Stanford



Stephen Monismith

Obayashi Professor in the School of Engineering and Professor of Oceans

Civil and Environmental Engineering

Bio

BIO

Stephen Monismith's research in environmental and geophysical fluid dynamics involves the application of fluid mechanics principles to the analysis of flow processes operating in rivers, lakes, estuaries and the oceans, with a particular interest in the ecological impacts of those flows. His current research includes studies of estuarine hydrodynamics and mixing processes, flows over coral reefs and on the inner shelf, turbulence in density stratified fluids, and physical-biological interactions in phytoplankton and benthic systems. Current and past projects include field and computational work on wave-driven flows over coral reefs, stratified turbulence due to shoaling internal waves, benthic grazing on coral reefs and in kelp forests, dispersion in complex estuarine tidal flows, and lab and computational studies of flows through coral colonies. He is also involved with various scientific panels focusing on the San Francisco Bay/Delta including an NRC committee that examined the sustainability of the Delta as a water supply system and as an ecosystem.

Professor Monismith is currently director of the Environmental Fluid Mechanics Laboratory. He is the Obayashi Professor in the School of Engineering. Prior to coming to Stanford, he spent three years in Perth (Australia) as a research fellow at the University of Western Australia.

ACADEMIC APPOINTMENTS

- Professor, Civil and Environmental Engineering
- Professor, Oceans
- Member, Bio-X
- Affiliate, Stanford Woods Institute for the Environment

ADMINISTRATIVE APPOINTMENTS

- Chair, Civil and Environmental Engineering, (2009- present)
- Chair, Committee on Research, (2008-2011)

HONORS AND AWARDS

- Presidential Young Investigator, NSF (1989)
- Eugene L. Grant teaching award, Stanford School of Engineering (2002)
- Borland Hydraulics Lecture, AGU (2011)
- Pritchard Award, Coastal and Estuarine Research Federation (2012)
- Member, Academy of Distinguished Alumni of UC Berkeley Civil Engineering (2014)
- Straub award lecture, University of Minnesota (2015)

- Overseas Visiting Fellow, Churchill College, Cambridge University (2016)
- Fellow, American Physical Society (Division of Fluid Dynamics (2019)
- Steve and Sylvia Burges Endowed Visiting Professor, University of Washington (2019)
- Member, National Academy of Engineering (2022)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Associate editor, Limnology and Oceanography Letters (2020 - present)
- Member, Advisory Council, Marine Science Center, Okinawa Institute of Science and Technology (2016 - 2017)
- Associate Editor, Estuaries and Coasts (2014 - present)
- Member, Delta Science Advisory Board (2014 - present)
- Member, Advisory Council, Dept. of Civil and Environmental Eng., UC Berkeley (2013 - 2018)
- Member, NRC Committee on the Independent Scientific Review of the Everglades Restoration Progress (2012 - 2014)
- Member, NRC Committee on Sustainable Water and Environmental Management in the California Bay-Delta (2010 - 2012)
- Chair, Science Advisory Group, Interagency Ecological Agency (2002 - present)
- Member, Review Panel for CALFED Environmental Water Account (2001 - 2007)
- Associate Editor, LImnology and Oceangraphy (1997 - 2002)
- Member, ASCE Task Committee for research needs in hydraulic engineering (1992 - 1993)
- Chair, ASCE Task Committee for an Album of Environmental Transport Processes (1990 - 1992)

PROFESSIONAL EDUCATION

- BS, UC Berkeley , Civil Engineering (1977)
- MS, UC Berkeley , Civil Engineering (1979)
- PhD, UC Berkeley , Civil Engineering (1983)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Hydrodynamics of lakes, estuaries, coral reefs, kelp forests and the coastal ocean

Teaching

COURSES

2026-27

- Approaching Palau: Preparation and Research Ideation and Development: OCEANS 40 (Spr)
- Coral Reefs, Geopolitics, and Small Island Livelihoods: Lessons from Palau: OSPGEN 53 (Sum)
- Hydrodynamics: CEE 262A (Aut)
- Transport and Mixing in Surface Water Flows: CEE 262B, OCEANS 262B (Win)

2025-26

- Environmental Engineering Seminar: CEE 269 (Aut)
- From the Foothills to the Bay: Perspectives on the Sacramento River & SF Bay/Delta: CEE 86Q (Spr)
- Hydrodynamics: CEE 262A (Aut)
- Observational Methods in Coastal Oceanography: CEE 262H, OCEANS 306 (Spr)

- Transport and Mixing in Surface Water Flows: CEE 262B, OCEANS 262B (Win)

2024-25

- From the Foothills to the Bay: Perspectives on the Sacramento River & SF Bay/Delta: CEE 86Q, OCEANS 86Q (Aut)
- Observational Methods in Coastal Oceanography: CEE 262H, OCEANS 306 (Spr)
- Transport and Mixing in Surface Water Flows: CEE 262B, OCEANS 262B (Win)

2023-24

- From the hills to the sea: OSPOXFRD 86 (Aut)
- Get to Know Your Oceans: OCEANS 300A (Aut)
- Ocean Waves: CEE 262F (Spr)
- Transport and Mixing in Surface Water Flows: CEE 262B (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Max Beeman, Madolyn Kelm

Doctoral Dissertation Advisor (AC)

Isabelle Kavanagh, Jayde Meng

Master's Program Advisor

Julia Forti, Carolina Garcia, Qianwen Luo, Grace Trautwein, Elisa Yang

Doctoral (Program)

David Llewellyn Smith, Tanner Shinkle

Publications

PUBLICATIONS

- **On the use of simplified geometries to represent turbulent flow over coral reefs** *Journal of Fluid Mechanics*
  Hamilton, J. F., Kelley, B. Z., Monismith, S. G., Koseff, J. R.
  2025; 1004

- **Influence of kelp forests on flow around headlands.** *The Science of the total environment*
  Valle-Levinson, A., Daly, M. A., Juarez, B., Tenorio-Fernandez, L., Fagundes, M., Woodson, C. B., Monismith, S. G.
  2022: 153952

- **Limited biogeochemical modification of surface waters by kelp forest canopies: Influence of kelp metabolism and site-specific hydrodynamics** *LIMNOLOGY AND OCEANOGRAPHY*
  Traiger, S. B., Cohn, B., Panos, D., Daly, M., Hirsh, H. K., Martone, M., Gutierrez, I., Mucciarone, D. A., Takeshita, Y., Monismith, S. G., Dunbar, R. B., Nickols, K. J.
  2021

- **Characterization of the biological, physical, and chemical properties of a toxic thin layer in a temperate marine system** *MARINE ECOLOGY PROGRESS SERIES*
  McManus, M. A., Greer, A. T., Timmerman, A. H., Sevadjian, J. C., Woodson, C., Cowen, R., Fong, D. A., Monismith, S., Cheriton, O. M.
  2021; 678: 17-35

- **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

- **Variable coastal hypoxia exposure and drivers across the southern California Current.** *Scientific reports*
  Low, N. H., Micheli, F., Aguilar, J. D., Arce, D. R., Boch, C. A., Bonilla, J. C., Bracamontes, M. A., De Leo, G., Diaz, E., Enriquez, E., Hernandez, A., Martinez, R., Mendoza, et al
  2021; 11 (1): 10929
- **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)
- **Response of Lower Sacramento River phytoplankton to high-ammonium wastewater effluent** *Elementa: Science of the Anthropocene*
  Strong, A. L., Mills, M. M., Huang, I. B., van Dijken, G. L., Driscoll, S. E., Berg, G. M., Kudela, R. M., Monismith, S. G., Francis, C. A., Arrigo, K. R.
  2021; 9(1)
- **The setup and relaxation of spring upwelling in a deep, rotationally influenced lake** *LIMNOLOGY AND OCEANOGRAPHY*
  Roberts, D. C., Egan, G. C., Forrest, A. L., Largier, J. L., Bombardelli, F. A., Laval, B. E., Monismith, S. G., Schladow, G.
  2020
- **Drivers of Biogeochemical Variability in a Central California Kelp Forest: Implications for Local Amelioration of Ocean Acidification** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Hirsh, H. K., Nickols, K. J., Takeshita, Y., Traiger, S. B., Mucciarone, D. A., Monismith, S., Dunbar, R. B.
  2020; 125 (11)
- **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)
- **Stokes drift: theory and experiments** *JOURNAL OF FLUID MECHANICS*
  Monismith, S. G.
  2020; 884
- **Ocean acidification causes variable trait shifts in a coral species.** *Global change biology*
  Teixidó, N. n., Caroselli, E. n., Alliouane, S. n., Ceccarelli, C. n., Comeau, S. n., Gattuso, J. P., Fici, P. n., Micheli, F. n., Mirasole, A. n., Monismith, S. G., Munari, M. n., Palumbi, S. R., Sheets, et al
  2020
- **Turbulence and Coral Reefs.** *Annual review of marine science*
  Davis, K. A., Pawlak, G. n., Monismith, S. G.
  2020
- **Circulation patterns in a shallow tropical reservoir: Observations and modeling** *JOURNAL OF HYDRO-ENVIRONMENT RESEARCH*
  Yang, P., Fong, D. A., Lo, E. Y. M., Monismith, S. G.
  2019; 27: 75–86
- **Instrumentation for direct measurements of wave-driven flow over a fringing reef crest** *LIMNOLOGY AND OCEANOGRAPHY-METHODS*
  Hefner, B. B., Rogers, J. S., Maticka, S. A., Monismith, S. G., Woodson, C.
  2019
- **Vertical mixing in a shallow tropical reservoir** *LIMNOLOGY*
  Yang, P., Fong, D. A., Lo, E., Monismith, S. G.
  2019; 20 (3): 279–96
- **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

- **Harnessing marine microclimates for climate change adaptation and marine conservation** *CONSERVATION LETTERS*
  Woodson, C., Micheli, F., Boch, C., Al-Najjar, M., Espinoza, A., Hernandez, A., Vazquez-Vera, L., Saenz-Arroyo, A., Monismith, S. G., Torre, J.
  2019; 12 (2)
- **Flow and Drag in a Seagrass Bed** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Monismith, S. G., Hirsh, H., Batista, N., Francis, H., Egan, G., Dunbar, R. B.
  2019; 124 (3): 2153–63
- **Wave-induced setup and wave-driven current over Quasi-2DH reef-lagoon-channel systems** *COASTAL ENGINEERING*
  Yao, Y., Huang, Z., He, W., Monismith, S. G.
  2018; 138: 113–25
- **Temporal Variability in Thermally Driven Cross-Shore Exchange: The Role of Semidiurnal Tides** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Ulloa, H. N., Davis, K. A., Monismith, S. G., Pawlak, G.
  2018; 48 (7): 1513–31
- **Connecting Flow over Complex Terrain to Hydrodynamic Roughness on a Coral Reef** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Rogers, J. S., Maticka, S. A., Chirayath, V., Woodson, C., Alonso, J. J., Monismith, S. G.
  2018; 48 (7): 1567–87
- **Mixing Efficiency in the Presence of Stratification: When Is It Constant?** *GEOPHYSICAL RESEARCH LETTERS*
  Monismith, S. G., Koseff, J. R., White, B. L.
  2018; 45 (11): 5627–34
- **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.
  2018; 123 (6): 4177–99
- **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
- **Transport Between Palau and the Eastern Coral Triangle: Larval Connectivity or Near Misses** *GEOPHYSICAL RESEARCH LETTERS*
  Monismith, S. G., Barkdull, M. K., Nunome, Y., Mitarai, S.
  2018; 45 (10): 4974–81
- **Vertically migrating swimmers generate aggregation-scale eddies in a stratified column** *NATURE*
  Houghton, I. A., Koseff, J. R., Monismith, S. G., Dabiri, J. O.
  2018; 556 (7702): 497-+
- **Local oceanographic variability influences the performance of juvenile abalone under climate change** *SCIENTIFIC REPORTS*
  Boch, C. A., Micheli, F., AlNajjar, M., Monismith, S. G., Beers, J. M., Bonilla, J. C., Espinoza, A. M., Vazquez-Vera, L., Woodson, C. B.
  2018; 8: 5501
- **One-Dimensional Particle Tracking with Streamline Preserving Junctions for Flows in Channel Networks** *JOURNAL OF HYDRAULIC ENGINEERING*
  Sridharan, V. K., Monismith, S. G., Fong, D. A., Hench, J. L.
  2018; 144 (2)
- **"Internal tide pools" prolong kelp forest hypoxic events** *LIMNOLOGY AND OCEANOGRAPHY*
  Leary, P. R., Woodson, C., Squibb, M. E., Denny, M. W., Monismith, S. G., Micheli, F.
  2017; 62 (6): 2864–78
- **Gerstner waves in the presence of mean currents and rotation** *JOURNAL OF FLUID MECHANICS*
  Constantin, A., Monismith, S. G.
  2017; 820: 511–28

- **Effects of current and future coastal upwelling conditions on the fertilization success of the red abalone (Haliotis rufescens)** *ICES JOURNAL OF MARINE SCIENCE*
  Boch, C. A., Litvin, S. Y., Micheli, F., De Leo, G., Aalto, E. A., Lovera, C., Woodson, C., Monismith, S., Barry, J. P.
  2017; 74 (4): 1125–34
- **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
- **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
- **An integral model of unsteady salinity intrusion in estuaries** *JOURNAL OF HYDRAULIC RESEARCH*
  Monismith, S.
  2017; 55 (3): 392-408
- **Thermodynamics and hydrodynamics in an atoll reef system and their influence on coral cover** *LIMNOLOGY AND OCEANOGRAPHY*
  Rogers, J. S., Monismith, S. G., Koweek, D. A., Torres, W. I., Dunbar, R. B.
  2016; 61 (6): 2191-2206
- **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)
- **Observations of nonlinear internal waves at a persistent coastal upwelling front** *CONTINENTAL SHELF RESEARCH*
  Walter, R. K., Stastna, M., Woodson, C. B., Monismith, S. G.
  2016; 117: 100-117
- **Wave dynamics of a Pacific Atoll with high frictional effects** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Rogers, J. S., Monismith, S. G., Koweek, D. A., Dunbar, R. B.
  2016; 121 (1): 350-367
- **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.
  2015; 85: 10-21
- **High-resolution physical and biogeochemical variability from a shallow back reef on Ofu, American Samoa: an end-member perspective** *CORAL REEFS*
  Koweek, D. A., Dunbar, R. B., Monismith, S. G., Mucciarone, D. A., Woodson, C. B., Samuel, L.
  2015; 34 (3): 979-991
- **Observations of vertical eddy diffusivities in a shallow tropical reservoir** *JOURNAL OF HYDRO-ENVIRONMENT RESEARCH*
  Yang, P., Xing, Z., Fong, D. A., Monismith, S. G., Tan, K. M., Lo, E. Y.
  2015; 9 (3): 441-451
- **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
- **Frictional wave dissipation on a remarkably rough reef** *GEOPHYSICAL RESEARCH LETTERS*
  Monismith, S. G., Rogers, J. S., Koweek, D., Dunbar, R. B.
  2015; 42 (10): 4063-4071
- **Heat balances and thermally driven lagoon-ocean exchangeson a tropical coral reef system (Moorea, French Polynesia)** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Herdman, L. M., Hench, J. L., Monismith, S. G.
  2015; 120 (2): 1233-1252

- **Field observations of wave-driven circulation over spur and groove formations on a coral reef** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Rogers, J. S., Monismith, S. G., Dunbar, R. B., Koweek, D.
  2015; 120 (1): 145-160

- **Stratified turbulence in the nearshore coastal ocean: Dynamics and evolution in the presence of internal bores** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Walter, R. K., Squibb, M. E., Woodson, C. B., Koseff, J. R., Monismith, S. G.
  2014; 119 (12): 8709-8730

- **On the use of refractive-index-matched hydrogel for fluid velocity measurement within and around geometrically complex solid obstructions** *EXPERIMENTS IN FLUIDS*
  Weitzman, J. S., Samuel, L. C., Craig, A. E., Zeller, R. B., Monismith, S. G., Koseff, J. R.
  2014; 55 (12)

- **Diurnal cross-shore thermal exchange on a tropical forereef** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Molina, L., Pawlak, G., Wells, J. R., Monismith, S. G., Merrifield, M. A.
  2014; 119 (9): 6101-6120

- **Connecting wind-driven upwelling and offshore stratification to nearshore internal bores and oxygen variability** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Walter, R. K., Woodson, C. B., Leary, P. R., Monismith, S. G.
  2014; 119 (6): 3517-3534

- **Local shear and mass transfer on individual coral colonies: Computations in unidirectional and wave-driven flows** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Chang, S., Iaccarino, G., Ham, F., Elkins, C., Monismith, S.
  2014; 119 (4): 2599-2619

- **Scale-Dependent Dispersion within the Stratified Interior on the Shelf of Northern Monterey Bay** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Moniz, R. J., Fong, D. A., Woodson, C. B., Willis, S. K., Stacey, M. T., Monismith, S. G.
  2014; 44 (4): 1049-1064

- **Flow through a rough, shallow reef** *CORAL REEFS*
  Monismith, S. G.
  2014; 33 (1): 99-104

- **Fortnightly Tidal Modulations Affect Net Community Production in a Mesotidal Estuary** *ESTUARIES AND COASTS*
  Nidzieko, N. J., Needoba, J. A., Monismith, S. G., Johnson, K. S.
  2014; 37 (1): S91-S110

- **Thermal structure and variability of a shallow tropical reservoir** *Limnol. Oceanog.*
  Xing, Z., Fong, D., A., Lo, E., M.Y., Monismith, S., G.
  2014; 1 (59): 115-128

- **Dispersion Mechanisms of a Tidal River Junction in the Sacramento–San Joaquin Delta, California** *San Francisco Estaury and Watershed Science*
  Gleichauf, K. T.
  2014

- **Thermal structure and variability of a shallow tropical reservoir** *LIMNOLOGY AND OCEANOGRAPHY*
  Xing, Z., Fong, D. A., Lo, E. Y., Monismith, S. G.
  2014; 59 (1): 115-128

- **Using Depth-Normalized Coordinates to Examine Mass Transport Residual Circulation in Estuaries with Large Tidal Amplitude Relative to the Mean Depth** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Giddings, S. N., Monismith, S. G., Fong, D. A., Stacey, M. T.
  2014; 44 (1): 128-148

- **Scale-Dependent Dispersion within the Stratified Interior on the Shelf of Northern Monterey Bay** *Journal of Physical Oceanography*

Moniz, R. J., Fong, D. A., Woodson, C. B., Willis, S. K., Stacey, M. T., Monismith, S. G.
2014; 44: 1049-1065=4

- **Using depth-normalized coordinates to examine mass transport residual circulation in estuaries with large tidal amplitude relative to the mean depth** *J. Phys. Ocean.*
  Giddings, S., N., Monismith, S., G., Fong, D., A., Stacey, M., T.
  2014; 44: 128–148
- **Simple Estimate of Entrainment Rate of Pollutants from a Coastal Discharge into the Surf Zone (vol 47, pg 11554, 2013)** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*
  Wong, S. H. C., Monismith, S. G., Boehm, A. B.
  2013; 47 (22): 13208
- **Simple estimate of entrainment rate of pollutants from a coastal discharge into the surf zone.** *Environmental science & technology*
  Wong, S. H., Monismith, S. G., Boehm, A. B.
  2013; 47 (20): 11554-11561
- **Temporal and spatial variability of the internal wave field in a lake with complex morphometry** *LIMNOLOGY AND OCEANOGRAPHY*
  Vidal, J., Macintyre, S., McPhee-Shaw, E. E., Shaw, W. J., Monismith, S. G.
  2013; 58 (5): 1557-1580
- **Local mass transfer measurements for corals and other complex geometries using gypsum dissolution** *EXPERIMENTS IN FLUIDS*
  Chang, S., Elkins, C., Eaton, J. K., Monismith, S.
  2013; 54 (7)
- **Wave Transformation and Wave-Driven Flow across a Steep Coral Reef** *JOURNAL OF PHYSICAL OCEANOGRAPHY*
  Monismith, S. G., Herdman, L. M., Ahmerkamp, S., Hench, J. L.
  2013; 43 (7): 1356-1379
- **Hydrodynamics of spur and groove formations on a coral reef** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Rogers, J. S., Monismith, S. G., Feddersen, F., Storlazzi, C. D.
  2013; 118 (6): 3059-3073
- **Interaction of waves and currents with kelp forests (Macrocystis pyrifera): Insights from a dynamically scaled laboratory model** *LIMNOLOGY AND OCEANOGRAPHY*
  Rosman, J. H., Denny, M. W., Zeller, R. B., Monismith, S. G., Koseff, J. R.
  2013; 58 (3): 790-802
- **Contrasting Seasonal and Fortnightly Variations in the Circulation of a Seasonally Inverse Estuary, Elkhorn Slough, California** *ESTUARIES AND COASTS*
  Nidzieko, N. J., Monismith, S. G.
  2013; 36 (1): 1-17
- **Interactions between a kelp forest (Macrocystis pyrifera) and waves: Insights from a dynamically scaled laboratory model** *Limnol. Ocean.*
  Rosman, J., H., Denny, M., W., Zeller, R., Monismith, S., G., Koseff, J., R.
  2013; 3 (58): 790–802
- **Wave transformation and wave-driven flow across a steep coral reef.** *Journal of Physical Oceanography*
  Monismith, S. G., Herdman, L. M., Ahmerkamp, S., Hench, J. L.
  2013; 43: 1356–1379
- **Drag coefficients for single coral colonies and related spherical objects** *Limnology and Oceanography Fluids and Environments*
  Samuel, L. C., Monismith, S. G.
  2013; 3: 173-181
- **Flow through a rough, shallow reef** *Coral Reefs*
  Monismith, S., G.
  2013
- **A simple estimate of entrainment rate of pollutants from a coastal discharge into the surf zone** *Env. Sci. Tech.*
  Wong, S., H.C., Monismith, S., G., Boehm, A., B.

2013; 47: 11554-11561

- **Temporal and spatial variability of the internal wave field in a lake with complex morphometry** *Limnol. Ocean.*
  Vidal, J., MacIntyre, S., McPhee-Shaw, E., E., Shaw, W., J., Monismith, S., G.
  2013; 5 (58): 1557–1580
- **Characteristics of Monochromatic Waves Breaking over Fringing Reefs** *JOURNAL OF COASTAL RESEARCH*
  Yao, Y., Huang, Z., Monismith, S. G., Lo, E. Y.
  2013; 29 (1): 94-104
- **Comparison of mixing efficiency and vertical diffusivity models from temperature microstructure** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*
  Dunckley, J. F., Koseff, J. R., Steinbuck, J. V., Monismith, S. G., Genin, A.
  2012; 117
- **Observations of tidal currents in the northern Gulf of Eilat/Aqaba (Red Sea)** *JOURNAL OF MARINE SYSTEMS*
  Carlson, D. F., Fredj, E., Gildor, H., Biton, E., Steinbuck, J. V., Monismith, S. G., Genin, A.
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