Abbreviated CV's for Key Project Personnel

JOSH T. KOHUT
Center for Ocean Observing Leadership, Department of Marine and Coastal Sciences
New Jersey Agriculture Experiment Station
Rutgers University, New Brunswick, NJ 08901-8521
(Tel.) 848-932-3496; (Fax) 732-932-8578
E-mail: kohut@marine.rutgers.edu

Professional Preparation:
College of Charleston; Charleston, SC, USA; B.S. with honors in Physics (Cum Laude); 1997.
College of Charleston; Charleston, SC, USA; Minor in Mathematics; 1997.
Rutgers University; New Brunswick, NJ, USA; Ph.D. in Physical Oceanography; 2002.

Appointments:
2019-Pres: Professor, Rutgers University, New Brunswick, New Jersey.
2014-2019: Associate Professor, Rutgers University, New Brunswick, New Jersey.
2008-2014: Assistant Professor, Rutgers University, New Brunswick, New Jersey.
2002-2007: Director: COOL Operational Center, Rutgers University, New Brunswick, New Jersey.
1997-2002: Graduate Assistant, Rutgers University, New Brunswick, New Jersey

Selected Products:
Kohut, J., Winsor, P., Statscewich, H., Oliver, M., Fredj, E., Couto, N., Bernard, B., and Fraser, W. 2018. Variability in summer surface residence time within a Western Antarctic Peninsula biological hotspot. Philosophical Transactions of the Royal Society. DOI 10.1098/rsta.2017.0165.

Oliver, M., Kohut, J., Bernard, K., Fraser, W., Winsor, P., Statscewich, H., Fredj, E., Cimino, M., Patterson-Fraser, D., and Carvalho, F. 2019. Central place foragers select ocean surface convergent features despite differing foraging strategies. Scientific Reports. Vol 9. pp. 1-10.
DOI: 10.1038/s41598-018-35901-7.

Kohut, J., Kustka, A, Hiscock, M., Lam, P., Measures, C., Milligan, A., White, A., Carvalho, F., Hatta, M., Jones, B., Ohnemus, D., Swartz, J. 2016. Mesoscale variability of the summer bloom over the northern Ross Sea shelf: A tale of two banks. Journal of Marine Systems. http://dx.doi.org/10.1016/j.jmarsys.2016.06.009

Carvalho, F., J. Kohut, M. J. Oliver, and O. Schofield. 2017. Defining the ecologically relevant mixed-layer depth for Antarctica's coastal seas, Geophys. Res. Lett., 44, 338–345, doi:10.1002/2016GL071205.

Kohut, J., Bernard, K., Fraser, W., Oliver, M., Statscewich, H., Winsor, P., Miles, T. 2014. Studying the Impacts of Local Oceanographic Processes on Adélie Penguin Foraging Ecology. Marine Technology Society Journal. 48(5). pp. 25-34.

Other Significant Products:
Kohut, J. T., S. M. Glenn, and J. D. Paduan. 2006, Inner shelf response to Tropical Storm Floyd, J. Geophys. Res., 111, C09S91, doi:10.1029/2003JC002173.

Kohut, J.T., H.J. Roarty and S.M. Glenn. 2006. Characterizing Observed Environmental Variability with HF Doppler Radar Surface Current Mappers and Acoustic Doppler Current Profilers: Environmental Variability in the Coastal Ocean, IEEE Journal of Oceanic Engineering, Vol. 31, No. 4, pp. 876-884.

Kohut, J., Hunter, E., and Huber, B. 2013. Small scale variability of the cross-shelf flow over the outer shelf of the Ross Sea, J. Geophys. Res, Vol. 118, 1–14, doi:10.1029/2012JC008243.

Glenn, S., Miles, T, Seroka., G.N., Xu, Y., Forney, R., Yu, F., Roarty, H., Schofield, O., Kohut, J. 2016. Stratified Coastal Ocean Interactions with Tropical Cyclones, Nature Communications 7.

Kohut, J. T., Glenn, S. M., Chant, R. J. 2004. Seasonal current variability on the New Jersey inner shelf. Journal of Geophysical Research. 109, C07S07, doi: 10.1029/2003JC001963.

Synergistic Activities:

PI is a member of the Marine Technology Society Board of Directors. As vice president of education the PI provides support for existing and new educational programs and effort conducted by the society.

PI is a member of the New Jersey Department of Environmental Protection Science Advisory Board, which provides scientific advice to the department related to marine water quality and quantity.

Michael Crowley

Director, Rutgers University, Dept. Marine & Coastal Science, 71 Dudley Road, New Brunswick, NJ, 08901

Email: crowley@rutgers.edu; Phone: 848-932-3287

Education: 1993 M.S. Oceanography/Geography (Remote Sensing, Physical Oceanography), Rutgers University, New Brunswick, NJ. 1991 B.A. Geography (Remote Sensing & Geographic Information Systems), Rutgers University, NJ.

Current Experience: Michael is the Technical Director for the Rutgers University Center for Ocean Observing Leadership (RUCOOL) and the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS). His RUCOOL work includes: management of operations for the entire COOL Lab, ensuring continuous quality data delivery from RUCOOL, managing finances and tasking across numerous projects, heading up the external communications for the RUCOOL Team including oversight of our website and acting as the health and safety officer for the Orsted ECO-PAM and fisheries project.

As the Technical Director for the U.S. Integrated Ocean Observing System (IOOS) Mid-Atlantic Regional Coastal Ocean Observation System (MARACOOS – MARACOOS.org), Michael oversees all aspects of data collection within the Mid-Atlantic Bight. MARACOOS collects data primarily from satellites, HF-Radar and underwater ocean gliders as well as buoys/moorings. Data from all the instrumentation is used to feed and test/validate ocean prediction models, with the ultimate goal being to better enable scientists to predict both the ocean and atmospheric weather for the greater good of the Mid-Atlantic region.

Past Experience:

2006-2010: Program Manager, PAR Government Systems Corporation, La Jolla, CA.
Mike was the Program Manager of the Rapid Robust Sensor Development and Deployment Program (R2D2) for NAVAIR. The R2D2 program was directed toward the implementation of low-cost autonomous sensing systems in support of US Navy missions. Missions included IED, landmine and personnel detection using a multi-spectral video imaging acquisition and processing system on board a small unmanned aircraft. In addition to R2D2, Mr. Crowley focused on business development for PAR's Signal and Image Processing business unit located at the San Diego Technology Center (SDTC). Activities included, but were not limited to: marketing new customers, proposal generation, program development and planning, program management, and participating in the algorithm testing activities on several remote sensing programs.

2003-2006: Technical Sales Manager, SeaSpace Corporation, Poway, CA.
Michael has comprehensive experience in the field of remote sensing including land, ocean and atmospheric studies with real-time data. Michael worked with multi-spectral VIS/IR radiometers, SAR, passive microwave sounders and imagers, and radio buoy tracking. He oversaw multiple ground station installation projects for both operational (civil and military) and research (academic and government lab) projects on every continent, including the Antarctic. He organized and chaired remote sensing conferences worldwide. Mike presented scientific research papers at remote sensing conferences, as well as organized and staffed trade-show exhibits. He possesses unique qualifications for understanding academic, military and corporate views, and their use and application of remotely sensed data. He traveled to over 10 countries on 4 continents, presenting

and informing students and professors, generals and admirals, and government ministers on potential uses of remote sensing in their regions. Additionally, he managed the sales department, which acquired over $6,000,000 in annual revenue.

1993-2003: Director, Marine Remote Sensing Lab, Institute of Marine and Coastal Sciences,
Rutgers University, New Brunswick, NJ

Throughout his first 10 years at Rutgers, Michael's research efforts were supported largely by the United States Navy and National Oceanic and Atmospheric Administration (NOAA). Early research projects included using multiple satellite sensors (Geosat, AVHRR, DCS) and in-situ datasets to monitor the Gulf Stream and model subsurface fronts to support operational anti-submarine warfare. In later years, he supported Navy S.E.A.L. teams (Special Forces) and mine counter measure research in coastal regions using satellite imagery to forecast currents and visibility for naval operations in coastal waters. Satellite data was combined with *in situ* data (http://marine.rutgers.edu/cool/sat_data/), CODAR HF-RADAR, AUV data, ADCP/ADP//CTD data and aerial photography. This was used to support shallow water submarine warfare mission planning. He served as the primary web developer for the Coastal Ocean Observation lab where real time satellite data from a SeaSpace satellite ground station was displayed (http://rucool.marine.rutgers.edu/cool). Over 90,000 hits per day on average occur on this site, with 90% of those accessing these real-time satellite image products (primarily fishermen, sailors and beachgoers). Mr. Crowley has taught hundreds of students, K-12 teachers, professors and the general public by lecturing and performing one-on-one training/tutoring sessions in remote sensing.

Relevant Publications:

Seroka, G.; Dunk, R.; Glenn, S.; Bowers, L.; Kerfoot, J.; Crowley, M.; Roarty, H.; Palamara, L., "Rutgers University Coastal Ocean Observation Laboratory (RU-COOL) advanced modeling system developed to cost-effectively support offshore wind energy development and operational applications," *Oceans, 2012* , vol., no., pp.1,4, 14-19 Oct. 2012 doi: 10.1109/OCEANS.2012.6404935

Glenn, S.; Schofield, O.; Kohut, J.; Bowers, L.; Crowley, M.; Dunk, etal., "Impact of ocean observations on hurricane forecasts in the Mid-Atlantic: Forecasting lessons learned from Hurricane Irene," *Oceans, 2012* , vol., no., pp.1,5, 14-19 Oct. 2012 doi: 10.1109/OCEANS.2012.6404929

Crowley, M., Schofield, O., Glenn, S., Whoriskey, F., *Gliderpalooza 2013 to Modelpalooza 2014: Joint U.S. & Canadian Ocean Glider Operations Supporting Multidisciplinary Scientific Research and Education*, MTS IEEE Oceans 2014 Proceedings.

Murphy, S. C., L. J. Nazzaro, J. Simkins, M. J. Oliver, J. Kohut, M. Crowley, and T. N. Miles (2021), *Persistent upwelling in the Mid-Atlantic Bight detected using gap-filled , high-resolution satellite SST*, Remote Sens. Environ., 262, 112487, doi:10.1016/j.rse.2021.112487

Douglas R. Zemeckis

Rutgers, The State University of New Jersey (732)-349-1152
Department of Agriculture and Natural Resources zemeckis@njaes.rutgers.edu
1623 Whitesville Road, Toms River, NJ 08755, USA

EDUCATION

Ph.D., Marine Science and Technology **2009–2016**
University of Massachusetts, Dartmouth, MA
B.S., Marine Sciences **2005–2009**
Rutgers College, Rutgers University, New Brunswick, NJ

PROFESSIONAL EXPERIENCE

County Agent III (Assistant Professor) **2017–Present**
Department of Agriculture and Natural Resources, Rutgers University
Postdoctoral Researcher (*Part-Time*) **2016–2017**
Department of Marine and Coastal Sciences, Rutgers University
Postdoctoral Fellow (*Part-Time*) **2016–2017**
SMAST, University of Massachusetts Dartmouth
Research Associate **2015–2016**
SMAST, University of Massachusetts Dartmouth
Research Technician **2013–2015**
SMAST, University of Massachusetts Dartmouth
Graduate Research Assistant **2009–2013**
SMAST, University of Massachusetts Dartmouth
Undergraduate Research Assistant **2008**
Haskin Shellfish Research Laboratory, Rutgers University

HONORS AND AWARDS

Achievement Award, National Association of County Agricultural Agents (NACAA), 2022
John H. Annala Fisheries Leadership Award, Gulf of Maine Research Institute, 2019
Outreach Excellence Award, School of Environmental and Biological Sciences/New Jersey Agricultural Experiment Station, Rutgers University, 2019
Distinguished Service Award, American Institute of Fishery Research Biologists (AIFRB), 2018

JOURNAL AND BOOK PUBLICATIONS (selected, n = 8 of 28)

Trudeau, A., E.A. Bochenek, A.S. Golden, M.C. Melnychuk, **D. Zemeckis**, and O.P. Jensen. *In Press*. Shorter seasons proportionately reduce for-hire fishing effort in a multispecies marine recreational fishery. Canadian Journal of Fisheries and Aquatic Sciences.

Capizzano, C., E.A. Jones, S.B. Scyphers, **D. Zemeckis**, A.J. Danylchuk, and J.W. Mandelman. *In Press*. The implications of recreational angler beliefs, attitudes, and behaviors on promoting responsible fishing practices in a multispecies Gulf of Maine fishery. Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science.

Capizzano, C., **D. Zemeckis**, E.A. Jones, W.S. Hoffman, M.J. Dean, M.H. Ayer, N. Ribblett, and J.W. Mandelman. 2021. Reducing bycatch impacts in recreational fisheries: case study examining terminal tackle in the multispecies Gulf of Maine groundfish fishery. Fisheries Management and Ecology, 28(4): 338-350.

Smith, S.L., A.S. Golden, V. Ramenzoni, **D. Zemeckis**, and O.P. Jensen. 2020. Adaptation and resilience of commercial fishers in the Northeast United States during the early stages of the COVID-19 pandemic. PLoS ONE, 15(12): e0243886. https://doi.org/10.1371/journal.pone.0243886.

Zemeckis, D. 2020. Offering a HyFlex fisheries science course for stakeholders of New Jersey's fisheries. Journal of Extension, 58(1): https://tigerprints.clemson.edu/joe/vol58/iss1/10/.

Zemeckis, D., J. Kneebone, C.W. Capizzano, E.A. Bochenek, W.S. Hoffman, T. Grothues, J.W. Mandelman,and O.P. Jensen. 2020. Discard mortality of black sea bass (*Centropristis striata*) in a deepwater recreational fishery off New Jersey: role of swim bladder venting in reducing mortality. Fishery Bulletin, 118: 105–119.

Langan, J.A., M.C. McManus, **D. Zemeckis**, and J.S. Collie. 2020. Abundance and distribution of Atlanticcod (*Gadus morhua*) in a warming southern New England. Fishery Bulletin, 118: 145–156.

Zemeckis, D., M.J. Dean, A.I. DeAngelis, S.M. Van Parijs, W.S. Hoffman, M.F. Baumgartner, L.T. Hatch, S.X. Cadrin, and C.H. McGuire. 2019. Identifying the distribution of Atlantic cod spawning using multiple fixed and glider-mounted acoustic technologies. ICES Journal of Marine Science, 76(6): 1610–1625.

TEACHING EXPERIENCE

Extension Education Lectures

From September 2017 – October 2021, I have delivered 120 lectures totaling 125 hours of instruction to 4,245 extension clienteles. Lectures focused on stock assessment and fisheries management, fisheries biology, responsible fishing practices, climate change impacts on fisheries, offshore wind energy, shellfish aquaculture and restoration, and coastal stewardship principles.

Principal Extension Programs *(100% responsibility on these programs)*

Introductory Fisheries Science for Stakeholders (IFISSH): Developed and annually delivered the 10-week curriculum since 2018. Over 325 participants have been educated on the science, management, and responsible stewardship of New Jersey's marine fishery resources.

Coastal Stewardship Course: Adapted Coastal Stewardship curriculum based on previous Shellfish Gardener curriculum and hosted annually since 2018. Over 230 volunteers trained on estuarine ecology and responsible stewardship practices, including volunteer opportunities for local stewardship initiatives.

Marine Extension Program Seminar Series (MEPSS): Developed this seminar series to educate clientele on current issues impacting marine resources and the fishing and aquaculture industries. Since 2017, 33 different guest lecturers have educated 2,759 participants.

SELECTED SERVICE ROLES

New Jersey Department of Environmental Protection (NJDEP): Member, New Jersey Environmental Resources Offshore Wind Working Group (02/2020–Present)

New Jersey Department of Agriculture: Member, Aquaculture Advisory Council (AAC) (2017–Present)

Barnegat Bay Partnership, U.S. Environmental Protection Agency (EPA): Member, Shellfish Working Group (2019–Present)

Mid-Atlantic Fishery Management Council: Member, Communication and Outreach Advisory Panel (2021– Present)

Rutgers University: Rutgers Energy Institute, Member (12/2018–Present); Rutgers Climate Institute, Affiliated Faculty (12/2018–Present); Center for Fisheries & Ocean Sustainability, Affiliated Faculty (07/2018–Present)

Rebecca E. Green

NATIONAL RENEWABLE ENERGY LABORATORY

Education

Ph.D., Biological Oceanography, M.I.T. and Woods Hole Oceanographic Institution, MA, 2002
B.S., Independent Studies Program, California Institute of Technology (CalTech), CA, 1994

Professional Experience

2018–Present Senior Project Leader, National Renewable Energy Laboratory (NREL), Golden, CO

- PI on multiple government-funded (DOE, BOEM, NYSERDA) offshore wind energy projects related to assessing environmental effects, multi-use (fishing) considerations, technical feasibility, and stakeholder outreach.
- Lead on NREL partnerships with external offshore wind programs/agencies
- Session Chair, Offshore Wind Environmental Research, IPF Conference 2020

2010-2018 Senior Scientist, Bureau of Ocean Energy Management (BOEM), New Orleans, LA

- Project Manager for >$30M in offshore energy-related research programs
- Developed NOPP-sponsored programs and inter-agency partnerships
  - Atlantic Deepwater Ecosystem Observatory Network (ADEON)
  - Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS)
- Environmental management of offshore conventional and renewable energy
- Strategic research partnerships with universities, agencies, and industry
- Presenter and Session Chair at wind energy conferences (AWEA, IPF, OWES)

Selected Publications

1. Constant, C., M. Kotarbinski, J. Stefek, **R. Green** …, Accelerating ocean-based renewable energy educational opportunities to achieve a clean energy future, *Progress in Energy*, 2021.
2. **Green, R.**, Copping, A., Cavagnaro … (2019), Enabling Power at Sea: Opportunities for Expanded Ocean Observations through Marine Renewable Energy Integration (pp. 1-7). *IEEE*.
3. **Green, R.**, J. Litz, J. Gleason, M. Lamont (2018), GoMMAPPS Celebrates a Successful First Field Season, *USDOI Newswave*, Winter Issue.
4. Perry, R. L., W. McCall, **R.E. Green** (2015), Gulf of Mexico Environmental Monitoring Through Federal-Academic Industry Partnerships. In *SPE E&P Health, Safety, Security and Environmental Conference-Americas*. Society of Petroleum Engineers.

5. **Green, R.E.**, A.S. Bower, A. Lugo-Fernandez (2014), First Autonomous Bio-Optical Profiling Float in the Gulf of Mexico Reveals Dynamic Biogeochemistry in Deep Waters, *PLoS ONE* 9(7).
6. Zimmer, B., L. Manzello, K. Madsen, J. Sinclair, **R.E. Green** (2014), An Innovative Ocean Planning Tool for the Atlantic Outer Continental Shelf: The Ecospatial Information Database, *Marine Policy*, V. 45, pp. 60-68.
7. **Green, R.E.** and H.M. Sosik (2004), Analysis of apparent optical properties and ocean color models using measurements of seawater constituents in New England continental shelf surface waters, *Journal of Geophysical Research*: Oceans, 109(C3).
8. **Green, R.E.**, H.M. Sosik, R.J. Olson (2003), Contributions of phytoplankton and other particles to inherent optical properties in New England continental shelf waters, *Limnology and Oceanography*, 48 (6), pp.2377-2391.

Cris Daniel Hein
233 NE 18th Ave., Hillsboro, OR 97124
(706) 621-1975
cris.hein@nrel.gov

EDUCATION

2/03–5/08 Ph.D. in Forestry, University of Georgia (co-advisors: Drs. Castleberry & Miller)
Dissertation: Seasonal patterns of bat activity and habitat use on an intensively-managed southern pine landscape with forested corridors

1/98–5/01 M.S. in Biology, Texas State University (advisor: Dr. Baccus)
Thesis: Population structure and dynamics of juvenile Brazilian free-tailed bats (*Tadarida brasiliensis mexicana*) banded in central Texas

8/94–12/96 B.S. in Geology, Texas A&M University

SELECTED PROFESSIONAL EXPERIENCE

10/18–Present **Senior Project Leader:** National Renewable Energy Laboratory (NREL), Forest Grove, OR
- Provide strategic direction for NREL's environmental portfolio
- Manage multi-stakeholder partnership-Enabling the Coexistence of Wind Energy
- Coordinate the International Energy Agency's Task 34-Working Together to Resolve Environmental Effects of Wind Energy
- Design and implement collaborative research to validate technological solutions to reduce, to the greatest extent practicable, the impacts of wind turbines on birds and bats
- Manage program budgets ($2,000,000–3,000,000 annually)
- Coordinate multi-stakeholder research program-Bats & Wind Energy Cooperative
- Disseminate research findings at scientific meetings and in peer-reviewed publications
- Organize and facilitate workshops and symposia

8/10–9/18 **Director, Wind Energy Program:** Bat Conservation, International, Inc. (BCI), Forest Grove, OR
- Provide strategic direction for BCI's Bats and Wind Energy Program
- Coordinate multi-stakeholder research program-Bats & Wind Energy Cooperative
- Design and implement collaborative research to validate solutions to reduce, to the greatest extent practicable, the impacts of wind turbines on bats
- Provide technical advice for international wind energy and wildlife guidelines
- Manage program budgets ($500,000–1,000,000 annually)
- Disseminate research findings at scientific meetings and in peer-reviewed publications
- Organize and facilitate workshops and symposia
- Supervise permanent staff and seasonal field technicians

SELECTED PEER-REVIEWED REPORTS

Hein, C., K. A. Williams, and E. Jenkins. 2021. Bat workgroup report for the state of the science workshop on wildlife and offshore wind energy 2020. Cumulative impacts. Report to the New York State Energy Research and Development Authority (NYSERDA). Albany, NY. 21 pp. Available at https://www.nyetwg.com/2020-workgroups.

Hein, C., and B. Straw. 2021. Proceedings from the state of the science and technology for minimizing impacts to bats from wind energy. Golden CO: National Renewable Energy Laboratory. NREL/TP-5000-78557.

Gorresen, P. M., P. M. Cryan, M. M. Huso, C. D. Hein, M. R. Schirmacher, J. A. Johnson, K. M. Montoya-Aiona, K. W. Brink, and F. J. Bonaccorso. Behavior of the Hawaiian hoary bat (*Lasiurus cinereus semotus*) at wind turbines and its distribution across the north Ko'olau Mountains, O'ahu. Hawai'I Cooperative Studies Unit Technical Report HCSH-064, University of Hawai'i, Hilo.

Arnett, E. B., G. D. Johnson, W. P. Erickson, and C. D. Hein. 2013. A synthesis of operational mitigation studies to reduce bat fatalities at wind energy facilities in North America. A report submitted to the National Renewable Energy Laboratory. Bat Conservation International. Austin, TX.

Hein, C. D., J. Gruver, and E. B. Arnett. 2013. Relating pre-construction bat activity and post-construction bat fatality to predict risk at wind energy facilities: a synthesis. A report submitted to the National Renewable Energy Laboratory. Bat Conservation International, Austin, TX.

SELECTED PEER-REVIEWED PUBLICATIONS

Guest, E. E., B. F. Stamps, N. D. Durish, A. M. Hale, C. D. Hein, B. P. Morton, S. P. Weaver, and S. R. Fritts. 2022. An updated review of hypotheses regarding bat attraction to wind turbines. Animals DOI: 10.3390/ani12030343.

Hale, A. M., C. D. Hein, and B. R. Straw. 2021. Acoustic and genetic data can reduce uncertainty regarding populations of migratory tree-roosting bats impacted by wind energy. Animals DOI: 10.3390/ani12010081.

Peterson, T. S., B. McGill, C. D. Hein, and A. Rusk. 2021. Acoustic exposure to turbine operation quantifies risk to bats at commercial wind energy facilities. Wildlife Society Bulletin DOI: 10.1002/wsb.1236.

Weaver, S. P., A. K. Jones, C. D. Hein, and I. Castro-Arellano. 2020. Estimating bat fatality at a Texas wind energy facility: Implications transcending the United States-Mexico border. Journal of Mammalogy DOI: 10.1093/jmammal/gyaa132.

Weaver, S. P., C. D. Hein, T. R. Simpson, J. W. Evans, and I. Castro-Arellano. 2020. Ultrasonic acoustic deterrents significantly reduce bat fatalities at wind turbines. Global Ecology and Conservation DOI: 10.1016/j.gecco.2020.e01099.

Allison, T. D., J. E. Diffendorfer, E. F. Baerwald, J. A. Beston, D. Drake, A. Hale, C. D. Hein, M. M. Huso, S. R. Loss, J. E. Lovich, M. D. Strickland, K. Williams, W. L. Winder. In Press. Impacts to wildlife of wind energy siting and operation in the United States. Issues in Ecology.

Hein, C. D., M. R. Schirmacher. 2016. Impact of wind energy on bats: a summary of our current knowledge. Human–Wildlife Interactions 10: 19–27.

Weller, T. J., K. T. Castle, F. Liechti, C. D. Hein, M. R. Schirmacher, and P. M. Cryan. 2016. First direct evidence of long-distance seasonal movements and hibernation in a migratory bat. Scientific Reports 6: 34585. doi:10.1038/srep34585.

Castle, K. T., T. J. Weller, P. M. Cryan, C. D. Hein, and M. R. Schirmacher. 2015. Using sutures to attach miniature tracking tags to small bats for multi-month movement and behavioral studies. Ecology and Evolution 5: 2980–2989.

Cryan, P. M., P. M. Gorresen, C. D. Hein, M. R. Schirmacher, R. Diehl, M. Huso, D. T. S. Hayman, P. Fricker, F. Bonaccorso, D. H. Johnson, K. Heist, and D. Dalton. 2014. Behavior of tree bats at wind turbines. Proceedings of the National Academy of Sciences of the United States of America 111: 15126–15131.

Arnett, E. B., C. D. Hein, M. R. Schirmacher, M. M. P. Huso, and J. M. Szweczak. 2013. Evaluating the effectiveness of an ultrasonic acoustic deterrent for reducing bat fatalities at wind turbines. PLoS ONE 8(6): e65794. doi:10.1371/journal.pone.0065794.

Arnett, E. B., R. M. R. Barclay, and C. D. Hein. 2013. Thresholds for bats killed by wind turbines. Frontiers in Ecology and the Environment 11: 171.

ANTHONY B. MACDONALD, ESQ.

1300 Sunset Avenue, Ocean, New Jersey 07712
Home: 732-774-5192; Work: 732-263-5392; Email: amacdona@monmouth.edu

BACKGROUND SUMMARY

Executive and attorney with proven leadership skills and management experience related to environmental, coastaland ocean management, community resilience, ports and maritime affairs, and other public policy issues; strategicplanning and organizational management; government and legal affairs.

EXPERIENCE

URBAN COAST INSTITUTE, MONMOUTH UNIVERSITY (UCI). *West Long Branch, NJ*
Director *September 2005 - Present*
Founding Director of the UCI, a University-based 'think tank' that serves as a forum for addressing key coastal community sustainability, resilience and ocean policy challenges at the state, regional, national and international level; supports interdisciplinary science and research that informs coastal and ocean decision-making, and increasespublic engagement and understanding; and, builds on the University's emerging strengths in environmental and socio-economic studies related to coasts and oceans.

COASTAL STATES ORGANIZATION, Inc. (CSO). *Washington, DC*
Executive Director *April 1997 – August 2006*
Direct professional, nonprofit association representing the Governors of 35 coastal States, Commonwealths and Territories. Responsibilities include strategic planning and policy development; representation of the state interestsbefore Congress and federal agencies; and Office Management and Budget. Prepare and present Congressional testimony and comments on legislation and regulations.

AMERICAN ASSOCIATION OF PORT AUTHORITIES (AAPA). *Alexandria, VA*
Special Counsel and Director of Environmental Affairs *June 1991 - March 1997*
Represented the interests of a 380-member multinational trade association representing public seaport agencies.Negotiated consensus policy positions, legislative and regulatory comments year.

SPIEGEL & McDIARMID *Washington, DC*
Of Counsel *1990 - 1991*
Civil environmental practice specializing in municipal clients. Advised clients on compliance with environmentallaws, and implemented legislative strategy with an emphasis on clean water, clean air and solid waste issues.

OFFICE OF THE MAYOR, CITY OF NEW YORK *Washington, DC*
Legislative Representative *1987 - 1990*
Served as a principal lobbyist for the Mayor. Analyzed legislation and regulations and worked with Commissioners of Environmental Protection, Sanitation, City Planning and Cultural Affairs agencies and other senior City officials to develop policies on environment, cultural affairs, parks and maritime issues.

NEW YORK CITY LAW DEPARTMENT *New York, NY*
Assistant Corporation Counsel, *Commercial and Real Estate Litigation Divisions* *1983 - 1987*
Represented the City in major environmental, real estate, commercial and civil rights litigation, and in summaryproceedings in connection with the award of public contracts.

CITY OF NEW YORK, DEPARTMENT OF PARKS AND RECREATION *New York, NY*
Assistant and Deputy General Counsel *1979 - 1983*
Negotiated and drafted major concession agreements, land use permits, and consultant contracts. Reviewed anddrafted legislation, supervised resolution of construction contract disputes, and supported litigation counsel.

EDUCATION

FORDHAM UNIVERSITY SCHOOL OF LAW.
New York, NY, JD, *1979*
Staff, Fordham Urban Law Journal; Clinical Internship: N.Y. State Department of Environmental Conservation.

MIDDLEBURY COLLEGE
Middlebury, VT, BA, 1975
Double Major: American History/Art History; Honors: Dean's List

THOMAS O. HERRINGTON
Urban Coast Institute
Monmouth University, West Long Branch, NJ 07764
(Tel.) 732-263-5588; (Fax) 732-263-5723
E-mail: therring@monmouth.edu
mailto:jadolf@hawaii.edu

(A) Professional Preparation

Steven Institute of Technology	Civil Engineering	B.E.	1989
Steven Institute of Technology	Ocean Engineering	M.E.	1992
Steven Institute of Technology	Ocean Engineering	Ph.D.	1996

(B) Appointments

2017 - pres.: Associate Director, Urban Coast Institute, Monmouth University
2017 - pres.: New Jersey Sea Grant Coastal Community Resilience Specialist
2015 - 2017: Research Professor, Stevens Institute of Technology
2007 – 2017: Program Director, Ocean Engineering, Stevens Institute of Technology
2006 – 2017: Assistant Director, Center for Maritime Systems, Stevens Institute of Technology
2002 – 2017: Director, NJ Coastal Protection Technical Assistance Service, Stevens-NJDEP
2012 – 2015: Research Associate Professor, Stevens Institute of Technology
2005 – 2012: Associate Professor, Stevens Institute of Technology
2002 – 2005: Graduate Professor, Stevens Institute of Technology
1996 – 2002: Research Assistant Professor, Stevens Institute of Technology
1993 – 1996: Research Engineer, Davidson Laboratory, Stevens Institute of Technology
1992 – 1993: Coastal Engineer, T&M Associates, Middletown, NJ

(C) Relevant Products

Georgas, N., Blumberg, A., **Herrington, T.**, Wakeman, T., Saleh, F., Runnels, D., Jordi, A. Ying, K., Yin, L., Ramaswamy, V., Yakubovskiy, A., Lopez, O., McNally, J., Schulte, J., and Wang, Y. 2016. The Stevens Flood Advisory System: Operational H3E flood forecasts for the Greater New York/New Jersey Metropolitan Region. *Int. J. of Safety and Security Eng*., Vol. 6, No. 3, 648-662, doi:10.2495/SAFE-V6-N3-648-662

Blumberg, A.F., Georgas, N., Yin, L., Herrington, T.O., and Orton, P. 2015. Street scale modeling of storm surge inundation along the New Jersey Hudson River Waterfront, J. Atmos. Oceanic Technol, Vol. 32, pp. 1486-1497, doi.org/10.1175/JTECH-D-14-00213.1

Georgas N., Blumberg, A.F., and **Herrington T.O.** 2007. An operational coastal wave forecasting model for New Jersey and Long Island waters, *Shore & Beach*, Vol. 75, No.2.

Bruno, M.S., Blumberg, A.F., and **Herrington T.O.** 2006. The urban ocean observatory – coastal ocean observations and forecasting in the New York Bight, *J. Marine Sci and Envirn*., No. C4, 31-39.

Herrington, T.O., Bruno M.S., and Rankin, K.L. 2000. The New Jersey Coastal Monitoring Network: A real-time coastal observation system, *J. Marine Env. Engg.* Vol. 6, pp. 69-82, 2000.

Relevant Community Engagement Products

Herrington, M., Deepak, A.C., **Herrington, T.O.**, 2019. Assessment of the Effectiveness of Structured and Unstructured Community Groups in the Co-production of Actionable Science with Boundary Organizations, Abstract PA34B-09 presented at the 2019 Fall Meeting, AGU, San Francisco, CA, December 9-13, 2019. https://agu.confex.com/agu/fm19/meetingapp.cgi/Paper/618741

Herrington, T.O., Kumari-Drapkin, J. and Harrington, S., 2019. Boundary Organizations and Coproduction: Ocean City Residents Map Flood Risks with ISeeChange and Monmouth University. iPoster presented at the 2019 Fall Meeting, AGU, San Francisco, CA, December 9-13, 2019. https://agu2019fallmeeting-agu.ipostersessions.com/default.aspx?s=44-99-7C-00-EC-5B-EF-0C-D0-25-04-96-4E-81-DB-9C

Herrington, T.O. and G. Fouad, 2019. Framework for a Coastal Ecological Adaptation Prioritization Support Tool: Methodology. Prepared for the New Jersey Department of Environmental Protection. West Long Branch, NJ: Urban Coast Institute, Monmouth University, 92 pp. doi:10.13140/RG.2.2.24785.25445

Herrington, T.O., Hornick, S., Wilkins, S. and Festing, H., 2018. Empowering local community organizations to engage with community decision makers for the application of science-based hazard mitigation through science-community partnerships: A Thriving Earth Exchange case study. Abstract PA41C-1318 presented at 2018 Fall Meeting, AGU, Washington D.C., December 10-14, 2018. https://agu.confex.com/agu/fm18/meetingapp.cgi/Paper/440071

Herrington, T.O., 2017. 'Coastal Hazards and Mitigation Techniques' in Blue Dunes: Climate Change by Design, edited by J.M. Keenan and C. Weisz, Columbia University Press, NY, NY, 228 pp**.** https://www.arch.columbia.edu/books/catalog/2-blue-dunes-climate-change-by-design

(D) Synergistic Activities

(1) Scientific Partner in an American Geophysical Union Thriving Earth Exchange Project that developed community monitoring methods to monitor nuisance flood events in a coastal community; (2) Developed methods for the co-production of actionable community science focused on environmental change in New Jersey coastal communities through the New Jersey Sea Grant program; (3) Reviewed citizen shoreline monitoring techniques for Measuring Success: Monitoring Natural and Nature-Based Shoreline Features in New York State as a member of the Project Advisory Committee Member; (4) Member of the Mid-Atlantic Regional Association Coastal Ocean Observing System of IOOS; (5) Workshop participant in the NHERI Intensive Training on RAPID Reconnaissance Equipment in Seattle, WA, July 23-27, 2019.

KRIS OHLETH

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QUALIFICATIONS SUMMARY

- Passionate professional, with nearly 20 years of experience dedicated to advancing US offshore wind
- Spirited team leader with excellent oral and written communication skills
- Exceptional presentation and public speaking skills
- Strong attention to detail – considerable budget, schedule, and editorial experience
- Conservation-minded with an extensive professional, academic, and volunteer record in several disciplines

PROFESSIONAL EXPERIENCE

Director – Special Initiative on Offshore
February 2021 – present
As the Director of the organization, I manage all aspects of our workflows, budget, grant writing, outreach, technical analysis, and convenings.

Senior Manager – Stakeholder Engagement, Ørsted North America
April 2017 – February 2021
As a Senior Stakeholder Engagement Manager for the world's leading offshore wind developer led all aspects of the origination's stakeholder engagement program

Offshore Wind Team Lead, Ecology & Environment, Inc.
September 2015 – March 2017
As the Offshore Wind Team Lead, I advanced work for clients and E&E

Executive Director, Mid-Atlantic Regional Council on the Ocean (MARCO)
February 2014 – January 2015
As the founding Executive Director, I led all aspects of the organization

Director of Permitting, Atlantic Wind Connection, Chevy Chase, MD
March 2011 – January 2014
As the Director of Permitting, I led our permitting team in securing environmental permits

Policy Manager, Renewable Energy and Marine Spatial Planning, Ocean Conservancy, Washington, DC
August 2010 – March 2011
As the Policy Manager for Marine Spatial Planning, I worked to advance marine renewable energy projects

Director, Environmental Programs, Deepwater Wind, Hoboken, NJ
June 2009 – August 2010
As the Director of Environmental Programs, I worked to develop offshore wind sites off the coast of the US

New Jersey Deputy Project Director, Bluewater Wind, Hoboken, NJ
February 2007 – May 2009
As Deputy Director, I worked in all capacities to identify and develop project sites off the coast of the US

SELECT VOLUNTEER EXPERIENCE

- Board Member, New York Offshore Wind Alliance - January 2021 – present
- Board Member, National Offshore Wind Research and Development Consortium - January 2018 – January 2021
- New Jersey Chapter Chair, Women in Renewable Industries and Sustainable Energy - April 2020 – present
- New York/New Jersey Chapter Chair, Women of Wind Energy - September 2007 – May 2014
- Board Member, New Jersey Environmental Lobby - September 2008 – present
- Board Member, US Offshore Wind Collaborative - October 2010 – October 2014

EDUCATION

Master's Degree: Ocean and Coastal Policy - University of Rhode Island - Graduated, May 2006
Bachelor's Degree: Major, Journalism and Communications - Rutgers University - Graduated, December 1999