

Gary T. Mitchum
Professor and Associate Dean

Education

1984 Ph.D., Florida State University, Physical Oceanography
1980 B.S. (magna cum laude), Florida State University, major in Physics with minor in Mathematics

Professional Experience

2012 - present Associate Dean and Professor, College of Marine Science, USF
2002 - 2012 Professor, Department (then College) of Marine Science, USF
1996 - 2002 Associate Professor, Department of Marine Science, USF
1996 - 2000 Affiliate faculty, Department of Oceanography, UH Manoa
1992 - 1996 Associate Researcher, Department of Oceanography, UH Manoa
1987 - 1992 Assistant Researcher, Department of Oceanography, UH Manoa
1985 - 1987 Postdoctoral Researcher at the UH Manoa with Klaus Wyrski

Honors and awards

Listed as one of the Top 2% of Researchers in my field based on career citation rate (2021 and 2022)
Outstanding Review Paper award, NOAA/ERL for McPhaden et al. (1998)
Honorable Mention, NMFS, Best paper in *Fishery Bulletin* for Polovina and Mitchum (1992)
1992 AGU Editor's Citation for Excellence in Refereeing
Florida State University Fellowship (1981-1982)
4-year National Merit Scholarship at the Florida State University
Honorary societies: Phi Beta Kappa, Phi Kappa Phi, Sigma Pi Sigma (Physics)

Professional Society Memberships

American Geophysical Union
American Meteorological Society

Publications

Manuscripts submitted or in press:

2024 BAMS State of Climate 2023 submitted.
2024 IOC State of Climate 2023 submitted.
2023 **Mitchum, G.**, Benedict, D., Chambers, D., Dahl, K., Kirtman, B., Merrifield, M., Meyers, S., Nerem, R. S.,
ObeG.T. Mitchum

Ch. 22. Southeast. In: *Fifth National*

2018 Thompson, P.R., M.A. Merrifield, E. Leuliette, W. Sweet, D.P. Chambers, B.D. Hamlington, S. Jevrejeva, J.J. Mara, **G.T. Mitchum**, R.S. Nerem and M.J. Widlansky, Sea level variability and change [in “State of the Climate in 2017”]. *Bull. Amer. Met. Soc.*, **99(8)**, S84-86, <https://doi:10.1175/2018BAMSStateoftheClimate>.

- 2003 Holland, C., and **G.T. Mitchum**, Interannual volume variability in the tropical Pacific. *J. Geophys. Res. Oceans*, **108** (C11), 33, doi:10.1029/2003JC001841.
- 2003 Lagerloef, G., R. Lukas, F. Bonjean, J. Gunn, **G.T. Mitchum**, M. Bourassa, and A. Busalacchi, El Nino Tropical Pacific Ocean surface current and temperature evolution in 2002 and outlook for early 2003. *Geophys. Res. Ltrrs.*, **30** (10), 1514, doi:10.1029/2003GL017096.
- 2002 Nerem, R., and **G.T. Mitchum**, Estimates of vertical crustal motion derived from differences of TOPEX/POSEIDON and tide gauge measurements. *Geophys. Res. Ltrrs.*, **29** (19), 1934, doi:10.1029/2002GL015037.
- 2002 Seki, M., J. Polovina, D. Kobayashi, R. Bidigare and **G.T. Mitchum** , An oceanographic characterization of swordfish (*Xiphias gladius*) longline fishing grounds in the springtime subtropical North Pacific. *Fisheries*

- 1997 Potemra, J.T., R. Lukas, and **G.T. Mitchum**, Large-scale estimation of transport from the Pacific to the Indian Ocean. *J. Geophys. Res.*, 102, 27795-27812.
- 1997 Nerem, S., B. Haines, J. Hendricks, J.-F. Minster, **G.T. Mitchum** and W. White, Improved determination of global mean sea level variations using TOPEX/POSEIDON altimeter data. *Geophys. Res. Ltrrs.*, **24**, 1331-1334.
- 1996 Ray, R., and **G.T. Mitchum**, Surface manifestation of internal tides generated near Hawaii. *Geophys. Res. Ltrrs.*, **23**, 2101-2104.
- 1996 **Mitchum, G.T.**, A context for the Hawaiian Oc,

- 1997 **Mitchum, G.T.**, Altimeter Drift from Tide Gauges. AVISO Altimetry Newsletter, Number 5, 8-11.
- 1995 **Mitchum, G.T.**, Altimetric observations of Rossby wave variability near topography. Proceedings of Aha Hulikoa Conference, Honolulu, Hawaii, February, 1995.
- 1994 **Mitchum, G.T.**, B. Kilonsky and B. Miyamoto, Methods for maintaining a stable datum in a sea level monitoring system. IEEE Oceans Proceedings.
- 1993 **Mitchum, G.T.**, Principal component analysis: Basic methods and extensions. Proceedings of Aha Hulikoa Conference, Honolulu, Hawaii, March, 1993.
- 1990 **Mitchum, G.T.**, U.S. WOCE supports global sea level data collecton. WOCE Notes, 2 (6), 10-12.
- 1983 **Mitchum, G.T.**, and W. Sturges, On the wind stress - sea level power law. Technical report, Department of Oceanography, Florida State University.

Extramural Funding

Pending Prong

USGS: Co-

NASA: Principal Investigator, "El Nino/Southern Oscillation in the Antarctic Circumpolar Current", \$66K for September 1, 1998 to August 31, 2001. This is funding for a NASA Fellowship won by Christina Holland based on her proposed dissertation research.

NOAA/PFRP: Principal Investigator, "Evaluation of remote sensing technologies for the identification of oceanographic features critical to pelagic fish distributions around the Hawaiian Archipelago", \$179K for April 1, 1996 to Sep 30, 2000.

NASA/TPEM: Principal Investigator, "Studies of tropical Pacific variability", \$146K for October 1, 1996 to Dec 31, 1999.

NOAA/OGP: Co-Principal Investigator (with M. Luther), USF portion of a proposal from a Consortium of Florida Universities for Regional Assessment of ENSO Impact in SSA, SNA and SA. Received \$30K for July 1, 1996 to December 31, 1997. Original USF proposed portion was \$90K of \$515K for entire Consortium, but NOAA cut funds for the overall project after year 1 and USF PIs dropped out of the collaboration.

NOAA/JIMAR: Principal Investigator, "Computing support for intercomparison of satellite and in situ sea levels", \$22K for November 1, 1996 to October 1, 1997. Funding provided via an equipment transfer from UH to USF.

NASA/JPL: Principal Investigator, "Proposal to develop recommendations for upgrades to the in situ tide gauge network for calibration of the TOPEX/POSEIDON Extended Mission", \$24K for July 1, 1996 to March 31, 1997.

Projects completed at University of Hawaii (1990-1995)

NOAA/NOS: Principal Investigator, UH Sea Level Center, \$639K for April 1, 1995 to March 31, 1996.

NOAA/NESDIS: Principal Investigator, WOCE "Fast Delivery" Sea Level Center, \$66.6K for February 1, 1995 to January 31, 1996.

NASA/JPL: Co-Investigator (R. Lukas, PI), Studies of tropical ocean dynamics using the TOPEX/Poseidon altimeter-derived sea surface topography, \$1.348M for October 1, 1987 to January 31, 1996.

NOAA/PFRP: Principal Investigator, Evaluation of remote sensing technologies for the identification of oceanographic features critical to pelagic fish distributions around the Hawaiian Archipelago, \$78K for October 1, 1994 to September 30, 1995. C4-1.13265 0 4(iticTw 2.265 0 Td (7.1(/)6.9(N)5.1(O)-6.9(S)7.7(:)6.9(P)-4.3(r)2..3(595M1.90.506 0 Td [(e)-7892 -1.157 Td [(s1

Directed Individual Study for various students

Spring 2022

Summer 2016

OCE 7910 (9 hrs) Directed Research for Y. Zhu
Directed Individual Study for various students

Spring 2016

OCE 7910 (9 hrs) Directed Research for Y. Zhu
OCE 6934 (3 hrs) Geophysical Fluid Dynamics

Fall 2015

OCE 7910 (9 hrs) Directed Research for Y. Zhu

Summer 2015

OCE 7910 (9 hrs) Directed Research for Y. Zhu
Directed Individual Study for various students

Spring 2015

OCE 7910 (3 hrs) Directed Research for Y. Zhu
OCE 6934 (3 hrs) Geophysical Fluid Dynamics

Fall 2014

OCP 6050 (3 hrs) Physical Oceanography
OCE 7910 (9 hrs) Directed Research for Y. Zhu

Summer 2014

OCE 7910 (9 hrs) Directed Research for Y. Zhu
Directed Individual Study for various students

Spring 2014

OCE 7910 (3 hrs) Directed Research for Y. Zhu

Fall 2013

OCE 7910 (3 hrs) Directed Research for Y. Zhu

Summer 2013

OCE 7910 (9 hrs) Directed Research for Y. Zhu
Directed Individual Study for various students

Spring 2013

OCE 6934 (3 hrs) Ocean Waves
OCE 7910 (3 hrs) Directed Research for Y. Zhu

Fall 2012

OCP 6050 (3 hrs) Physical Oceanography
OCE 7910 (3 hrs) Directed Research for Y. Zhu

Summer 2012

OCE 7910 (9 hrs) Directed Research for Y. Zhu

Spring 2012

OCE 6934 (3 hrs) Advanced Data Analysis Methods
OCE 7980 (2 hrs) Dissertation for P. Thompson
OCE 7910 (3 hrs) Directed Research for Y. Zhu

Fall 2011

OCE 6934 (3 hrs) Readings in Climate Variability (team taught equally with Chambers, Shin and Flower)
OCE 6971 (3 hrs) Thesis for M. Robinson
OCE 6972 (6 hrs) Directed Research for M. Robinson
OCE 7980 (3 hrs) Dissertation for P. Thompson
OCE 7910 (3 hrs) Directed Research for P. Thompson

Spring 2011

OCE 6934 (3 hrs) Decadal Climate Variations
OCE 6972 (2 hrs)

OCE 6972 (4 hrs) Directed Research for M. Robinson

OCE 7980 (8 hrs) Dissertation for C. Holland
OCE 6971 (5 hrs) Thesis for J. Law

Summer 2001

OCE 7910 (1 hrs) Directed Research for C. Holland
OCE 6972 (1 hrs) Directed Research for J. Law
OCE 7980 (1 hrs) Dissertation for C. Holland
OCE 6971 (1 hrs) Thesis for J. Law

Spring 2001

OCE 6908 (1 hrs) Independent Study (Physics) with K. Kilbourne
OCE 7910 (1 hrs) Directed Research for C. Holland
OCE 6972 (3 hrs) Directed Research for S. Gilbert
OCE 6972 (3 hrs) Directed Research for J. Law
OCE 7980 (8 hrs) Dissertation for C. Holland
OCE 6971 (2 hrs) Thesis for S. Gilbert
OCE 6971 (6 hrs) Thesis for J. Law

Fall 2000

OCP 6050 (3 hrs) Physical Oceanography
OCE 7910 (1 hrs) Directed Research for C. Holland
OCE 6972 (7 hrs) Directed Research for S. Gilbert
OCE 6972 (6 hrs) Directed Research for J. Law
OCE 7980 (8 hrs) Dissertation for C. Holland
OCE 6971 (2 hrs) Thesis for S. Gilbert
OCE 6971 (3 hrs) Thesis for J. Law

Summer 2000

OCE 6972 (1 hrs) Directed Research for S. Gilbert

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OCP 6050 (3 hrs) Physical Oceanography
OCE 7910 (9 hrs) Directed Research for C. Holland
OCE 6972 (3 hrs) Directed Research for S. Gilbert
OCE 6972 (1 hrs) Directed Research for J. Law

Summer 1998

OCE 7910 (2 hrs) Directed Research for C. Holland
OCE 6972 (2 hrs) Directed Research for S. Gilbert

Spring 1998

OCE 6934 (3 hrs) Ocean Waves II
OCE 7910 (6 hrs) Directed Research for C. Holland
OCE 6972 (2 hrs) Directed Research for S. Gilbert

Fall 1997

OCE 6934 (3 hrs) Ocean Waves I
OCE 7910 (5 hrs) Directed Research for C. Holland
OCE 6972 (3 hrs) Directed Research for S. Gilbert
OCE 6908 (2 hrs) Independent Study (Satellite Altimetry) for P. Filippi

Summer 1997

OCE 7910 (2 hrs) Directed Research for C. Holland
OCE 6908 (2 hrs) Independent Study (Satellite Altimetry) for P. Filippi

Spring 1997

OCE 6934 (2 hrs) Marine Time Series Analysis
OCE 6934 (3 hrs) Statistics for Marine Research - teamed with R. Wilson
OCE 7910 (2 hrs) Directed Research for C. Holland

Fall 1996

OCP 6050 (3 hrs) Physical Oceanography
OCE 6908 (1 hrs) Independent Study (Statistics) for K. Donaldson
OCE 7910 (3 hrs) Directed Research for C. Holland

Graduate student advising at USF

Yingli Zhu	PhD Advisor, 2012-2019
Philip Thompson	PhD Advisor, 2005-2012
Kristine DeLong	PhD Co-Advisor with Terry Quinn, 2006-2008
Paola Filippi	PhD Co-advisor with F. Muller-Karger, 1997-1997
Christina Holland	PhD Advisor, 1996-2003
Dylan Benedict	MS Advisor, 2021-present
Mindy Robinson	MS Advisor, 2004-2011
Kara Doran	MS Advisor, 2002-2010
Jason Law	MS Advisor, 1998-2003
Sherryl Gilbert	MS Advisor, 1997-2001
Jordan Meyer	Member of PhD Committee, 2018-present
Jessica Caggiano	Member of PhD Committee, 2020-present
Siria Munoz	Member of PhD Committee, 2023-present
Macarena Major	Member of PhD Committee, 2023-present
Luis Morales	Member of PhD Committee, 2023-present
Katelyn Schockman	Member of PhD Committee, 2018-2022
Ali Alshamrani	Member of PhD Committee (College of Engineering), 2019-2022
Ali Ahmad Al Dasouqi	Member of PhD Committee (College of Engineering), 2018-2021
Mengqiu Wang	Member of PhD Committee, 2016-2018

Michael Kosempa	Member of PhD Committee, 2013-2017
Dawn Goldsmith	Member of PhD Committee, 2009-2014
Sennai Habtes	Member of PhD Committee, 2010-2014
Monica Wilson	Member of PhD Committee, 2009-2013
Ana Arellano	Member of PhD Committee, 2011-2013
Dan Otis	Member of PhD Committee, 2003-2012
Lore Ayoub	Member of PhD Committee, 2006-2009
Marina Marrari	Member of PhD Committee, 2004-2008
Heidi Souder	Member of PhD Committee, 2006-2007
Yonggang Liu	Member of PhD Committee, 2004-2006
Jyotika Virmani	Member of PhD Committee, 1997-2005
Bob Helber	Member of PhD Committee, 1997-2003
Ruoying He	Member of PhD Committee, 1999-2002
Denis Nadeau	Member of PhD Committee, 1999-2001
Nan Schmidt	Member of PhD Committee, 1995-2001

2008 - 2011	Space
2002 - 2004	Dean's Advisory Committee (Chair for 2003-2004)
1997 - 2002	Long-range planning
1996 - 2002	Computer

Ad hoc committees

2009 - 2010	Fisheries Scientist Faculty Search Committee (Chair)
2009 - 2010	CMS Endowed Postdoctoral Associates Committee
2008 - 2009	Ocean-Atmosphere Modeling Search Committee
2008 - 2008	Remote Sensing and Fisheries Search Committee
2007 - 2008	Strategic Planning Committee
2004 - 2005	Ranked NTE Faculty Promotion Guidelines Committee
2005 - 2006	Post Retreat Planning Committee
2003 - 2005	Search

1988 - 1989 International WOCE Data Management Panel

Service

Ocean Sciences, Honolulu, Hawaii, February 2022

Thompson, P., M. Widlansky, B. Hamlington, M. Merrifield, J. Marra, **G. Mitchum**, W. Sweet, Rapid increases and extreme months in projections of United States high-tide flooding.

Zhu, Y., and **G.T. Mitchum**, A Statistical Simulation Model for Global Mean Sea Level from Altimetry and Tide Gauge Reconstructions.

GOMRI, Tampa, February 2016

Chanton, J., **G.T. Mitchum**, S. Locker, H. Parker, R.E. Turner, and O. Pilkey, Climate and Sea Level Rise (SLR) – The Nuts and Bolts of an Inescapable Coastal Driver.

Calendar year 2015

Fall AGU meeting, San Francisco, December 2015

Mitchum, G.T., (invited) GNSS Estimates of Vertical Land Motion at Tide Gauges: Brief History, Present Status and Current Challenges.

Wdowinski, S., P. Thompson, **G.T. Mitchum**, and J. Park, Decadal-scale sea level rise acceleration along the Florida Atlantic coast and its relations to sea level variability along the Florida Current.

University of Luxembourg, July 2015

Mitchum, G.T., (invited) Sea surface heights from altimetry and sea levels from tide gauges: How do these compare and a couple of examples of what do I do with them.

26th IUGG General Assembly, Prague, Czech Republic, June 2015

Mitchum, G.T., (Session Chair) Sea Level Change and Variability: Past, Present and Future.

Mitchum, G.T.

Calendar year 2013

IOC GLOSS Group of Experts XIII, Liverpool, England, October 2013

As Chair of GLOSS Group of Experts I was the convener for this meeting.

Ocean Surface Topography Science Team, Boulder, October 2013

Beckley, B., F. Lemoine, N. Zelensky, **G.T. Mitchum**, R. Ray, X. Yang, S. Melachroinos, D. Chinn and S.B. Luthcke,

Risk and Response: Sea Level Rise Summit, Florida Atlantic University, Boca Raton, June 2012

Mitchum, G.T. (invited), Sea Level Change: The Global Perspective.

Calendar year 2011

Florida Climate Institute's Annual Meeting, Gainesville, November 2011

Mitchum, G.T. (invited), Sea Level Changes in the Southeastern United States: Past, Present and Future.

Ocean Surface Topography Science Team, San Diego, October 2011

Beckley, B., F. Lemoine, N. Zelensky, R. Ray, S. Holmes, **G.T. Mitchum**, S. Desai, S. Brown and N. Tran,
Assessment of Current Global and Regional Mean Sea Level Estimates Based on ITRF2008.

Leuliette, E., R. Scharoo and **G.T. Mitchum**, Evaluating the Jason-2 Primary Mission Sea Level Climate Record.

Workshop on "Influence of sea level rise on natural systems of the greater Everglades", Boca Raton, April 2011

Mitchum, G.T. (invited), Sea Level Rise in Florida (and beyond): Observations and Obfuscations.

European Geophysical Union Annual Meeting, Vienna, Austria, April 2011

Thompson, P., **G.T. Mitchum** and M. Merrifield, Decadal Variability in Sea Level Rise Rates.

University of Dublin, Institute for Advanced Studies, Dublin, Ireland, April 2011

Mitchum, G.T. (invited), A series of 8 lectures on Advanced Time Series Analysis.

State University System Cl4.2(e)84.2(nv.3(a 6)5.1(4(hang)6.9(e)TD [(W)1)1.7(r)9.5(k)4.2(s)9.)7.8(,)3(Ao)6.9(c) Batn6.8(Ma)4.2(r)6.9

Ocean Sciences, Portland, Oregon, February 2010

Beckley, B., **G.T. Mitchum** and 8 others, Assessment of Current Estimates of Global and Regional Mean Sea Level from the TOPEX/Poseidon, Jason-1, and OSTM 17-year record.

Leuliette, E., R. Scharoo, L. Miller, J. Lillibridge and **G.T. Mitchum**, Evaluation of the Multiple-Altitude Global and Regional Climate Record.

Keeping our Heads Above Water: Surviving the Challenges of Sea-Level Rise in Florida, Lake Placid, Florida, January 2010

Invited as a discussant and as a moderator for a session on “Adaptations Options for Sea-Level Rise in Florida”

Calendar year 2009

Fall AGU meeting, San Francisco, California, December 2009

Beckley, B., R. Ray, F. Lemoine, N. Zelensky, D. Jacob, S. Holmes, S. Desai, S. Brown, **G.T. Mitchum** and R.S. Nerem, Integrated multi-mission altimeter data for climate research.

Florida State University, December 2009

Invited seminar - Sea level rise: What do tide gauges and altimeters really tell us?

NASA Sea Level Workshop, Austin, November 2009

Mitchum, G.T., M. Merrifield and P. Thompson (invited), Tide gauge observations of sea level rise over the past century.

NASA Ocean Surface Topography Misat.8521n9i T0 T4.2(T)7.8 Tw 4.916 0 Td [(e:)2.d [(e:)2. 2ayj 0(pogr)9.4c1(i)-8ce[2802 Tc 0.001

Invited seminar - Sea level rise: What do we know and what do we need to know?

50th Anniversary Meeting of the National Council of University Research Administrators, Washington, DC, November, 2008
Invited as a panelist in the Climate Change session and as a speaker on Sea Level Rise in the same session

NASA Ocean Surface Topography Mission, Science Working Team Meeting, Nice, France, November 2008
Beckley, B.D., N.P. Zelensky, F.G. Lemoine, R.D. Ray, S. Desai, S. Brown, **G.T. Mitchum** and S. Labroue,
Extending the sea surface height climate data record with OSTM data.
Nerem, R.S., D. Chambers, **G.T. Mitchum**, J. Ries, J. Choe and T. Sazonova, Building and understanding a climate record of sea level change.
Lagerloef, G., F. Bonjean and **G.T. Mitchum**, Upper ocean dynamics related to the Pacific Decadal Oscillation using altimeter derived velocity fields.
Lillibridge, J., R. Scharroo, E. Leuliette and **G.T. Mitchum**, Jason-2/OSTM near real-time product validation at NOAA.

Calendar year 2007

University of Hawai'i at Manoa, Department of Oceanography, March 2007
Invited to give a seminar on Sea Level Rise

Ocean Surface Topography Science Team meeting, Hobart, Australia, March 2007
Mitchum, G.T., B. Beckley, N. Bernier, and K. Sedwick, Improved Comparisons of Altimeter Sea Surface Heights and Tide Gauge Sea Levels.
Nerem, R.S., **G.T. Mitchum**, D.P. Chambers, J. Choe, and E. Leuliette, An Assessment of Jason GDR-Bs for Monitoring Long-term Sea Level Change.
Merrifield, M.A., **G.T. Mitchum**, B. Giese, S.T. Merrifield, J. Foster, B. Brooks, and M. Bevis, Global Sea Level Estimates from the GCOS Tide Gauge Network.
Lagerloef, G., F. Bonjean, J. Gunn, L. Miller, **G.T. Mitchum**, Surface Currents and Evolution of the 2006-2007 El Nino.

NASA Workshop on Decadal Climate Variability, Kona, Hawaii, May 2007
Mitchum, G.T., and R. Steven Nerem, Decadal Variability and Sea Level Rise.

AGU Joint Assembly, Acapulco, Mexico, May 2007
Mitchum, G.T., and N. Bernier (invited), Using Tide Gauges to Assure the Quality and Stability of Sea Surface Heights from Satellite Altimetry. (Note: Mitchum was the invited speaker and prepared the talk, but due a last minute schedule conflict with an NSF panel, Bernier attended and presented the talk in his place.)

IOC GLOSS Group of Experts X, Paris, France, June 2007
Invited as sea level expert and as Chair of GLOSS Science Steering Group.

1st International Meeting of Students in Physical Oceanography, Ensenada, Mexico, June 2007
Sedwick-Doran, K., and **G.T. Mitchum**, Improvements to the Method of Altimeter Calibration Using Tide Gauges: Addressing the Problem of Land Motion.

College of Marine Science Brown Bag, September 2007
Mitchum, G.T. (invited), Global Climate Change I: Is the Sky Really Falling and is it our Fault?

Florida Environmental Summit, Jacksonville, Florida, November 2007
Mitchum, G.T. (invited), A Review of the Science Underlying 20th Century Sea Level Rise Estimates.

Calendar year 2006

University of Texas at Austin, November 2006
Invited to give two seminars. One on Sea Level Rise in the Institute for Geophysics and one on circulation controls on swordfish catch in the Center for Nonlinear Dynamics in the Physics department.

World Climate Research Workshop on Global Sea Level Rise, Paris, France, June 2006
Invited as convenor of the 20th Century Sea Level Rise session

Mitchum, G.T., R.S. Nerem, and M. Merrifield (invited)

AGU Western Pacific Geophysics Meeting, Honolulu, Hawaii, August 2004

Mitchum, G.T., and C. Vonesch, Low frequency Modulations in the Response of Coastal Sea Level to Winter Storms.

Holland, C., and **G.T. Mitchum**, Interannual Volume Changes and Heat Transport Pathways in the Tropical Pacific.
Lagerloef, G., **G.T. Mitchum**, F. Bonjean, and R. Cheney, OSCAR (Ocean Surface Currents Analysis - Real time): An Operational Resource for Various Maritime Applications and El Nino Monitoring Using JASON-1 Data.

Leuliette, E., R.S. Nerem, J. Parker, **G.T. Mitchum**, and D. Chambers, Results of TOPEX/Poseidon-JASON Calibration to Construct a Continuous Record of Global Mean Sea Level.

Bathymetry from satellite altimetry planning meeting, San Diego, California, October 2002

Invited as an expert in satellite altimetry.

TOPEX/Poseidon/JASON-1 Science Working Team meeting, New Orleans, Louisiana, October 2002

Mitchum, G.T., (Invited) Updated JASON-1 stability estimates from global tide gauge measurements.

Holland, C., and **G.T. Mitchum**, Lagrangian Analyses of Interannual Volume Changes in the Tropical Pacific
Lagerloef, G., **G.T. Mitchum**, R. Cheney, L. Miller, M. Bourassa, F. Bonjean, J. Gunn, E. Johnson, N. Soreide, W. Zhu, R. Legeckis, V. Kousky, Y. Zue, J. Polovina, and G. Jacobs, OSCAR (Ocean Surface Current Analysis Real time): A Processing System and Web-server using JASON IGDR Data to Provide Timely Surface Velocity Fields in the Tropical Pacific.

NASA Workshop on Decadal Variability, Madison, Wisconsin, October 2002

Mitchum, G.T., and C. Vonesch, Low frequency modulations in winter storm frequency from tide gauge measurements of sea level.

GPS workshop, Toulouse, France, September 2002

Invited as an expert in altimetry and GPS and to serve as a session chair. -ince Workig(T),7(8)(c)428idjADcP(SMo)Da,16(9N)

American Meteorological Society Annual meeting, Dallas, January 1999

G.T. Mitchum (invited), A System for Measuring Long-term Regional to Global Sea Level Change, talk was presented by C. Holland

Calendar year 1998

Fall meeting of the American Geophysical Union, San Francisco, CA, December, 1998

Lagerloef, **G.T. Mitchum**, R. Lukas and A. Busalacchi, Tropical Pacific Surface Currents During the 1997-1998 El Nino-Southern Oscillation cycle.

S. Nerem, E. Leuliette, D. Chambers and **G.T. Mitchum** (invited), Variations in Global Mean Sea Level During the 1997-1998 ENSO event

INSMAP, Melbourne, December 1998

G.T. Mitchum (invited), On Calibrating Satellite Altimeters with Tide Gauges and GPS

TPEM/JASON-1 Science Working Team meeting, Boulder, October 1998

G.T. Mitchum (invited), Improvements to the Estimates of Altimeter Drift from Tide Gauges

G.T. Mitchum, A. Busalacchi and G. Lagerloef, Mean Surfaces for Altimetric Data : Beyond Representativeness

G. Lagerloef, **G.T. Mitchum** and A. Busalacchi, Pacific Surface Currents

International Association of Geodesy, International Symposium, Munich, October 1998

R.S. Nerem, R.J. Eanes, J.C. Ries, and **G.T. Mitchum** (invited), The Use of a Precise Reference Frame in Sea Level Change Studies

NASA Workshop on Interannual to Decadal Climate Variability, Williamsburg, September 1998

G.T. Mitchum (invited), Can We Compute Decadal Anomalies from Decade-long Altimetric Time Series?

World Ocean Circulation Meeting, Halifax, Nova Scotia, Canada, May 1998

G.T. Mitchum, Joint Use of the WOCE "Fast Delivery" Tide Gauges and Satellite Altimeters

T.M.S. Johnston, M.A. Merrifield, and **G.T. Mitchum**, Interannual Sea Level and Geostrophic Current Anomalies in the Western Tropical Pacific

G.S.E. Lagerloef, **G.T. Mitchum**, and A.J. Busalacchi, Tropical Pacific Circulation Studies

Spring meeting of the American Geophysical Union, Baltimore, April, 1998

N. Schmidt, M. Haines, M.E. Luther, and **G.T. Mitchum**, Analyses of ENSO-related Trends in Precipitation in Florida

Lagerloef, G., **G.T. Mitchum** and A. Busalacchi, Tropical Pacific Surface Circulation
Polovina, J., D. Kobayashi, M. Seki and **G.T. Mitchum**, Application of Altimeter-derived Surface Currents to
Fisheries Research and Management

International Sea Level Workshop, Honolulu, HI, June, 1997

Served as a member of the Science Steering Group for the workshop.

G.T. Mitchum (invited), Altimeter Calibration

Methods for Monitoring Sea Level: GPS and Tide Gauge Benchmark Monitoring, GPS Altimeter Calibration, Pasadena, CA, March, 1997

Chair of Session 2 -- An Introduction to the Measurements

G.T. Mitchum (invited), An Overview of Tide Gauge Measurements

G.T. Mitchum (invited), Using Tide Gauges to Calibrate Satellite Altimeter Measurements

Global Sea Level Observing System (GLOSS) Group of Experts, Pasadena, CA, March, 1997

Invited as a member of the Group of Experts to review the global sea level observing system, and to assist in the revision of the IOC's Global Sea Level Observing System Implementation Plan.