

# Stanford


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## Jeffrey Koseff

William Alden Campbell and Martha Campbell Professor in the School of Engineering and Senior Fellow at the Woods Institute for the Environment

Civil and Environmental Engineering

 Curriculum Vitae available Online

 Resume available Online

### CONTACT INFORMATION

#### • Administrator

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### Bio

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#### BIO

Jeff Koseff, founding co-director of the Stanford Woods Institute for the Environment, is an expert in the interdisciplinary domain of environmental fluid mechanics. His research falls in the interdisciplinary domain of environmental fluid mechanics and focuses on the interaction between physical and biological systems in natural aquatic environments. Current research activities are in the general area of environmental fluid mechanics and focus on: turbulence and internal wave dynamics in stratified flows, transport and mixing in estuarine systems, phytoplankton dynamics in estuarine systems, coral reef, sea-grass and kelp-forest hydrodynamics, and the role of natural systems in coastal protection. Most recently he has begun to focus on the interaction between gravity currents and breaking internal waves in the near-coastal environment, and the transport of marine microplastics. Koseff has served on the Board of Governors of The Israel Institute of Technology, and has been a member of the Visiting Committees of the Civil and Environmental Engineering department at Carnegie-Mellon University, The Iowa Institute of Hydraulic Research, and Cornell University. He has also been a member of review committees for the College of Engineering at the University of Michigan, The WHOI-MIT Joint Program, and the University of Minnesota Institute on the Environment. He is a former member of the Independent Science Board of the Bay/Delta Authority. He was elected a Fellow of the American Physical Society in 2015, and received the Richard Lyman Award from Stanford University in the same year. In 2020 he was elected as a Fellow of the California Academy of Sciences.

#### ACADEMIC APPOINTMENTS

- Professor, Civil and Environmental Engineering
- Senior Fellow, Stanford Woods Institute for the Environment
- Member, Bio-X
- Affiliate, Precourt Institute for Energy
- Founding Perry L. McCarty Director, Stanford Woods Institute for the Environment

#### ADMINISTRATIVE APPOINTMENTS

- Faculty Athletic Representative to the NCAA, Stanford University, (2017- present)

#### HONORS AND AWARDS

- Fellow, California Academy of Sciences (2020)

- School of Engineering Tau Beta Pi Award for Excellence in Undergraduate Teaching, Stanford University (2019)
- Borland Lecturer in Hydraulics, Colorado State University (2018)
- Sustainable Stanford Award Winner, Stanford University (2017)
- Fellow, American Physical Society (2015)
- Richard W. Lyman Award, Stanford University (2015)
- Eugene L. Grant Award for Excellence in Undergraduate Teaching, Stanford University (2011)
- Teacher of the Year; Honorable Mention, Associated Students of Stanford University (2007)
- Bing Teaching Fellowship, Stanford University (1995-1998)
- Eugene L. Grant Award for Excellence in Undergraduate Teaching, Stanford University (1995)
- University Fellow, Stanford University (1994-1996)
- Lillian and Thomas B. Rhodes Award for Excellence in Undergraduate Teaching, Stanford University (1993)
- Outstanding Teaching Award, ASSU (1991-92)
- Gledden Visiting Senior Fellow, University of Western Australia (1991, 2003)
- Leavell Family Faculty Scholar, Stanford University School of Engineering (1989-92)
- Tau Beta Pi Award for Excellence in Undergraduate Teaching, Stanford University School of Engineering (1989)
- Award for Outstanding Service, American Society of Civil Engineers (1986-87)
- Robert T. Knapp Award, Fluids Engineering Division of the American Society of Mechanical Engineers (1985)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- Member of Research Advisory Board, Resilient by Design (2017 - 2019)
- Member of the Board of Trustees, California Academy of Sciences (2018 - present)

## **PROFESSIONAL EDUCATION**

- PhD, Stanford University (1983)
- M.S., Stanford University (1978)
- B.Sc., University of the Witwatersrand (1976)

## **LINKS**

- Stanford Woods Institute for the Environment: <https://woods.stanford.edu/>
- The Bob and Norma Street Environmental Fluid Mechanics Laboratory: <https://cee.stanford.edu/research-impact/labs-centers/bob-and-norma-street-environmental-fluid-mechanics-laboratory-efml>

## **Teaching**

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### **COURSES**

#### **2020-21**

- Introduction to Mechanics of Fluids: CEE 101E (Sum)
- Mechanics of Fluids: CEE 101B (Win)
- Olympic Training: ATHLETIC 50 (Aut)
- Varsity Sport Experience: ATHLETIC 10 (Aut)

#### **2019-20**

- Rivers, Streams, and Canals: CEE 162E, CEE 262E (Spr)

- Topics in Stratified Turbulence: CEE 363H (Win)

#### 2018-19

- Hard Earth: Development's Dilemmas: CEE 126Z, EARTH 126Z (Spr)
- Hard Earth: Stanford Graduate-Student Talks Exploring Tough Environmental Dilemmas: CEE 126X (Aut)
- Hard Earth: Stanford Graduate-Student Talks Exploring Tough Environmental Dilemmas: CEE 126Y (Win)
- Hard Earth: Stanford Graduate-Student Talks Exploring Tough Environmental Dilemmas: EARTH 126X (Aut)
- Hard Earth: Stanford Graduate-Student Talks Exploring Tough Environmental Dilemmas: EARTH 126Y (Win)
- Mechanics of Fluids: CEE 101B (Aut)
- Mechanics of Fluids: CEE 162A (Aut)
- Rivers, Streams, and Canals: CEE 162E, CEE 262E (Spr)

#### 2017-18

- Rivers, Streams, and Canals: CEE 162E, CEE 262E (Spr)
- Sustainability Challenges and Transitions: THINK 40 (Aut)
- Transport and Mixing in Surface Water Flows: CEE 262B (Win)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Margaret Daly, Marios Galanis

#### Doctoral Dissertation Advisor (AC)

Hayoon Chung, Laura Clark, Jenny Hamilton, Yukinobu Tanimoto, Paul Yi

#### Master's Program Advisor

Mingwei Cai, Jingyan Tong

#### Doctoral (Program)

Annie Rosen

## Publications

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### PUBLICATIONS

- **Secondary generation of breaking internal waves in confined basins by gravity currents** *JOURNAL OF FLUID MECHANICS*  
Tanimoto, Y., Ouellette, N. T., Koseff, J. R.  
2021; 917
- **Direct Numerical Simulations of Stably-Stratified Sheared Turbulence: Implications for Oceanic Mixing**  
Itsweire, E., C, Holt, S., E., Koseff, J., R., Ferziger, J., H.
- **Large Eddy Simulation of Turbulent Cavity Flow Using a Dynamic Subgrid-Scale Model**  
Zang, Y., Street, R., L., Koseff, J., R.  
edited by Ragab, S., A., Piomelli, U.
- **Local and Nonlocal Impacts of Gaps on Submerged Canopy Flow** *WATER RESOURCES RESEARCH*  
Chung, H., Mandel, T., Zarama, F., Koseff, J. R.  
2021; 57 (2)
- **Settling of inertial nonspherical particles in wavy flow** *PHYSICAL REVIEW FLUIDS*  
Clark, L. K., DiBenedetto, M. H., Ouellette, N. T., Koseff, J. R.

2020; 5 (12)

- **On the surface expression of bottom features in free-surface flow** *JOURNAL OF FLUID MECHANICS*  
Gakhar, S., Koseff, J. R., Ouellette, N. T.  
2020; 900
- **Interaction between an inclined gravity current and a pycnocline in a two-layer stratification** *JOURNAL OF FLUID MECHANICS*  
Tanimoto, Y., Ouellette, N. T., Koseff, J. R.  
2020; 887
- **Interaction of a downslope gravity current with an internal wave** *JOURNAL OF FLUID MECHANICS*  
Ouillon, R., Meiburg, E., Ouellette, N. T., Koseff, J. R.  
2019; 873: 889–913
- **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
- **On the surface expression of a canopy-generated shear instability** *JOURNAL OF FLUID MECHANICS*  
Mandel, T. L., Gakhar, S., Chung, H., Rosenzweig, I., Koseff, J. R.  
2019; 867: 633–60
- **Orientation dynamics of nonspherical particles under surface gravity waves** *PHYSICAL REVIEW FLUIDS*  
DiBenedetto, M. H., Koseff, J. R., Ouellette, N. T.  
2019; 4 (3)
- **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
- **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–+
- **Shoaling internal waves may reduce gravity current transport** *ENVIRONMENTAL FLUID MECHANICS*  
Hogg, C. R., Egan, G. C., Ouellette, N. T., Koseff, J. R.  
2018; 18 (2): 383–94
- **Transport of anisotropic particles under waves** *JOURNAL OF FLUID MECHANICS*  
DiBenedetto, M. H., Ouellette, N. T., Koseff, J. R.  
2018; 837: 320–40
- **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
- **Characterizing free-surface expressions of flow instabilities by tracking submerged features** *EXPERIMENTS IN FLUIDS*  
Mandel, T. L., Rosenzweig, I., Chung, H., Ouellette, N. T., Koseff, J. R.  
2017; 58 (11)
- **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.  
2017; 815: 169–198
- **Low order physical models of vertical axis wind turbines** *JOURNAL OF RENEWABLE AND SUSTAINABLE ENERGY*  
Craig, A. E., Dabiri, J. O., Koseff, J. R.

2017; 9 (1)

- **Flow Kinematics in Variable-Height Rotating Cylinder Arrays** *JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME*  
Craig, A. E., Dabiri, J. O., Koseff, J. R.  
2016; 138 (11)
- **On the flux Richardson number in stably stratified turbulence** *JOURNAL OF FLUID MECHANICS*  
Venayagamoorthy, S. K., Koseff, J. R.  
2016; 798
- **On the flux Richardson number in stably stratified turbulence** *JOURNAL OF FLUID MECHANICS*  
Venayagamoorthy, S. K., Koseff, J. R.  
2016; 798
- **A Kinematic Description of the Key Flow Characteristics in an Array of Finite-Height Rotating Cylinders** *JOURNAL OF FLUIDS ENGINEERING-TRANSACTIONS OF THE ASME*  
Craig, A. E., Dabiri, J. O., Koseff, J. R.  
2016; 138 (7)
- **Characteristics of bolus formation and propagation from breaking internal waves on shelf slopes** *JOURNAL OF FLUID MECHANICS*  
Moore, C. D., Koseff, J. R., Hult, E. L.  
2016; 791: 260-283
- **Bivalve Grazing Can Shape Phytoplankton Communities** *FRONTIERS IN MARINE SCIENCE*  
Lucas, L., Cloern, J. E., Thompson, J. K., Stacey, M. T., Koseff, J. R.  
2016; 3
- **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
- **The attenuation of current- and wave-driven flow within submerged multispecific vegetative canopies** *LIMNOLOGY AND OCEANOGRAPHY*  
Weitzman, J. S., Zeller, R. B., Thomas, F. I., Koseff, J. R.  
2015; 60 (6): 1855-1874
- **Introduction: 32nd Annual Gallery of Fluid Motion (San Francisco, California, USA, 2014)** *PHYSICS OF FLUIDS*  
Mungal, M., Koseff, J. R.  
2015; 27 (9)
- **A simple and practical model for combined wave-current canopy flows** *JOURNAL OF FLUID MECHANICS*  
Zeller, R. B., Zarama, F. J., Weitzman, J. S., Koseff, J. R.  
2015; 767: 842-880
- **A New Approach To Wind Energy: Opportunities And Challenges** *3rd Physics of Sustainable Energy (PSE) Conference*  
Dabiri, J. O., Greer, J. R., Koseff, J. R., Moin, P., Peng, J.  
AMER INST PHYSICS.2015: 51-57
- **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)
- **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
- **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

- **High-resolution carbon budgets on a Palau back-reef modulated by interactions between hydrodynamics and reef metabolism** *LIMNOLOGY AND OCEANOGRAPHY*  
Teneva, L., Dunbar, R. B., Mucciarone, D. A., Dunckley, J. F., Koseff, J. R.  
2013; 58 (5): 1851-1870
- **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
- **Uptake of dissolved inorganic nitrogen by shallow seagrass communities exposed to wave-driven unsteady flow** *MARINE ECOLOGY PROGRESS SERIES*  
Weitzman, J. S., Aveni-Deforge, K., Koseff, J. R., Thomas, F. I.  
2013; 475: 65-83
- **Interactions between a kelp forest (*Macrocystispyrifera*) and waves: Insights from a dynamically scaled laboratory model** *Limnology and Oceanography*  
Rosman, J., H., Denny, M., W., Zeller, R., Monismith, S., G., Koseff, J., R.  
2013; 3 (58): 790–802
- **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
- **A short-term in situ CO2 enrichment experiment on Heron Island (GBR)** *SCIENTIFIC REPORTS*  
Kline, D. I., Teneva, L., Schneider, K., Miard, T., Chai, A., Marker, M., Headley, K., Opydyke, B., Nash, M., Valetich, M., Caves, J. K., Russell, B. D., Connell, et al  
2012; 2
- **Conditions for bolus formation from breaking internal waves on shelf slopes**  
Moore, C., D., Hult, E., L., Koseff, J., R.  
2012
- **Hydrodynamics of a Headland Kelp Forest**  
Alnajjar, M., W., Woodson, C., B., Monismith, S., G., Koseff, J., R., Genin, A., Litvin, S.  
2012
- **Modeling the Impact of Sea-Level Rise on Salinity Intrusion in San Francisco Bay**  
Chua, V., P., Fringer, O., B., Fong, D., A., Monismith, S., G., Koseff, J., R.  
2012
- **The fine-scale hydrodynamics of a sloping coral reef: Eilat Israel**  
Dunckley, J., F., Koseff, J., R., Genin, A., Monismith, S., G., Woodson, C., B., Lindemann, Y.  
2012
- **Seagrass blade dynamics in unidirectional, oscillatory, and combinedflows**  
Zeller, R., B., Weitzman, J., S., Abbett, M., E., Fringer, O., B., Koseff, J., R.  
2012
- **Horizontal dispersion of ocean tracers in internal wave shear** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*  
Steinbuck, J. V., Koseff, J. R., Genin, A., Stacey, M. T., Monismith, S. G.  
2011; 116
- **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
- **The mixing efficiency of interfacial waves breaking at a ridge: 2. Local mixing processes** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*  
Hult, E. L., Troy, C. D., Koseff, J. R.  
2011; 116
- **The mixing efficiency of interfacial waves breaking at a ridge: 1. Overall mixing efficiency** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*  
Hult, E. L., Troy, C. D., Koseff, J. R.

2011; 116

- **Currents and turbulence within a kelp forest (*Macrocystis pyrifera*): Insights from a dynamically scaled laboratory model** *LIMNOLOGY AND OCEANOGRAPHY*  
Rosman, J. H., Monismith, S. G., Denny, M. W., Koseff, J. R.  
2010; 55 (3): 1145-1158
- **Turbulent mixing in fine-scale phytoplankton layers: Observations and inferences of layer dynamics** *CONTINENTAL SHELF RESEARCH*  
Steinbuck, J. V., Genin, A., Monismith, S. G., Koseff, J. R., Holzman, R., Labiosa, R. G.  
2010; 30 (5): 442-455
- **Harmonic generation of interfacial waves at a submerged bathymetric ridge** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*  
Hult, E. L., Troy, C. D., Koseff, J. R.  
2010; 115
- **Wavy turbulence in Florida Bay seagrass canopies**  
Weitzman, J., S., Aveni-Deforge, K., Koseff, J., R., Thomas, F., I.  
2010
- **Spatial and Temporal Variability of Internal Wave Mixing at a Submerged Ridge**  
Hult, E., L., Troy, C., D., Koseff, J., K.  
2010
- **Evolution of a reef pass jet from microstructure profiles**  
Fleischfresser, J., D., Hench, J., L., Walter, L., M., Monismith, S., G., Koseff, J., R.  
2010
- **Horizontal dispersion of ocean tracers in internal wave shear**  
Steinbuck, J., V., Koseff, J., R., Genin, A., Stacey, M., T., Monismith, S., G.  
2010
- **The breaking of interfacial waves at a submerged bathymetric ridge** *JOURNAL OF FLUID MECHANICS*  
Hult, E. L., Troy, C. D., Koseff, J. R.  
2009; 637: 45-71
- **Intense benthic grazing of phytoplankton in a coral reef** *LIMNOLOGY AND OCEANOGRAPHY*  
Genin, A., Monismith, S. G., Reidenbach, M. A., Yahel, G., Koseff, J. R.  
2009; 54 (3): 938-951
- **Shallow water processes govern system-wide phytoplankton bloom dynamics: A modeling study** *JOURNAL OF MARINE SYSTEMS*  
Lucas, L. V., Koseff, J. R., Monismith, S. G., Thompson, J. K.  
2009; 75 (1-2): 70-86
- **Hydrodynamic forces on larvae affect their settlement on coral reefs in turbulent, wave-driven flow** *LIMNOLOGY AND OCEANOGRAPHY*  
Reidenbach, M. A., Koseff, J. R., Koehl, M. A.  
2009; 54 (1): 318-330
- **Shallow water processes govern system-wide phytoplankton bloom dynamics: A field study** *JOURNAL OF MARINE SYSTEMS*  
Thompson, J. K., Koseff, J. R., Monismith, S. G., Lucas, L. V.  
2008; 74 (1-2): 153-166
- **Modeling flow in coral communities with and without waves: A synthesis of porous media and canopy flow approaches** *LIMNOLOGY AND OCEANOGRAPHY*  
Lowe, R. J., Shavit, U., Falter, J. L., Koseff, J. R., Monismith, S. G.  
2008; 53 (6): 2668-2680
- **Extracting Reynolds stresses from acoustic Doppler current profiler measurements in wave-dominated environments** *JOURNAL OF ATMOSPHERIC AND OCEANIC TECHNOLOGY*  
Rosman, J. H., Hench, J. L., Koseff, J. R., Monismith, S. G.  
2008; 25 (2): 286-306

- **Density stratification, turbulence, but how much mixing?** *ANNUAL REVIEW OF FLUID MECHANICS*  
Ivey, G. N., Winters, K. B., Koseff, J. R.  
2008; 40: 169-184
- **The coupling of hydrodynamics and nutrient exchange in natural seagrass canopies, Part I: flow conditions**  
Weitzman, J., S., Aveni-Deforge, K., Koseff, J., R., Thomas, F., I.  
2008
- **Flow development and turbulence generation within a kelp forest (*MacrocystisPyrifera*): lessons from a small scale laboratory model**  
Rosman, J., H., Koseff, J., R., Monismith, S., G.  
2008
- **The coupling of hydrodynamics and nutrient exchange in natural seagrass canopies, Part II: canopy characteristics and nutrient uptake**  
Aveni-Deforge, K., Weitzman, J., S., Koseff, J., R., Thomas, F., I  
2008
- **In situ Lagrangian measurements of phytoplankton production and mortality: a net heterotrophic state of the upper oligotrophic water column**  
Genin, A., Koseff, J., R., Monismith, S., G., Steinbuck, J., V., Vaknin, R., Holtzman, R.  
2008
- **Modeling the effect of wind-waves on the evolution of marshplains and mudflats**  
Lee, S., Brennan, M., Crooks, S., Orr, M., Koseff, J., R., Monismith, S., G.  
2008
- **Observations of a planktonic layer in its physical environment**  
Steinbuck, J., V., Genin, A., Monismith, S., G., Koseff, J., R., Holtzman, R.  
2008
- **Simulations of Mixing and Transport of Dissolved Waste Discharged from near-coastal aquaculture pen**  
Venayagamoorthy, S., K., Fringer, O., B., Koseff, J., R., Naylor, R., L.  
2008
- **Wave instability criteria for interfacial waves breaking over a ridge**  
Hult, E., L., Troy, C., D., Koseff, J., R.  
2008
- **Spatial patterns of flow and their modification within and around a giant kelp forest** *LIMNOLOGY AND OCEANOGRAPHY*  
Gaylord, B., Rosman, J. H., Reed, D. C., Koseff, J. R., Fram, J., Macintyre, S., Arkema, K., McDonald, C., Brzezinski, M. A., Largier, J. L., Monismith, S. G., Raimondi, P. T., Mardian, et al  
2007; 52 (5): 1838-1852
- **Laboratory experiments of fine-scale mixing and mass transport within a coral canopy** *PHYSICS OF FLUIDS*  
Reidenbach, M. A., Koseff, J. R., Monismith, S. G.  
2007; 19 (7)
- **Spectral wave flow attenuation within submerged canopies: Implications for wave energy dissipation** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*  
Lowe, R. J., Falter, J. L., Koseff, J. R., Monismith, S. G., Atkinson, M. J.  
2007; 112 (C5)
- **A field investigation into the effects of a kelp forest (*Macrocystis pyrifera*) on coastal hydrodynamics and transport** *JOURNAL OF GEOPHYSICAL RESEARCH-OCEANS*  
Rosman, J. H., Koseff, J. R., Monismith, S. G., Grover, J.  
2007; 112 (C2)
- **Individual-based model of larval transport to coral reefs in turbulent, wave-driven flow: behavioral responses to dissolved settlement inducer** *MARINE ECOLOGY PROGRESS SERIES*  
Koehl, M. A., Strother, J. A., Reidenbach, M. A., Koseff, J. R., Hadfield, M. G.  
2007; 335: 1-18
- **Richardson number measurements in breaking internal waves**



- Hult, E., L., Koseff, J., R., Troy, C., D.  
2007
- **Simulations of Mixing and Transport of Dissolved Waste Discharged from a submerged aquaculture pen**  
Venayagamoorthy, S., K., Fringer, O., B., Koseff, J., R., Naylor, R., L.  
2007
  - **Structure of mass and momentum fields over a model aggregation of benthic filter feeders** *BIOGEOSCIENCES*  
Crimaldi, J. P., Koseff, J. R., Monismith, S. G.  
2007; 4 (3): 269-282
  - **Effects of nonlocal turbulence on the mass transfer of dissolved species to reef corals** *LIMNOLOGY AND OCEANOGRAPHY*  
Falter, J. L., Atkinson, M. J., Lowe, R. J., Monismith, S. G., Koseff, J. R.  
2007; 52 (1): 274-285
  - **Structure of turbulent plumes from a momentumless source in a smooth bed** *ENVIRONMENTAL FLUID MECHANICS*  
Crimaldi, J. P., Koseff, J. R.  
2006; 6 (6): 573-592
  - **The effects of coral morphology and ambient flow on mass transfer in coral communities**  
Reidenbach, M. A., Koehl, M. A., Genin, A., Monismith, S. G., Koseff, J. R.  
OXFORD UNIV PRESS INC.2006: E115-E115
  - **A mixing-length formulation for the turbulent Prandtl number in wall-bounded flows with bed roughness and elevated scalar sources** *PHYSICS OF FLUIDS*  
Crimaldi, J. P., Koseff, J. R., Monismith, S. G.  
2006; 18 (9)
  - **Boundary layer turbulence and flow structure over a fringing coral reef** *LIMNOLOGY AND OCEANOGRAPHY*  
Reidenbach, M. A., Monismith, S. G., Koseff, J. R., Yahel, G., Genin, A.  
2006; 51 (5): 1956-1968
  - **Laboratory images of breaking internal waves** *PHYSICS OF FLUIDS*  
Hult, E. L., Troy, C. D., Koseff, J. R.  
2006; 18 (9)
  - **Thermally driven exchanges between a coral reef and the adjoining ocean** *JOURNAL OF PHYSICAL OCEANOGRAPHY*  
Monismith, S. G., Genin, A., Reidenbach, M. A., Yahel, G., Koseff, J. R.  
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