerical Study of Nonlinear Internal Wave Generation in the Luzon Strait**
  Zhang, Z., Fringer, O., B.
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- **Effects of grid resolution on the simulation of internal tides** *16th International Offshore and Polar Engineering Conference (ISOPE 2006)*
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