

DAREK BOGUCKI

Associate Professor, Department of Physical and Environmental Sciences

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EDUCATION

Ph. D., Earth Sciences, University of Southern California, Los Angeles, California, 1996
M. Sc., Oceanography, Dalhousie University, Halifax, Canada, 1991
M. Sc., Applied Physics, and Math, Technical University, Gdansk, Poland, 1982
M. Eng., Engineering Diploma, Technical University, Gdansk, Poland, 1982

APPOINTMENTS

2016-present Texas A&M University—Corpus Christi, Corpus Christi, TX,
Associate Professor

2011-present Caltech/JPL, Pasadena, CA, *Faculty - part time (summer)*

2012 August-January 2013 Aerospace Eng. Dept., University of Southern California, Los Angeles,
CA, *Visiting Research Faculty*

2010-2016 Texas A&M University-Corpus Christi, Corpus Christi, TX,
Assistant Professor

2002-2009 Applied Marine Physics Dept., University of Miami, Miami, FL,
Assistant Professor

1999-2001 Aerospace Eng. Dept., University of Southern California, Los
Angeles, CA, *Assistant Research Professor*

1996-1999 Aerospace Eng. Dept., University of Southern California, Los
Angeles, CA, *Post-doctoral fellow (half-time)*

1996-1999 College of Oceanic and Atmospheric Sciences, Oregon State
University, Corvallis, OR, *Post-doctoral fellow (half-time)*

1982-1988 Polish Academy of Science, Sopot, Poland, *Research Associate*

TEACHING

- *PHYS 2426 University Physics II- lab- 2 sections, Spring 2019*
- *Graduate seminar series: ' Ocean Physics'. Polish Naval Academy: Mech. and
Electrical Engineering Dept., Gdynia, Poland, October 2018.*
- *CMSS 6328 Coastal Oceanography Using Remote Sensing, Spring 2018*
- *Seminar series for Ph.D. students, Gdansk Technical University, Applied Physics Dept,
June 2017, Gdansk, Poland*
- *CMSS 6596 (DIS) Upper Ocean Turbulence, International Summer School, 2016,
Gdansk, Poland*
- *CMSS 6102 Seminar in Coastal and Marine System Science, Fall 2015*

- *CMSS 6328 Coastal Oceanography Using Remote Sensing*, Fall 2010
- *PHYS 1401 University Physics I*, Fall 2010, Spring 2014
- *PHYS 2425 University Physics I*, Spring 2011, Spring 2012
- *PHYS 2426 University Physics II*, Fall 2011, Spring 2012, Fall 2012, Spring 2013, Spring 2014, Spring 2015
- *PHYS 4496 (DIS) Calculus-based Problems in Mechanics*, Spring 2012

STUDENTS & POSTDOCTORAL SUPERVISION

Current Students	Degree	Program	Role	Graduation Date
Mohammad Barzegar	Ph. D.	CMSS/TAMUCC	Cmmte. Chair	2020 (expected)
Shao Mingming*	Ph. D.	RSMAS /UM	Cmmte. Member	Fall, 2020
Shelby Metoyer	M. S.	TAMCC	Research advisor	Fall, 2019

Past Students	Degree	Program	Role	Graduation date^b
Juan Farias	M. S.	Math	Research advisor	Fall, 2019
Jesse Slaten	M.S.	Math	Research advisor	Fall, 2019
Miles Segler	B. S.	Electrical Eng.	Research advisor	2018
Nathan Laxague*	Ph. D.	U of Miami	Cmmte. Member	Fall, 2016
Chris Trombley	M. Sc.	MATH	Cmmte. Member	2013 ^b
Jonathan Zikos	B. S.	CHEM	Research Advisor	2014-2015
Zachary Bagley	B. S.	MATH	Research Advisor	2014
Fabio Leke**	Ph. D.	Oceanography	Research Advisor	2013-2014
Lorenzo Rossato ^a	Ph. D.	CMSS	Supervisor	2013-2014
Crystal Mitchell	B. S.	ESCI	Research Advisor	2012-2013
Tyler Schlenker (*)	Ph. D.	Aerospace Eng./USC	Research Advisor	June 2012-Dec. 2012
Silvia Matt*	Ph. D.	U of Miami	Cmmte. Member	2010 ^b
Sarah Woods*	Ph. D.	U of Miami	Cmmte. Chair	2009 ^b
Wlodek Freda***	Ph. D.	U of Miami	Research Advisor	2008-2009

Symbol explanation:

UM-University of Miami

USC-University of Southern California

^a= Mr. Rossato left the CMSS program, did not complete his Ph.D. degree.

^b = student's graduation date otherwise the date indicates when the student was advised.

Graduate students from other universities denoted with *:

*= student at the University of Miami, Rosenstiel School of Marine and Atmospheric Science
AMP- Applied Marine Physics or MPO - Meteorology and Physical Oceanography.

**= student at the Oceanography Department, University of São Paulo, Brazil.

***=student at the Physics Department, Maritime University, Gdynia, Poland.

(*) =student at the University of Southern California/SpaceX

Completed Postdoctoral Fellow Supervision	Date
Kimberly Huguenard	May 2012– June 2015
Eduardo Gentil	May 2013– Dec 2013
Hian Luo	2011– 2012
Sarah Woods	Jan 2010– Feb 2010
Jacek Piskozub*	Jan 2005– Jan 2006

Symbol explanation:

*= postdoc at the University of Miami, Rosenstiel School of Marine and Atmospheric Science.

GRANTS & CONTRACTS

Funded:

“Underwater Laser Line Scanner System”, submitted to the Department of Defense, Republic of Poland, 8/1/2020 – 9/1/2024, \$50,000, D. Bogucki (PI).

“Development of the Optical Turbulence Sensor ver. 2.0”, Collaborative effort with the JFE Inc. Kobe, Japan. (Internal JFE Inc. funds for the instrument development). 5/1/2018 – 6/1/2019. \$300,000. H. Lee / JFE Inc (PI), D. Bogucki (Co-PI \$3,000).

“Ad-hoc Chair project - Polish Naval Academy”, series of lectures for the cadets of the Polish Naval Academy (Polish Naval Academy- Gdynia), 9/1/2018-10/1/2018. D. Bogucki (PI \$10,000).

“Numerical simulation of the polarized light propagation over turbulent flow seeded with small particles”. Caltech/JPL (Division Technologist Discretionary Tasks Fund); 7/1/2018 – 8/1/2018. D. Bogucki (PI \$10,000).

"Consortium for Advanced Research on Hydrocarbon Transport in the Environment (CARTHE-III)". GOMRI, 1/1/2018 – 12/1/2019, \$5,000,000. T. Özgökmen/UM (PI), D. Bogucki (Co-PI \$200,000).

“Collaborative Research: Temporal and spatial scaling of dissipation under non-breaking surface waves”. National Science Foundation, 6/1/2015 – 12/31/2019, \$1,200,000, B. Haus/UM (PI), D. Bogucki (Co-PI \$410,000).

"Consortium for Advanced Research on Hydrocarbon Transport in the Environment (CARTHE-II)". GOMRI, 1/1/2015 – 12/1/2018, \$22,000,000. T. Özgökmen/UM (PI), D. Bogucki (Co-PI \$408,000).

"Consortium for Advanced Research on Hydrocarbon Transport in the Environment (CARTHE-I)". GOMRI, 8/1/2011 – 12/1/2015. \$16,000,000. T. Özgökmen/UM (PI), D. Bogucki (Co-PI \$769,000).

"Remote Ocean Mixed Layer Depth Parameter Measurement Validation". Caltech, 1/3/2012-1/3/2013. D. Bogucki (PI \$199,000), J. A. Domaradzki/USC (CO-PI), G. Spiers/JPL (Co-PI).

- "Faculty Part-Time award". Caltech, 7/15/2012-8/15/2012. D. Bogucki (PI -\$7,000).
- "Laboratory turbulence measurements". Tokyo University of Marine Science and Technology, 12/1/2011-1/15/2012. D. Bogucki (PI -\$10,000).
- "Near-Surface Turbulence in Coastal Environment – Effects of Surface Waves and Flow Shear". Texas Research Development Fund, 1/6/2010-1/6/2012. D. Bogucki (PI -\$35,000).
- "LIDAR- Mixed Layer Depth Measurement Concept". NASA/JPL, 6/1/2009-12/1/2010. D. Bogucki (PI -\$40,000).
- "Laboratory verification of the Optical Turbulence Sensor (OTS): particulate Volume Scattering Function". ONR, 1/1/2008-12/1/2010. D. Bogucki (PI -\$393,000).
- "Estimates of Arctic air-sea CO₂ transfer using the QuikSCAT scatterometer". NASA, 6/1/2007-12/1/2010. D. Bogucki (PI \$240,000), W. Drennan (CO-PI).
- "A turbulence sensor, Renewal". ONR (SBIR, Phase II), 1/1/2005-12/1/2006. D. Bogucki (PI -\$320,000).
- "A turbulence sensor". ONR (SBIR, Phase I), 1/1/2003-12/1/2004. D. Bogucki (PI -\$650,000).
- "A feasibility study to determine oceanic mixed layer depth using LIDAR measurements". NASA, 1/1/2002-12/1/2004. D. Bogucki (PI -\$100,000).
- "Improved estimates of gas transfer using satellite scatterometer". NASA, 1/1/2002-12/1/2004. D. Bogucki (PI -\$300,000).
- "An optical scattering and fluorescence sensor". ONR (SBIR, Phase I), 1/1/2002-12/1/2003. D. Bogucki (PI -\$70,000).

IN PREPARATION: PEER REVIEWED JOURNAL PUBLICATIONS/PATENTS

D. J. Bogucki, J. A. Domaradzki, M., Barzegar, B. K. Haus, D. Mingming." The dissipation of energy beneath non-breaking waves "; *in prep. The Nature*

PATENTS GRANTED

Bogucki D. 2012. "Optical Turbulence Sensor". U.S. Patent 0,078,517, filed September 21, 2011, and issued March 29, 2012.

PEER-REVIEWED JOURNAL PUBLICATIONS

- S. Metoyer, M., Barzegar, D. J. Bogucki, B. K. Haus, D. Mingming." Measurement of small-scale surface velocity and turbulence using infrared imaging "; submitted to *J. Phys. Ocean*
- M., Barzegar, D. J. Bogucki, B. K. Haus, D. Mingming." The boundary layer under weak forcing"; submitted to *J. Ocean Technology*
- K. D. Huguenard, D. J. Bogucki, D. G. Ortiz-Suslow, J. H. MacMahan." Surface transport during a cold air outbreak: Interactions between wind-driven cross-shore circulation and a nearshore front", accepted with revisions *Estuarine, Coastal and Shelf Science*.
- Bogucki D., J. A. Domaradzki, P. von Allmen 2018 "Polarimetric lidar measurements of aquatic turbulence - laboratory experiment". *Optics Express*, Vol. 26, 6, 6806-6816
- Sang Y., H. B. Karayaka, Y. Yan, Z. Zhang, D. Bogucki. "A Rule-Based Control Methodology for a Slider Crank Wave Energy Converter Power Take-Off System", 2017, *International Journal of Marine Energy*. doi: [http:// dx.doi.org/10.1016/j.ijome.2017.07.001](http://dx.doi.org/10.1016/j.ijome.2017.07.001)

- Poje, C. A., T.M. Özgökmen, D. J. Bogucki, A. D. Kirwan, Jr., 2017.” Evidence of a forward energy cascade and Kolmogorov self-similarity in submesoscale ocean surface drifter observations”. *Phys. Of Fluids*, 29, 020701, 1-10.
- Mariano, A. J., E. H. Ryan, H. S. Huntley, L.C. Laurindo, E. Coelho, A. Griffa, T. M. Özgökmen, M. Berta, D. Bogucki, S. Chen, M. Curcic , M. Gough, B. K. Haus, A. C. Haza, P. Hogan, M. Iskandarani, G. Jacobs, A. D. Kirwan, Jr., N. Laxague, B. Lipphardt, Jr., M. G. Magaldi, G. Novelli, A. Reniers, J. M. Restrepo, C. Smith, A. Valle-Levinson, and M. Wei, 2016, “Statistical properties of the surface velocity field in the northern Gulf of Mexico sampled by GLAD drifters”, *JGR-Oceans*, 121, 5193–5216,
- Huguenard K. D, D. J. Bogucki, D. G. Ortiz-Suslow, N. J. M. Laxague, J. H. MacMahan, T. M. Özgökmen, B. K. Haus, A. J. H. M. Reniers, J. Hargrove, A.V. Soloviev, H. Graber, 2016 “On the nature of the frontal zone of the Choctawhatchee Bay plume in the Gulf of Mexico”, *JGR-Oceans*, 121(2), 1322-1345.
- Bogucki D. J., and J. A. Domaradzki. 2015. Temperature gradient spectra and temperature dissipation rate in a turbulent convective flow. *Journal of Turbulence*, 16(12): 1179-1198.
- Bogucki D. J., K. Huguenard, B.K. Haus, T.M. Özgökmen, A. Reniers, N. J. M. Laxague. 2015. Scaling Laws for the Upper-Ocean Temperature Dissipation Rate. *Geophysical Research Letters*, 42(3): 839-846.
- Laxague, N. J. M., B. K. Haus, D. Bogucki, and T.M. Özgökmen. 2015. Spectral characterization of fine-scale wind waves using shipboard optical polarimetry. *JGR: Oceans*, 120(4): 3140-3156.
- Coelho E. P. Hogan, G. Jacobs, P. Thoppil, H. Huntley, B. Haus, B. Lipphardt, Jr., A. D. Kirwan, Jr., E. H. Ryan, J. Olascoaga, G. Novelli, F. Beron-Vera, A. C. Haza, A. C. Poje, A. Griffa, T.M. Özgökmen, D. Bogucki, S. S. Chen, M. Curcic, M. Iskandarani, F. Judt, N. Laxague, A. J. Mariano, A.J.H.M. Reniers, C. Smith, A. Valle-Levinson, and M. Wei. 2015. Ocean Current Estimation Using a Multi-Model Ensemble Kalman Filter During the Grand Lagrangian Deployment Experiment (GLAD). *Ocean Modelling*, 87: 86-106.
- Jacobs, G.A., B. Bartels, D. Bogucki, F.J. Beron-Vera, S. S. Chen, E.F. Coelho, M. Curcic, A. Griffa, M. Gough, B.K. Haus, A.C. Haza, R.W. Helber, P.J. Hogan, H. Huntley, M. Iskandarani, F. Judt, A.D. Kirwan Jr., N. Laxague, A. Valle-Levinson, B. Lipphardt, A. Mariano, H.E. Ngodock, G. Novelli, M.J. Olascoaga, T.M. Özgökmen, P.G. Thoppil, A.C. Poje, A. J.H.M. Reniers, C.D. Rowley, E.H. Ryan, S.R. Smith, P.L. Spence, and M. Wei. 2014. Data Assimilation Considerations for Improved Ocean Predictability during the Gulf of Mexico Grand Lagrangian Deployment (GLAD), *Ocean Modelling*, 83: 98-117.
- Woods S., J. Minnett, C. Gentemann, and D. Bogucki. 2014. “Influence of the cool skin layer on global air-sea CO2 flux estimates”, *Rem. Sens. of Envir.*, 145: 15-24.
- Özgökmen, T.M., F. J. Beron-Vera, D. Bogucki, S. Chen, C. Dawson, W. Dewar, A. Griffa, B.K. Haus, A.C. Haza, H. Huntley, M. Iskandarani, G. Jacobs, B. Jagers, A.D. Kirwan, Jr., N. Laxague, B. Lipphardt, Jr., J. MacMahan, A.J. Mariano, J. Olascoaga, G. Novelli, A.C. Poje, A.J.H.M. Reniers, J.M. Restrepo, B. Rosenheim, E.H. Ryan, C. Smith, A. Soloviev, S. Venkataramani, G. Zha, P. Zhu. 2014. Research Overview of the Consortium for Advanced Research on Transport of Hydrocarbon in the Environment (CARTHE). *International Oil Spill Conference Proceedings*, 2014(1): 544-560.

- Bogucki D. J. and G. Spiers. 2013. What is the percentage of oceanic mixed layer accessible to marine LiDAR? Global and the Gulf of Mexico prospective, *Optics Express*, 21(20): 23997-24014.
- Bogucki D. J., W.M. Drennan, S. Woods, S. Gremes-Cordero, D.G. Long, and C. Mitchell. 2013. "Short surface waves in the Canadian Arctic in 2007 and 2008, *JGR: Oceans*, 118(7): 3712-3722.
- Bogucki D. J., Luo, H., J.A. Domaradzki. 2012. Experimental evidence of the Kraichnan scalar spectrum at high Reynolds number. *Journal of Physical Oceanography*, 42(10): 1717–1728.
- Woods S., W. Freda, J. Piskozub, M. Jonasz, D. Bogucki. 2010. Laboratory measurements of light beam depolarization on oceanic turbulent flows. *Applied Optics*, 49(18): 3545-51
- Bogucki D., M.-E. Carr, W. Drennan, P. Woiceshyn, M. Schmeltz and T. Hara. 2010. Preliminary and novel estimates of CO₂ gas transfer using a satellite scatterometer during the 2001 GasEx experiment. *International Journal of Remote Sensing*, 31(1): 75-92
- Bogucki D., L. Redekopp. 2008. The climate of long internal waves and resuspension on the coastal shelf. *Oceanologia*, 50(1): 5-21.
- Bogucki D., J. Piskozub, M.-E. Carr and G. Spiers. 2007. Monte Carlo simulation of propagation of a short light beam through turbulent oceanic flow. *Optics Express*, 15(21): 13988-13996.
- Bogucki D., J. A. Domaradzki, C. Anderson, H. W. Wijesekera, R. J. Zaneveld, C. Moore. 2007. Optical measurement of rates of dissipation of temperature variance due to oceanic turbulence. *Optics Express*, 15(12): 7224-7230.
- Bogucki D., B. Jones, and M.-E. Carr. 2005. Remote measurements of the horizontal eddy diffusivity. *Journal of Oceanic and Atmospheric Technology*. 22(9): 1373-1380.
- Bogucki D., J. A. Domaradzki. 2005. Numerical study of light scattering by a boundary-layer flow. *Applied Optics*. 44(25): 5286-5291.
- Bogucki D., L. Redekopp, and J. Barth. 2005. Internal Solitary Waves in the Coastal Mixing and Optics Experiment-1996: multimodal structure and resuspension. *Journal of Geophysical Research*, 110(C2):1-19.
- Stramski D., E. Boss, D. Bogucki, and K. J. Voss. 2004. The Role of Seawater Constituents in Light Backscattering in the Ocean. *Progress in Oceanography*. 61(1): 27-56.
- Bogucki D., J. A. Domaradzki, R. E. Ecke, and C. R. Truman. 2004. Light scattering on oceanic turbulence. *Applied Optics*. 43(30): 5662-5668.
- Wang B. J., D. J. Bogucki, and L. G. Redekopp. 2001, Internal solitary waves in a structured thermocline with implications for resuspension and the formation of thin particle-laden layers. *Journal of Geophysical Research*. 106: 9565-9586.
- Barth J. A. and D. J. Bogucki. 2000. Spectral light absorption and attenuation measurements from a towed undulating vehicle, *Deep Sea Research Part I: Oceanographic Research*. 47(2): 323- 342.
- Bogucki D. J. and L. G. Redekopp. 1999. A Mechanism for Sediment Resuspension by Internal Solitary Waves. *Geophysical Research Letters*. 26(9): 1317-1320.
- Barth J. A., D. Bogucki, S. D. Pierce and P. M. Kosro, 1998. Secondary circulation associated with a shelf break front. *Geophysical Research Letters*. 25(15): 2761-2764.
- Bogucki D., A. J. Domaradzki, D. Stramski and R. Zaneveld. 1998. Comparison of near-forward light scattering on oceanic turbulence and particles. *Applied Optics*. 37: 4669-4677.
- Bogucki D., A. J. Domaradzki and P. K. Yeung. 1997. Direct numerical simulations of passive scalars with $Pr > 1$ advected by turbulent flow. *Journal of Fluid Mechanics*. 343: 111-130.

- Bogucki D., L. G. Redekopp, and T. Dickey. 1997. Sediment resuspension and mixing by a resonantly generated internal solitary wave. *Journal of Physical Oceanography*. 27: 1181-1196.
- Dickey T. D., R. H. Douglass, D. Manov, D. Bogucki, P. C. Walker, and P. Petrelis. 1993. An Experiment in Two-Way Communication with a Multivariable Moored System in Coastal Waters. *Journal of Atmospheric and Oceanic Technology*. 10(4): 637-644.
- Bogucki D., and C. Garrett. 1993. A simple model for the shear-induced decay of an internal solitary wave. *Journal of Physical Oceanography*. 23(8): 1767-1776.

REFEREED CONFERENCE PROCEEDINGS

- Karayaka H., H. Mahlke, D. Bogucki, R. Mehrubeoglu. 2011. A Rotational Wave Energy Conversion System Development and Validation with Real Ocean Wave Data. Detroit, Michigan: *IEEE Power Engineering Society 2011 General Meeting*: 1-7.

REFEREED BOOK CHAPTERS

- Wang B, D. Bogucki and L. G. Redekopp, 2000. Transition in Separated Flows via Global Instability. In: '*Laminar-Turbulent Transition*'. Edited by W. Saric & H. Fasel. Springer-Verlag, pp. 667-674.
- Koblentz-Mishke O. J., B. Wozniak, R. Hapter and D. Bogucki, 1985. Primary productivity, chlorophyll, assimilation number and their relation to irradiance. In: '*Assimilation of solar energy by marine phytoplankton in the Black and the Baltic Sea*'. Edited by O. J. Koblentz-Mishke. Moscow. (In Russian).
- Koblentz-Mishke O. J., B. W. Konowalow, B. Wozniak and D. Bogucki, 1985. The efficiency of energy conversion by phytoplankton during photosynthesis. In: '*Assimilation of solar energy by marine phytoplankton in the Black and the Baltic Sea*'. Edited by O. J. Koblentz-Mishke. Moscow. (In Russian).

NON-REFEREED CONFERENCE PROCEEDINGS/PUBLICATIONS

- Ortiz-Suslow, D. G., K. Huguenard, N. J. M. Laxague, N. J. Williams, D. Bogucki, B.K. Haus, 2015. Coastal dynamics observed from a mobile air-sea interaction platform, IEEE/OES 11th Current, *Waves, and Turbulence Measurement Conference Proceedings*.
- K Huguenard, D Bogucki, TM Ozgokmen, BK Haus, A Reniers, J MacMahan, J Hargrove, N Laxague, DG Ortiz-Suslow, 2014 AGU Fall Meeting.
- Bogucki D., L. G. Redekopp, 2000. Resuspension and boundary mixing stimulated by long internal waves. *Fifth Int'l. Symp. On Stratified Flows*, 283-288.
- Bogucki D. J., R.E. Ecke, A.J. Domaradzki, R.C. Truman, and J. R.V. Zaneveld, 1998." Near forward light scattering on oceanic turbulence and particulates: comparison of experiment and theory", *Ocean Optics XIV Conference Papers*, 4669-4677.
- Bogucki D., A. Domaradzki, D. Stramski, and R. Zaneveld. 1997. "Light scattering on turbulence and on particulates". SPIE 2963, *Ocean Optics XIII*, 49-53.
- Bogucki D., A. Domaradzki, R. Zaneveld, and T. Dickey. 1994. Light Scattering induced by Turbulent Flow. SPIE 2258, *Ocean Optics XII*, 247-255.
- Simeon J., J. A. Barth, D. J. Bogucki, A. Erofeev, R. O'Malley and S. D. Pierce, 2000. "SeaSoar spectral light absorption and attenuation observations during the Coastal Mixing an Optics experiment: R/V Endeavor cruises from 14-Aug to 1-Sep 1996 and 25-Apr to 15-

May 1997". College of Oceanic and Atmospheric Sciences, Oregon State University, Corvallis, Ref. 00-3, Data Report 179.

PROFESSIONAL ACTIVITIES

CONFERENCE ACTIVITIES

- Organized and taught at the '*1st - Upper Ocean Turbulence - Summer School 2016, Gdansk, Poland*', 20 US and international students, July-August 2016
- Session Co-Convener: '*Measurement and modeling of the ocean surface boundary layer*', AGU Fall Meeting, San Francisco, December 2015
- Session Convener: '*Upper ocean turbulent fields and their variability: temperature, salinity, energy*', Ocean Sciences Meeting, Honolulu, 2014
- Session Convener: '*Mini-Symposium on Optical Effects of Turbulence*', 63rd Annual Meeting of the American Physical Society, Division of Fluid Dynamics, Long Beach, CA 2010

REVIEWER FOR JOURNALS

Journal of Physical Oceanography, Deep Sea Research, Geophysical and Astrophysical Fluid Dynamics, Journal of Fluid Mechanics, Journal of Atmospheric and Oceanic Technology, IEEE Journal of Oceanic Engineering, Geophysical Research Letters, Journal of Geophysical Research, Applied Optics, Optics Express, Reviews of Modern Physics, Physical Review journals, Physics of Fluids, Laser Physics, PNAS

TECHNICAL REVIEWER

Panel member of:
NASA Physical Oceanography Program, EOS, and NSF Physical Oceanography Programs, Marine Science & Technology Foundation (E. Schmidt Foundation, National Oceanographic Partnership Program BAA

Proposal reviewer: NSF, NASA, ONR and National Academy of Sciences of US.

LOCAL PROFESSIONAL ACTIVITIES

DEPARTMENT

Library Committee- a member: November: 2018-Present
CMSS Committee Chair, Academic Recruitment Committee: 2012 – Present.

COLLEGE

Committee Chair

- Chair of Atmospheric Sciences - Faculty search - two positions: January 2013 – December 2013.
- Chair of Assistant Professor of Physics - Faculty search – one position: January 2011 - May 2011.

UNIVERSITY

MOA (Memorandum of Agreement) with Polish Naval Academy, 2018, Gdynia, Poland

MOA (Memorandum of Agreement) with Gdansk Technical University, Gdansk, Poland: January 2016 - Present

MOA with Gdansk University, Poland: December 1, 2013 - December 1, 2017.

MOA with The Instituto Oceanográfico da Universidade de São Paulo, Brazil: December 1, 2013 - December 1, 2017.

Informal collaboration between University Houston-Downtown and TAMUCC: 2011 – Present.

Committee Member:

Texas Fluid Dynamics Club (based at UT-San Antonio): March 2018- now

College of S&E Research Enhancement/Research-Reassignment Committee: January 2012 –May 2013.

S&T Curriculum Committee: November: 2010 – November 2012.

LOCAL COMMUNITY

Taught an invited class for 5th grade and carried out an experiment at the Corpus Christi Metro Elementary School, 2015.

MEDIA COVERAGE

Bogucki D., "Ocean physics " Ad-hoc Chair - Polish Naval Academy *Gdynia, Poland*. A series of lectures for cadets of the Polish Naval Academy about Ocean Physics: <https://www.amw.gdynia.pl/index.php/o-nas/fotoaktualnosci/item/2297-katedra-ad-hoc-2018-dr-darek-bogucki-2-10>, 2018.

Bogucki D., "Small-scale ocean physics "An interview for the *Gdansk Technical University, Gdansk, Poland*, 2017.

<https://www.facebook.com/InternationalGdanskUniversityofTechnology/videos/1435183589861458/>

Bogucki D., "16-foot Waves Measured in the Arctic Ocean Where There Was Once Only Ice". An interview for the *National Geographic*. Reprinted in the *Traveler's Today* and the *Palm Beach Post*, 2014

Bogucki D., "Tiny Ripples Important to Ocean Mixing". An interview for the *TAMUCC News (TAMUCC web page)*. Reprinted in the *Sea-Technology E-News*, 2014

Zikos, J, Bogucki D., "Research Looks at How Oil and Water Mix in Gulf Waters in Spill Aftermath", An interview for the *TAMUCC News (TAMUCC web page)*. Reprinted in *World Oil*, 2014

Bogucki D., "BP spill study flows into the city". An interview for the *Caller Times*, 2011

INTERNATIONAL INVITED CONFERENCE PRESENTATION

Bogucki D., "Scaling laws for the upper ocean temperature dissipation rate", *Texas A&M Turbulence Symposium 2015: Recent advances in turbulence and mixing research* TAMU, College Station, TX; I had to decline that invitation due to medical emergency, 2015.

Bogucki D., "Optical Turbulence Probe", *Japanese Oceanographic Society Spring Meeting*, Tokyo, Japan, 2015.

Bogucki D., G. Spiers, "Direct remote measurement of the mixed-layer using LiDAR", NASA/JPL Climate Science Workshop, Pasadena, CA, 2015.

Bogucki D., Arnott, K, Laxague, N, B. Haus, “Subsurface turbulence measurements during GLAD experiment”. *Ocean Sciences Meeting*, Honolulu, 2014

Bogucki D., "Temperature spectra and the light beam depolarization in laboratory Rayleigh-Benard convection with the Rayleigh number between 10^8 to 5×10^9 ", *63rd Annual Meeting of the American Physical Society*, Division of Fluid Dynamics 2010, Long Beach, CA, 2010.

INTERNATIONAL AND NATIONAL PRESENTATIONS (*- INVITED)

D. Bogucki, M. Barzegar, B. Haus, J. A. Domaradzki, “Turbulent dissipation under non-breaking waves – why do we care”, invited presentation to Marine Science Dept., TAMUG, Galveston 2019.

M. Barzegar, D. Bogucki, B. Haus, “The response of the boundary layer to a weak forcing”, invited presentation to Marine Science Dept., TAMUG, Galveston 2019.

M. Barzegar, D. Bogucki, B. Haus, S. Mingming, M. Sanchit,, “Change of turbulent kinetic energy and temperature dissipation rate through the surface boundary layer”. *Gulf of Mexico Oil Spill & Ecosystem Science Conference*, New Orleans, LA, 2019.

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