HANS CHRISTIAN GRABER
Professor and Chair, Division of Applied Marine Physics
Co-Director, Center for Southeastern Tropical Advanced Remote Sensing (CSTARS)
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RESEARCH AND SCIENTIFIC INTERESTS

Theoretical and numerical studies of surface wave dynamics, satellite oceanography, radar remote sensing, homeland security issues, maritime domain awareness, air-sea fluxes and boundary-layer dynamics, hurricane prediction, remote sensing of public health and environment, HF radar technology, wave-current interaction, storm surge, tsunamis.

PROFESSIONAL EDUCATION

Sc.D. (Hydrodynamics), Massachusetts Institute of Technology, 1984
S.M. (Coastal Engineering), Massachusetts Institute of Technology, 1979
B.E. (Civil Engineering), *magna cum laude*, The City College of New York, 1977

EMPLOYMENT SUMMARY

2007 - present Chair, Div. of Applied Marine Physics (AMP), RSMAS, University of Miami
2001 - present Professor, Div. of Applied Marine Physics (AMP), RSMAS, University of Miami
2001 - present Co-Director, CSTARS, University of Miami
1998 - 2007 Director, Rosenstiel Computer Facility, RSMAS, University of Miami
1992 - 2004 Director, HF Radar Ocean Sensing Laboratory, RSMAS, University of Miami
1990 - 2001 Associate Professor, Div, of AMP, RSMAS, University of Miami
1985 - 1990 Assistant Scientist, AOPE Dept., Woods Hole Oceanographic Institution
1979 - 1980 Visiting Scientist (NATO Fellowship) Max-Planck Institute for Meteorology, Hamburg, Germany.

LIST OF SOME SELECTED PUBLICATIONS (SELECTION FROM 65 PEER-REVIEWED PAPERS)

Graber, H.C., D. Thompson, and R. Carande, 1996: Ocean surface features and currents measured with SAR interferometry and HF radar. *J. Geophys. Res.*, **101**, 25,813-25,832.

Marmorino, G., D. Thompson, **H.C. Graber** and C. Trump, 1997: Correlation of oceanographic signatures appearing in SAR and INSAR imagery with in-situ measurements. *J. Geophys. Res.*, **102**, 18,723-18,736.

Ebuchi, N. and **H.C. Graber**, 1997: Directivity of wind vectors derived from the ERS-1/AMI scatterometer. *J. Geophys. Res.*, **103**, 7,787-7,797.

Graber, H.C., E. Terray, M. Donelan, W. Drennan, J. Van Leer, and D. Peters, 2000: ASIS – a new air-sea interaction spar buoy: Design and performance at sea. *J. Atmos. Oceanic Techn.*, **17**, 708-720.

Vandemark, D., B. Chapron, J. Sun, G. Crescenti, **H.C. Graber**, 2005: Ocean wave slope observations using radar backscatter and laser altimeters. J. Phys. Oceanogr.. **34**, 2825-2824

Horstmann, J., D.R. Thompson, F. Monaldo, S. Iris, and **H.C. Graber**. 2005. Can synthetic aperture radars be used to estimate hurricane force winds? *Geophys. Res. Lett.*, **32(L22801)**, doi:10.1029/2005GL023992.

Wyatt, L., G. Liakhovetski, **H.C. Graber** and B. Haus, 2005: Factors affecting the accuracy of Showex HF radar wave measurements. *J. Atmos. Oceanic Technol.,* **22**(7), 844-856.

Haus, B., R. Ramos, **H.C. Graber**, L. Shay and Z. Hallock, 2006: Remote observation of the spatial variability of surface waves interacting with an estuarine outflow. *IEEE J. Oceanic Engin*., **31**(4), 1-15.

Graber, H.C., V.J. Cardone, R. E. Jensen, D.N. Slinn, S.C. Hagen, A.T. Cox, M.D. Powell, and C. Grassl, 2006: Coastal Forecasts and Storm Surge Predictions for Tropical Cyclones. A Timely Partnership Program. Oceanography, 19(1), 130-141.

Soloviev, A., M.A. Donelan, **H.C. Graber**, B.K. Haus, and P. Schlüssel, 2006: Estimation of Near-Surface Turbulence and CO2 Transfer Velocity from Remote Sensing Data, J. Marine Sys., 66, 182-194.

Tang, D., J.N. Moum, J.F. Lynch, P. Abbot, R. Chapman, P.H. Dahl, T.F. Duda, G. Gawarkiewicz, S. Glenn, J.A. Goff, **H.C. Graber,** J. Kemp, A. Maffei, J.D. Nash, and A. Newhall, 2007: Shallow Water '06: A Joint Acoustic Propagation/Nonlinear Internal Wave Physics Experiment, Oceanography, 20(4), 156-167.

Dahl, P., J.W. Choi, N.J. Williams, and **H.C. Graber**, 2008: Field Measurements and Modeling of Attenuation from Near-Surface Bubbles for Frequencies 1-20 kHz. *JASA Exp. Lett*., J. Acoust. Soc. Am., Vol. 124, No. 3, Pt. 2. EL 163 – EL 169.

Knobles, D.P., R.D. Gaul, **H.C. Graber**, S.M. Joshi, and N.J. Williams, 2008: Analysis of wind-driven ambient noise in a shallow water environment with a sandy seabed. JASA Exp. Lett., J. Acoust. Soc. Am., Vol. 124, No. 3, Pt. 2. , EL 157 – EL 162.

EXTERNAL PROFESSIONAL ACTIVITIES AND EXPERIENCE

ONR Typhoon DRI, Executive Steering Committee, 2008-present
USAF "RadarSat-2 Tandem Demo" Review Team, 2007-present
NGA "SAR Utility Assessment Study", 2008-present
USSOUTHCOM, "Innovation Cell Quick-Look Project: Project Seahorse", July 2007
ROW – Radio Oceanography Workshop, 2001-present, Co-Chair
NASA Ocean Wind Vector Science Team for Seawinds on QuikSCAT, 2001-present
ONR Shoaling Waves Experiment (SHOWEX), 1997-2003
Naval Research Laboratory Base Program Review Committee, December 1997
WMO/IOC, Radar Ocean Sensing (ROSE), Committee Chairman, 1997-2001
National Research Council, National Academy of Science/Naval Studies Board, 1992-1995
NASA Facility Instrument Team for EOS, 1988-1991, Subgroup: Synthetic Aperture Radar

GRADUATE AND POSTDOCTORAL ADVISORS

PH.D. ADVISOR

University of Miami: John Hargrove, Rafael Ramos, Jingshuang Xue, Clarence Collins

M.S. ADVISOR

University of Miami: Louis Chemi, Wei Zheng, Silvia Gremes, Alexander Lowag

POST-DOCTORAL ADVISOR

Fabrice Collard, Rafael Ramos

Collaborators	Affiliation	Collaborators	Affiliation
Jochen Horstmann,	NATO-NURC	Dick Yue	MIT
Mark Donelan	UMiami	Ben Holt	JPL
William Pichel	NOAA/NESDIS	Robert Jensen	USACE
Chris Wackerman	General Dynamics	Don Slinn	UF
Frank Monaldo	APL/JHU		
Eric Terrill	Scripps		