

MICHELLE M. GIERACH

Jet Propulsion Laboratory, California Institute of Technology
M/S 233-300 • 4800 Oak Grove Drive • Pasadena, CA 91109
Phone: (818) 354-1933 • Fax: (818) 354-3223
michelle.gierach@jpl.nasa.gov

EDUCATION

- 2009 Ph.D. Marine Science, University of South Carolina, Columbia, SC
Dissertation: *Analysis of the Upper Ocean Response to Hurricanes in the Gulf of Mexico Using Satellite Observations and Model Simulations*
Advisor: Dr. Subrahmanyam Bulusu
- 2006 M.S. Meteorology, Florida State University, Tallahassee, FL
Thesis: *Vorticity-based Detection of Tropical Cyclogenesis*
Advisors: Dr. James J. O'Brien and Mark A. Bourassa
- 2004 B.S. Meteorology, Florida State University, Tallahassee, FL
Minors: Mathematics and Physics

PROFESSIONAL EXPERIENCE

- 2011-present Scientist, Jet Propulsion Laboratory, Pasadena, CA
- 2009-2011 Postdoctoral Associate, University of Miami, Rosenstiel School of Marine and Atmospheric Science, Miami, FL
- 2006-2009 Graduate Research Assistant, University of South Carolina, Columbia, SC
- 2004-2006 Graduate Research Assistant, Florida State University, Tallahassee, FL

LEADERSHIP EXPERIENCE

- 2015-2019 Project Scientist for NASA EVS-2 Coral Reef Airborne Laboratory (CORAL)
- 2011-present Project Scientist for the Physical Oceanography Distributed Active Archive Center (PO.DAAC)

AWARDS

- 2016 Florida State University Reubin O'D. Askew Young Alumni Award
- 2016 Florida State University Notable Noles
- 2015 JPL Lew Allen Award for Excellence
- 2013 NASA Early Career Achievement Medal
- 2009 Dean's Award for Excellence in Graduate Study

FUNDED PROPOSALS

- 2018-2021 NASA Science Team for the OCO Missions, Co-I, *Observing and validating carbon-climate feedbacks with OCO-2*
- 2017-2019 NASA Applied Sciences – Water Resources, Co-I, *Maximizing utility of remote sensing data for water quality monitoring and resources management in California's water systems*
- 2016-2017 NASA Biodiversity, Co-I, *Scoping study for biodiversity airborne campaigns*
- 2015-2019 NASA Earth Venture Suborbital-2, Co-I (Project Scientist), *CORAL: Coral*

- Reef Airborne Laboratory*
- 2015-2017 NASA Rapid Response, PI, *Rapid Response to the ORCAS Campaign*
- 2015-2018 OCO-2 Science Team, Co-I, *Operations and data products for carbon-climate feedbacks using OCO-2*
- 2013-2016 NASA Physical Oceanography, Co-I, *Seasonal evolution of the coastal thermal front and small eddies in the Great Lakes as characterized by satellite SST and SAR imagery and numerical modeling*
- 2013-2015 NASA Ocean Biology and Biogeochemistry, PI, *Variation in phytoplankton composition associated with ENSO diversity in the Equatorial Pacific Ocean*
- 2012-2015 NASA New (Early Career) Investigator Program in Earth Science, PI, *Impact of ENSO diversity on biophysical processes in the Tropical and North Pacific Ocean*
- 2008-2009 NASA South Carolina Space Grant Consortium Graduate Student Research Program Fellowship, PI, *Hurricane contribution to air-sea fluxes of CO₂*

PROFESSIONAL ACTIVITIES

- 2018 US CLIVAR Phenomena, Observations, and Synthesis (POS) Panel member
- 2016 Participant in the CONAE SABIA-Mar satellite mission science review
- 2015 NASA representative at the U.N. Climate Change Conference (COP-21)
- 2015 NASA representative for the 2016 National Earth Observation Assessment
- 2015 Pre-decadal carbon-climate & ocean biology and biogeochemistry (OBB) steering group member
- 2015 International Ocean Color Science (IOCS) session chair, “Advances in hyperspectral remote sensing science”
- 2015 Co-organizer of the “Ocean Surface Mixed-Layer Processes & Air-Sea Interactions: A Critical Challenge for Climate Science” workshop, JPL Center for Climate Sciences, Pasadena, CA
- 2014-2016 NASA Early Career Scientist/Engineer Working Group (ECSEWG) member
- 2014 NASA representative at the U.N. Climate Change Conference (COP-20)
- 2014 Ocean Sciences session chair, “Effects of climate variability on marine biophysical interactions and ecosystems dynamics”
- 2014 Invited expert for the Tropical Pacific Observing System (TPOS2020) meeting
- 2013 Co-organizer of the Carbon Workshop, JPL Center for Climate Sciences, Pasadena, CA
- 2013 USGCRP Oceans and Coasts Indicator team member
- 2013 NASA ESD Decadal Survey System Trade Study: Data Latency Needs and Requirements steering committee member
- 2012-2014 IOOS Data Management And Communications (DMAC) steering team member (NASA representative)
- 2009-present Journal Reviewer for Geophysical Research Letters, Journal of Geophysical Research, Journal of Applied Meteorology and Climatology, Remote Sensing of Environment, Estuaries and Coasts, Marine Environmental Research, Marine Ecology Progress Series, Subject Matter Editor for Ecological Applications Journal

MENTORING

- 2018-present Senior mentor for MPOWIR (Mentoring Physical Oceanography Women to Increase Retention) group

- 2017 Co-Advisor for NASA DEVELOP graduate students (San Francisco Bay-Delta Water Resources I & II)
- 2016-present Thesis Advisory Committee for Zachary Erickson, Caltech
- 2016 Co-Advisor for NASA DEVELOP graduate students (Los Angeles Oceans and Water Resources III)
- 2015-present Advisor for Severine Fournier, NPP Postdoctoral Associate
- 2015 Co-Advisor for NASA DEVELOP graduate students (Los Angeles Oceans and Water Resources II)
- 2015-2016 Advisor for Yang (Cathy) Feng, Caltech Postdoctoral Associate
- 2014-2016 Advisor for Cedric Fichot, Caltech Postdoctoral Associate (Assistant Professor at Boston University)
- 2014 Co-Advisor for NASA DEVELOP graduate students (Los Angeles Oceans and Water Resources I)
- 2014 Thesis Jury for Severine Fournier, IFREMER

FIELD EXPERIENCE

- 2015 R/V La Mer & Marine Surveyor – Deployment of optical sensors as part of the Hyperion Treatment Plant Wastewater Diversion, Santa Monica Bay, CA
- 2010 R/V Roger Revelle - Deployment of ASIS and EASI buoys for ONR “Impact of Typhoons on the Pacific” (ITOP) DRI, Kaohsiung, Taiwan
- 2009 WHOI R/V Oceanus - Test deployment of ASIS and EASI buoys for ONR ITOP DRI, Jacksonville, FL

AIRBORNE EXPERIENCE

- 2016-2017 Tempus Applied Solutions Gulfstream IV – Deployment of the PRISM instrument as part of the NASA EVS-2 CORAL mission, Australia / Hawaii / Mariana Islands / Palau
- 2016 NSF/NCAR Gulfstream V – Deployment of the PRISM instrument as part of the ORCAS mission, Punta Arenas, Chile
- 2015 NASA/AFRC ER-2 – Deployment of the PRISM instrument as part of an NASA AITT project, Santa Monica Bay, California
- 2014 Twin Otter International Ltd. DHC-6 – Deployment of the PRISM instrument as part of a JPL project, Sacramento Bay Delta, California

OUTREACH

- 2018 Science Judge/TCQ Grader at the National Ocean Sciences Bowl in Pasadena, CA
- 2017 Presenter at JPL Open House
- 2016 NASA Earth Expeditions coverage of the CORAL mission
- 2016 Presenter/Participant in the EUMESAT “Monitoring the Oceans from Space” massive open online course (MOOC)
- 2016 Science Judge/TCQ Grader at the National Ocean Sciences Bowl in Pasadena, CA
- 2015 Presenter at JPL Open House
- 2015 Science Judge/TCQ Grader at the National Ocean Sciences Bowl in Pasadena, CA
- 2014 Moderator at the National Ocean Sciences Bowl in Pasadena, CA
- 2013 Participator/Contributor in NASA Earth Science Week via a blog on the role of mapping in research
- 2013 NASA’s Know Your Earth 3.0, local connections campaign

- 2012 Presenter at NASA/JPL Climate Day
- 2012 Presenter/Participant at the COSEE-West/NASA/JPL Salinity Workshop for K-12 educators
- 2012 Participant/Contributor in NASA Earth Science Week via a blog at Women@NASA and career spotlight video
- 2011 Presenter at JPL Open House and NASA/JPL Climate Day
- 2011 Presenter/Participant at the COSEE-West Ocean Observing Systems Workshop for K-12 educators
- 2011 Moderator at the National Ocean Sciences Bowl in Miami, FL
- 2010 Group leader for the American Association of University Women's Women in Science Day for 6-7th grade girls
- 2008 Guest lecturer at the COSEE Taking the Pulse of Our Coastal Ocean Workshop for K-12 educators
- 2008 Guest lecturer at the National Ocean Sciences Bowl in Columbia, SC

REFEREED PUBLICATIONS

- Fichot, G.G., K. Matsumoto, B. Holt, **M.M. Gierach**, K.S. Tokos, 2018: Disruption of the dimictic behavior of the Laurentian Great Lakes by warming, *Nature Climate Change*, submitted.
- Fournier, S., J. Vialard, M. Lengaigne, T. Lee, **M.M. Gierach**, and A.V.S. Chaitanya, 2017: Modulation of the Ganges-Brahmaputra river plume by the Indian Ocean Dipole and eddies inferred from satellite observations, *Journal of Geophysical Research*, doi:10.1002/2017JC013333.
- Fournier, S., D. Vandemark, L. Gaultier, T. Lee, B. Jonsson, and **M.M. Gierach**, 2017: Interannual variation in offshore advection of Amazon-Orinoco plume waters: observations, forcing mechanisms, and impacts, *Journal of Geophysical Research*, 122, 8966-8982, doi:10.1002/2017JC013103.
- Chatterjee, A., **M. M. Gierach**, D. Crisp, A. Eldering, M. Gunson, C. O'Dell, B. Stephens, A. Sutton, and D. Schimel, 2017: Influence of El Niño on atmospheric CO₂ over the tropical Pacific Ocean: Findings from NASA's OCO-2 mission, *Science*, doi:10.1126/science.aam5776.
- Liu, J., K. Bowman, D. Schimel, N. Parazoo, Z. Jiang, M. Lee, A. Bloom, D. Wunch, K. Gurney, D. Menemenlis, **M. M. Gierach**, D. Crisp, and A. Eldering, 2017: Contrasting carbon cycle responses of tropical continents to the 2015-16 El Niño, *Science*, doi:10.1126/science.aam5690.
- Trinh, R. C., C. G. Fichot, **M. M. Gierach**, B. Holt, N. K. Malakar, G. Hulley, and J. Smith, 2017: Application of Landsat 8 for monitoring impacts of wastewater discharge on coastal water quality, *Frontiers in Marine Science*, doi:10.3389/fmars.2017.00329.
- Bowman, K., J. Liu, A. Bloom, N. Parazoo, M. Lee, Z. Jiang, D. Menemenlis, **M. M. Gierach**, G.J. Collatz, and K. Gurney, 2017: Global and Brazilian carbon response to El Niño Modoki 2011-2010, *Earth and Space Science*, 4, 637-660, doi:10.1002/2016EA000204.
- Stephens, B., et al., 2017: The O₂/N₂ Ratio and CO₂ Airborne Southern Ocean (ORCAS) Study, *Bulletin of American Meteorological Society*, doi:10.1175/BAMS-D-16-0206.1.
- Thompson, D. M., E. Hochberg, G. P. Asner, R. O. Green, D. Knapp, B. C. Gao, R. Garcia, **M. M. Gierach**, Z. Lee, and S. Maritorena, 2017: Airborne Mapping of Benthic Reflectance Spectra with Bayesian Linear Mixtures, *Remote Sensing Environment*, 200, 18-30, doi:10.1016/j.rse.2017.07.030.

- Holt, B., R. C. Trinh, and **M. M. Gierach**, 2017: Stormwater Runoff Plumes in the Southern California Bight: A Comparison Study with SAR and MODIS Imagery, *Marine Pollution Bulletin*, 118, 141-154, doi:10.1016/j.marpolbul.2017.02.040.
- Gierach, M. M.**, B. Holt, R. Trinh, B. Pan, and C. Rains, 2017: Satellite detection of wastewater diversion plumes in southern California. *Estuarine, Coastal and Shelf Science*, 186, 171-182, doi:10.1016/j.ecss.2016.10.012.
- Basnayake, R., E. Bollt, N. Tufillaro, J. Sun, and **M. M. Gierach**, 2017: Regularization destriping of remote sensing imagery. *Nonlinear Processes in Geophysics*, doi:10.5194/npg-2016-74.
- Fournier, S., J. T. Reager, T. Lee, J. Vazquez-Cuervo, C. H. David, and **M. M. Gierach**, 2016: SMAP observes flooding from land to sea: The Texas event of 2015, *Geophysical Research Letters*, doi:10.1002/2016GL070821.
- Fournier, S., T. Lee, and **M. M. Gierach**, 2016: Seasonal and interannual variations of sea surface salinity associated with the Mississippi River plume observed by SMOS and Aquarius, *Remote Sens. Environ.*, 180, 431-439, doi:10.1016/j.rse.2016.02.050.
- Fichot, C. G., B. Downing, B. Bergamaschi, L. Windham-Myers, M. Marvin-DiPasquale, D. R. Thompson, and **M. M. Gierach**, 2015: High-resolution remote sensing of water quality in the San Francisco Bay-Delta Estuary, *Environmental Science and Technology*, 50(2), 573–583, doi:10.1021/acs.est.5b03518.
- Thompson, D. R., F. C. Seidel, B. C. Gao, **M. M. Gierach**, R. O. Green, R. M. Kudela, and P. Mouroulis, 2015: Optimizing irradiance estimates for coastal and inland water imaging spectroscopy. *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL063287.
- Lee, T., G. Lagerloef, H.-Y. Kao, M. J. McPhaden, J. Willis, **M. M. Gierach**, 2014: The influence of salinity on Tropical Atlantic instability waves and eddies. *J. Geophys. Res.*, 119(12), 8375-8394, doi:10.1002/2014JC010100.
- Gierach, M. M.**, M. Messié, T. Lee, K. B. Karnauskas, and M.-H. Radenac, 2013: Biophysical Responses near Equatorial Islands in the Western Equatorial Pacific Ocean during El Niño/La Niña Transitions. *Geophys. Res. Lett.*, 40(20), 5473-5479, doi:10.1002/2013GL057828.
- Gierach, M. M.**, J. Vazquez, T. Lee, V. Tsontos, 2013: Aquarius and SMOS detect effects on an extreme Mississippi River flooding event in the Gulf of Mexico, *Geophys. Res. Lett.*, 40(19), 5188-5193, doi:10.1002/grl.50995.
- Lee, T., D. E. Waliser, J. F. Li, F. W. Landerer, and **M. M. Gierach**, 2013: Evaluation of CMIP3 and CMIP5 Wind Stress Climatology Using Satellite Measurements and Atmospheric Reanalysis Products. *J. Clim.*, 26(16), 5810-5826, doi:http://dx.doi.org/10.1175/JCLI-D-12-00591.1.
- Lee, T., G. Lagerloef, **M. M. Gierach**, H.-Y. Kao, S. Yueh, and K. Dohan, 2012: Aquarius reveals salinity signature of tropical instability waves. *Geophys. Res. Lett.*, 39, L12610, doi:10.1029/2012GL052232.
- Gierach, M. M.**, T. Lee, D. Turk, and M.J. McPhaden, 2012: Biological response to the 1997-98 and 2009-10 El Niño events in the equatorial Pacific Ocean. *Geophys. Res. Lett.*, 39, L10602, doi:10.1029/2012GL051103.
- Gierach, M. M.**, H. C. Graber, and M. J. Caruso, 2012: SAR-derived gap jet characteristics in the lee of the Philippine Archipelago. *J. Remote Sens. Environ.*, 117, 289-300.
- Gierach, M. M.**, B. Subrahmanyam, and P. G. Thoppil, 2009: Physical and biological responses to Hurricane Katrina (2005) in a 1/25° nested Gulf of Mexico HYCOM. *J. Mar. Syst.*, 78, 168-179.
- Gierach, M. M.**, B. Subrahmanyam, A. Samuelsen, and K. Ueyoshi, 2009: Hurricane-driven alteration in plankton community size structure in the Gulf of Mexico: A modeling study.

Geophys. Res. Lett., 36, L07604, doi:10.1029/2009GL037414.

- Gierach, M. M.**, and B. Subrahmanyam, 2008: Biophysical responses of the upper ocean to major Gulf of Mexico hurricanes in 2005. *J. Geophys. Res. Oceans*, 113, C04029, doi:10.1029/2007JC004419.
- Gierach, M. M.**, and B. Subrahmanyam, 2007: “Global ocean color and phytoplankton”, State of the Climate in 2006. *Bull. Amer. Meteor. Soc.*, 88, S43-S45.
- Gierach, M. M.**, and B. Subrahmanyam, 2007: Satellite data analysis of the upper ocean response to Hurricanes Katrina and Rita (2005) in the Gulf of Mexico. *IEEE Geosci. Remote Sens. Lett.*, 4, 132-136.
- Gierach, M. M.**, M. A. Bourassa, P. Cunningham, J. J. O’Brien, and P. D. Reasor, 2007: Vorticity-based detection of tropical cyclogenesis. *J. Appl. Meteor. Climatol.*, 46, 1214-1229.

CONFERENCE PRESENTATIONS

- Gierach, M. M., et al., 2018: Influence of the 2015-2016 El Niño event on atmospheric CO₂ over the tropical Pacific Ocean, *2018 Ocean Sciences Meeting*, February, Portland, OR.
- Gierach, M. M., et al., 2018: Adaptive AUV in-situ sensing system, *2018 Ocean Sciences Meeting*, February, Portland, OR.
- Gierach, M. M., et al., 2015: Oceans Under Pressure, *United Nations Climate Change Conference (COP-21)*, December, Paris, France.
- Gierach, M. M., et al., 2014: EN...SO? The significance of El Niño and its impacts, *United Nations Climate Change Conference (COP-20)*, December, Lima, Peru.
- Gierach, M. M., et al., 2014: Application of hyperspectral airborne PRISM imagery to evaluate coastal and inland environments in California, *Ocean Optics XXII*, October, Portland, ME.
- Gierach, M. M., M. Messié, T. Lee, K.B. Karnauskas, and M.-H. Radenac, 2014: Biophysical Responses near Equatorial Islands in the Western Equatorial Pacific Ocean during El Niño/La Niña Transitions, *2014 Ocean Sciences Meeting*, February, Honolulu, HI.
- Gierach, M. M., J. Vazquez, T. Lee, V. Tsontos, 2014: Aquarius and SMOS detect effects on an extreme Mississippi River flooding event in the Gulf of Mexico, *2014 Ocean Sciences Meeting*, February, Honolulu, HI.
- Gierach, M. M., T. Lee, D. Turk, and M. J. McPhaden, 2013: Biophysical response to the 1997-98 And 2009-10 El Niño events in the equatorial Pacific Ocean, *U.S. CLIVAR ENSO Diversity Workshop*, February, Boulder, CO.
- Gierach, M. M., T. Lee, D. Turk, and M. J. McPhaden, 2012: Wind-induced biophysical responses to central and eastern Pacific El Niño, *2012 Fall Meeting*, American Geophysical Union, December, San Francisco, CA.
- Gierach, M. M., T. Lee, D. Turk, and M. J. McPhaden, 2012: Biophysical response to the 1997-98 And 2009-10 El Niño events in the equatorial Pacific Ocean. *2012 Ocean Sciences Meeting*, American Geophysical Union, February, Salt Lake City, UT.
- Gierach, M. M., and T. Lee, 2011: Consistency of sea surface temperature analyses in depicting ENSO behavior. *Pattullo Conference*, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR), October, Warrenton, VA.
- Gierach, M. M., and T. Lee, 2011: Consistency of sea surface temperature analyses in depicting ENSO behavior. *WCRP Open Science Conference*, WCRP. October, Denver, CO.
- Gierach, M. M., H. C. Graber, and M. J. Caruso, 2010: SAR-derived gap jet characteristics in the lee of the Philippine Archipelago. *2010 Fall Meeting*, American Geophysical Union, December, San Francisco, CA.
- Gierach, M. M., and H. C. Graber, 2010: SAR-derived gap flow characteristics in the lee of the Philippine Island Archipelago. *Pattullo Conference*, Mentoring Physical Oceanography Women to Increase Retention (MPOWIR), October, Charleston, SC.

- Gierach, M. M., and H. C. Graber, 2010: SAR-derived gap flow characteristics in the lee of the Philippine Island Archipelago. *2010 Ocean Sciences Meeting*, American Geophysical Union, February, Portland, OR.
- Gierach, M. M., and B. Subrahmanyam, 2008: Hurricane contribution to pCO₂ distribution in the Gulf of Mexico. *2008 Fall Meeting*, American Geophysical Union, December, San Francisco, CA.
- Gierach, M. M., and B. Subrahmanyam, 2008: Hurricane-induced responses in the Gulf of Mexico as observed through a 1/25° nested Gulf of Mexico HYCOM. *SC08: International Conference for High Performance Computing, Networking, Storage, and Analysis*, November, Austin, TX.
- Gierach, M. M., 2008: Upper ocean response to Hurricane Katrina (2005) in the Gulf of Mexico using multi-sensor satellite observations and model simulations. *5th Physical Oceanography Dissertation Symposium (PODS V)*, October, Honolulu, HI.
- Gierach, M. M., and B. Subrahmanyam, 2008: Multi-sensor satellite and HYCOM analysis of the upper ocean response to Hurricane Katrina in the Gulf of Mexico. *28th Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society, April, Orlando, FL.
- Gierach, M. M., B. Subrahmanyam, and P. Thoppil, 2008: Upper ocean response to Hurricane Katrina (2005) in a 1/25° nested Gulf of Mexico HYCOM. *2008 Ocean Sciences Meeting*, American Geophysical Union, March, Orlando, FL.
- Gierach, M. M., and B. Subrahmanyam, 2006: Upper ocean response to Hurricanes Katrina and Rita (2005) from multi-sensor satellites. *2006 Fall Meeting*, American Geophysical Union, December, San Francisco, CA.
- Hite, M. M., M. A. Bourassa, P. Cunningham, J. J. O'Brien, and P. D. Reasor, 2006: Vorticity-based detection of tropical cyclogenesis. *27th Conference on Hurricanes and Tropical Meteorology*, American Meteorological Society, April, Monterey, CA.
- Hite, M. M., M. A. Bourassa, and J. J. O'Brien, 2006: Vorticity-based detection of tropical cyclogenesis. *14th Conference on Interaction of the Sea and Atmosphere*, American Meteorological Society, February, Atlanta, GA.

PRESENTATIONS AT PROFESSIONAL MEETINGS

- Gierach, M. M., et al., 2015: The Portable Remote Imaging SpectroMeter (PRISM). HypsIRI Symposium and Aquatic Forum, Greenbelt, MD, June 3-5.
- Gierach, M. M., J. Vazquez, T. Lee, V. Tsontos, 2013: Aquarius and SMOS detect effects on an extreme Mississippi River flooding event in the Gulf of Mexico. Aquarius/SAC-D Science Team Meeting, Buenos Aires, Argentina, Nov. 12-14.
- Gierach, M. M., T. Lee, D. Turk, and M. J. McPhaden, 2013: Biological response to the 1997-98 and 2009-10 El Niño events in the equatorial Pacific Ocean. International Ocean Color Science (IOCS) Meeting, Darmstadt, Germany, May 6-8.
- Gierach, M. M., T. Lee, D. Turk, and M. J. McPhaden, 2012: El Niño Personality Affects Ocean Biology. ECCO Meeting, Pasadena, CA, November 1.
- Gierach, M. M., T. Lee, D. Turk, and M. J. McPhaden, 2012: Biophysical response to the 1997-98 And 2009-10 El Niño events in the equatorial Pacific Ocean. Ocean Color Research Team Meeting, Seattle, WA, April 23 - 25.
- Gierach, M. M., and T. Lee, 2011: Consistency of sea surface temperature analyses in depicting ENSO behavior. GHRSSST Science Team Meeting, Edinburgh, UK, June 27 – July 1.
- Gierach, M. M., W. M. Drennan, E. Sahlée, and A. Bentamy, 2011: Comparison of buoy measurements and satellite observations during SoGasex. NASA International Ocean Vector Wind Science Team Meeting, Annapolis, MD, May 9 – 11.

- Gierach, M. M., and B. Subrahmanyam, 2008: Gulf of Mexico response to Hurricane Katrina (2005). NASA Carbon Cycle & Ecosystems Joint Science Workshop, April 28 – May 2.
- Gierach, M. M., and B. Subrahmanyam, 2007: Biophysical feedback mechanisms during Gulf of Mexico hurricanes using satellite observations and HYCOM simulations. NASA Ocean Color Science Team, Seattle, WA, April 11 – 13.

INVITED PRESENTATIONS

- Gierach, M. M., 2013: Contrasting biophysical responses to central and eastern Pacific El Niño, Environmental Science and Engineering Seminar Series, California Institute of Technology, Pasadena, CA, January 16.
- Gierach, M. M., 2012: What hit me? Hurricanes and climate change, NASA/JPL Climate Day, Pasadena Convention Center, Pasadena, CA, November 16.
- Gierach, M. M., 2012: Contrasting biophysical responses to central and eastern Pacific El Niño, MPOWIR NASA Speaker Series, NASA Goddard Space Flight Center, Greenbelt, MD, August 22.
- Gierach, M. M., 2012: The satellite era: What ocean observations tell us about climate change. Museum of Flight Climate Day, Jet Propulsion Laboratory (virtual studio), CA, April 5.
- Gierach, M. M., 2012: The El Niño you don't know and why it matters to you. COSEE-West Workshop, Jet Propulsion Laboratory, CA, February 18.
- Gierach, M. M., 2012: What hit me? The biological effects on marine life of hurricanes and extreme storm events. COSEE-West Lecture, Jet Propulsion Laboratory, CA, February 15.
- Gierach, M. M., 2010: SAR-derived gap jet characteristics in the lee of the Philippine Archipelago. Jet Propulsion Laboratory, Pasadena, CA, November 15.
- Gierach, M. M., 2009: Analysis of the upper ocean response to hurricanes in the Gulf of Mexico using satellite observations and model simulations. NOAA National Oceanographic Data Center, Silver Spring, MD, April 23.
- Gierach, M. M., 2009: Analysis of the upper ocean response to hurricanes in the Gulf of Mexico using satellite observations and model simulations. NASA Goddard Space Flight Center, Global Modeling and Assimilation Office, Greenbelt, MD, April 22.
- Gierach, M. M., 2009: Analysis of the upper ocean response to hurricanes in the Gulf of Mexico using satellite observations and model simulations. University of Miami, Rosenstiel School of Marine and Atmospheric Science, Applied Marine Physics Division, Miami, FL, April 15.
- Gierach, M. M., 2009: Upper ocean response to Hurricane Katrina (2005) in the Gulf of Mexico using multi-sensor satellite observations and model simulations. Department of Marine and Environmental Systems, Florida Institute of Technology, Melbourne, FL, January 28.
- Gierach, M. M., 2008: A look at hurricanes through the “eyes” of various satellite sensors. COSEE Taking the Pulse of Our Coastal Ocean Workshop, Jacksonville University, Jacksonville, FL, July 10.
- Gierach, M. M., 2008: Hurricanes: Misunderstood giants. 2008 Ocean Science Bowl, Columbia, SC, February 23.
- Gierach, M. M., 2006: Satellite observations and model simulations of the upper ocean response to hurricanes in the Gulf of Mexico. Jet Propulsion Laboratory, Pasadena, CA, December 7.