

# Hongjie Wang

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## EDUCATION

- 2013- 2018 **Ph.D.**, Coastal and Marine System Science Program (CMSS),  
Texas A&M University-Corpus Christi (TAMUCC)  
2010- 2013 **M.S.**, Marine Chemistry, Xiamen University (XMU)  
2006- 2010 **B.S.**, Environmental Science, Ocean University of China (OUC)

## PROFESSIONAL EXPERIENCE

- 12/2021-present Assistant Professor, URI-GSO  
06/2020-12/2021 **Postdoctoral Scholar**, UW-CICOES  
08/2018-05/2020 **Postdoctoral Researcher**, University of Delaware  
07/2018-08/2018 **Teaching Adjunct**, TAMUCC  
06/2018-07/2018 **Research Associate**, TAMUCC

## AWARDS

- 1<sup>st</sup> place Student Poster Presentation, 2017 Annual Research Forum, TAMUCC
- Student Travel Award, Coastal & Estuarine Research Federation, 2017
- Student Travel Award, Ocean Carbon Hotspot Workshop, US CLIVAR, 2017
- Outstanding Research Assistant Award, TAMUCC, 2016-2017
- Gulf of Mexico Research Initiative Scholar, 2016
- Graduate Student Fellowship, XMU, 2010-2013
- Outstanding Award in Student Research Training Program, OUC, 2009
- National Scholarship of China, 2008-2009
- National Encouragement Scholarship of China, 2007-2008
- Scholarship for Outstanding Undergraduate Students, OUC, 2006-2010

## FUNDED RESEARCH

- Lead-PI**, NOAA-Pacific Marine Environmental Laboratory (PMEL) Innovation Grant (Year 2021)- How Does Ocean Acidification Respond to Climate Change in the Arctic?  
**Lead-PI**, Texas Sea Grant Grants-In-Aid of Graduate Research Program-Photochemical Degradation of Dissolved Organic Carbon in Baffin Bay, Texas (06/06/2017-05/31/2018)

## TEACHING EXPERIENCE

- Fall 2020 **Lecturer** for UW-CICOES postdoctoral professional development on “*The Craft of Scientific Writing*”  
Summer 2018 **Teaching Adjunct** for *General Chemistry I Laboratory CHEM 1411*, Department of Physical and Environmental Science, TAMUCC

- Spring 2018 **Instructor** for *General Chemistry I Laboratory CHEM 1411*,  
Department of Physical and Environmental Science, TAMUCC
- Fall 2015 **Lecturer** for *Professional Skills ESCI 3202*, Environmental Science,  
Department of Physical and Environmental Science, TAMUCC

## PUBLICATIONS

- Wang H.**, Lin P, Pickart R., Maenner S., Cross J. (2021), Summer air-sea CO<sub>2</sub> flux changes in the Pacific Arctic Region from the 1980s to 2010s. *Journal of Geophysical Research: Oceans*, 126, e2021JC017424. <https://doi.org/10.1029/2021JC017424>
- Wang H.**, Lehrter J., Maiti K., Fennel K., Laurent A., Rabalais N., Hussain N., Li Q., and Cai W.-J., Benthic Anaerobic Respiration Enhances Bottom-water Acidification in the northern Gulf of Mexico, *Journal of Geophysical Research: Oceans*, doi:10.1029/2020JC016152
- Wang H.**, Hu X., Wetz M., Hayes K., Photochemical degradation of dissolved organic carbon in Baffin Bay, Texas, *Limnology and Oceanography Letter*, doi:10.1002/lol2.10146
- Van Dam B. R. and **Wang H.**, Decadal-scale acidification trends in adjacent North Carolina estuaries: competing role of anthropogenic CO<sub>2</sub> and riverine alkalinity loads, 2019, *Frontiers in Marine Science*, doi: 10.3389/fmars.2019.00136
- Turk D., **Wang H.**, Hu X., Gledhill D.K., Kovach C., Wang Z.A., Jiang L., and Cai W.-J., Time of Emergence of Surface Ocean Carbon Dioxide Trends in the North American Coastal Margins in Support of Ocean Acidification Observing System Design, 2019, *Frontiers in Marine Science*, doi: 10.3389/fmars.2019.00091
- Wang H.**, Hu X., Wetz M., Hayes K., Oxygen consumption and organic matter remineralization in two subtropical, eutrophic coastal embayments, 2018, *Environmental Science & Technology*, doi: 10.1021/acs.est.8b02971
- Wang H.**, Hu X., Rabalais N. N., Brandes J., 2018, Oxygen consumption in the Northern Gulf of Mexico hypoxic waters-A stable carbon isotope perspective, *Geophysical Research Letters*, 45, doi:10.1029/2018GL078571
- Hu X., Nuttall M.F., **Wang H.**, Yao H., Staryk C.J., McCutcheon M.R., Eckert R.J., Embesi J.A., Johnston M.A., Hickerson E.L., Schmahl G.P., Manzello D., Enochs I.C., DiMarco S., Barbero L., 2018. Seasonal variability of carbonate chemistry and decadal changes in waters of a marine sanctuary in the Gulf of Mexico. *Marine Chemistry*, 205, 16-28, doi: 10.1016/j.marchem.2018.07.006
- Reimer, J., **Wang, H.**, Vargas, R., Cai, W.-J., 2017, Multi-decadal *f*CO<sub>2</sub> increase along the United States southeast coastal margin, *Journal of Geophysical Research-Ocean*, 122, 10061-10072, doi:10.1002/2017JC013170
- Wang, H.**, X. Hu, W.-J. Cai, and B. Sterba-Boatwright, 2017, Decadal *f*CO<sub>2</sub> trends in global ocean margins and adjacent boundary current-influenced areas, *Geophysical Research Letters*, 44, 8962-8970, doi:10.1002/2017GL074724
- Qian W., Dai M., Xu M., Kao S-J, Du C., Liu J., **Wang H.**, Guo L., Wang L. 2017, Non-local drivers of the summer hypoxia in the East China Sea off the Changjiang, *Estuary, Coastal and Shelf Science*, 198, 393-399, doi: 10.1016/j.ecss.2016.08.032
- Wang H.**, Sterba-Boatwright B., Hu X., 2016, A new statistical approach for interpreting oceanic *f*CO<sub>2</sub> record, *Marine Chemistry*, 183, 41-49, doi:10.1016/j.marchem.2016.05.007
- Wang H.**, Dai. M, Liu, Kao S-J, Zhang C., Cai W-J, Wang G., Qian W., Zhao M., Sun Z., 2016, Eutrophication-Driven Hypoxia in the East China Sea off the Changjiang Estuary, *Environmental Science & Technology*, 50, 2255-2263, doi: 10.1021/acs.est.5b06211

Hsiao SS-Y, Hsu T-C, Liu J-w, Xie, X, Zhang Y, Lin J, **Wang H**, Yang J-YT, Hsu, S-C, Dai M., 2014, Nitrification and its oxygen consumption along the turbid Chang Jiang River plume, *Biogeosciences*, 11, 2083-2098, doi: 10.5194/bg-11-2083-2014

## BOOK CHAPTER

**Wang H.** and Hu X. (invited chapter) Multidecadal Variations of Sea Surface CO<sub>2</sub> Fugacity (*f*CO<sub>2</sub>) in the Oyashio Current-Influenced Ocean Margin, *Changing Asia Pacific Marginal Seas* (2020)

## PUBLICATIONS IN PROGRESS

**Wang H.**, Jiang L.-Q., Carter B., Cai W.-J., Year of Emergence of Ocean Acidification in Global Ocean (in revision for *Global Biogeochemical Cycles*)

**Wang H.**, Cross J., Monacci N., Sutton A., Maenner S., Mordy K., Meinig K. Summer *p*CO<sub>2</sub> dynamics based on autonomous surface vehicles in eastern Bering Sea and Chukchi Sea (in prep for *Frontiers in Marine Science*)

## NON-REFEREED TECHNICAL PUBLICATION

Hu X., **Wang H.**, 2018. Mechanistic modeling of bottom water dissolved oxygen dynamics in Baffin Bay, Contract #1729. Department of Physical and Environmental Sciences, Texas A&M University-Corpus Christi, Corpus Christi, TX, p.24

## PRESENTATIONS

**Wang, H.** (Invited Speaker), Oxygen and Carbon Dynamics from Texas to the Arctic, Gulf of Mexico Coastal Acidification Network Webinar, 2021

Cross J., Pilcher D., **Wang H.**, Monacci N., Long W., Siddon E., Hurst T The next decade of Alaskan Ocean Acidification Research: What we learned, where 2020 fits, and what's coming next for the Bering Sea, Alaska Center for Climate Assessment & Policy Webinar, 2021

**Wang H.**, Cross J., Monacci N., Sutton A., Maenner S., Mordy K., Meinig K. Summer *p*CO<sub>2</sub> dynamics based on autonomous surface vehicles in eastern Bering Sea and Chukchi Sea (Oral), Virtual Alaska Marine Science Symposium, 2021

**Wang H.**, Cross J., Monacci N., Sutton A., Maenner S., Mordy K., Meinig K. Summer *p*CO<sub>2</sub> dynamics based on autonomous surface vehicles, Ecosystem & Fisheries-Oceanography Coordinated Investigations (EcoFOCI) Fall Seminar Lightning Talk, 2020

Hayes K., Wetz M., Cira E., **Wang H.**, Walker L., A potential reservoir for the brown tide organism, *Aureoumbra lagunensis*, in a South Texas estuary (Oral), *Coastal & Estuarine Research Federation Oceanography*, Holderness, 2019

Turk D., **Wang H.**, Hu X., Gledhill D., Wang A. Z., Jiang L.-Q., Cai W.-J., Time of Emergence of Surface Ocean Carbon Dioxide Trends in the North American Coastal Margins in Support of Ocean Acidification Observing System Design, *Ocean Observation 2019*, Honolulu, Hawaii, 2019

**Wang H.**, Lehrter J., Maiti K., Fennel K., Laurent A., Rabalais N., Anaerobic Benthic Process Enhanced bottom-water Acidification in northern Gulf of Mexico, *Gordon Research Conference on Chemical Oceanography*, Holderness, 2019

- Wang H.**, Cai W.-J., Fennel K., Laurent A., Anaerobic Benthic Process Enhanced bottom-water Acidification in the northern Gulf of Mexico, *Ocean Carbon & Biogeochemistry Workshop*, Woods Hole, Massachusetts, 2019
- Wang H.**, Hu X., Wetz M., Hayes K., Photochemical degradation of dissolved organic carbon in Baffin Bay, Texas, *Texas Sea Grant symposium*, College Station, Texas, 2019
- Wang H.** (Invited speaker), Jiang Li-Qing, Cai W.-J., Time of emergence of ocean acidification in global ocean (Oral), *The Fourth Xiamen Symposium on Marine Environmental Sciences*, Xiamen, China, 2019
- Wang H. and Hu X., Decadal  $f\text{CO}_2$  trends in Western Boundary Current- and Eastern Boundary Current-influenced areas, *Ocean Science Meeting*, New Oregon, 2018
- Wang H.**, Hu X., Rabalais N., Multi-decadal acidification enhanced by eutrophication in the northern Gulf of Mexico (Oral), *Coastal & Estuarine Research Federation*, Providence, RI, 2017
- Hayes K., Wetz M., **Wang H.**, Hu X., Identification of organic matter sources contributing to hypoxia in two eutrophic South Texas estuaries (Oral), *Coastal & Estuarine Research Federation*, Providence, RI, 2017
- Wang H.**, Hu X., Wetz M.S., Heyes K., Mechanistic Modeling of Bottom Water Dissolved Oxygen Dynamics in Baffin Bay, *7<sup>th</sup> Annual Research Forum*, TAMUCC, 2017
- Wang H.**, Hu X., Multi-decadal  $f\text{CO}_2$  trends in Western Boundary Current- and Eastern Boundary Current-Dominated Margins, *Ocean Carbon Hot Spots Workshop (U.S. CLIVAR)*, Moss Landing, CA, 2017
- Wang H.**, Hu X., Wetz M.S., Heyes K., Modeling of Dissolved Oxygen Dynamics in Baffin Bay (Oral), *Texas Bays and Estuaries Meeting*, Port Aransas, 2017
- Wang H.**, Hu X., Decadal  $f\text{CO}_2$  trends in global coastal margins (Oral), *Brown Bag Talk*, TAMUCC, 2016
- Wang H.**, Heyes K., Wetz M.S., Hu X., Identification of organic matter that drives oxygen consumption in Baffin Bay, Texas (Oral), *Gulf Estuarine Research Society*, Pensacola Beach, 2016.
- Wang H.**, Heyes K., Wetz M.S., Hu X., A stable isotope study on organic matter driving oxygen consumption in Baffin Bay (Oral), *Texas Bays and Estuaries Meeting*, Port Aransas, 2016
- Wang H.**, Hu X., Cai W.-J., Rabalais N.N., Comparison of  $f\text{CO}_2$  trends in a river dominated and an ocean dominated ocean margins, *Ocean Sciences Meeting*, New Orleans, 2016
- Wang H.**, Hu X., Rabalais N.N., What Drives Oxygen Consumption in the Northern Gulf of Mexico? – A Stable Isotope Perspective, *Ocean Sciences Meeting*, New Orleans, 2016
- Wang H.**, Sterba-Boatwright B., Hu X., A new statistical approach interpreting ocean  $f\text{CO}_2$  record. *Gordon Research Conference on Chemical Oceanography*, Holderness, 2015
- Wang H.**, Hu X., Huang W.-J., Cai W.-J., Xue J., Evidence of Cross-Shelf Inorganic Carbon Export in the Northern Gulf of Mexico, *Gulf of Mexico Oil Spill & Ecosystem Science Conference*. Houston, Texas, 2015
- Wang H.**, Hu X., Turner R.E., Cai W.-J., Rabalais N.N., Stable isotope composition of remineralizing organic carbon in the Northern Gulf of Mexico continental shelf sediments, *Gulf of Mexico Oil Spill & Ecosystem Science Conference*. Mobile, 2014
- Wang H.**, Dai M., Who is consuming oxygen: autochthonous or allochthonous organic material? (Oral), *ASLO Aquatic Sciences Meeting*, Lake Biwa, Japan, 2012

## PROGRAMMING SKILLS

R and Matlab

## PROFESSIONAL SOCIETIES

- Coastal & Estuarine Research Federation
- American Geophysical Union
- Gulf Estuarine Research Society
- The Union of Postdocs at the University of Washington
- Unlearning Racism in Geoscience-Pacific Marine Environmental Lab Pod

## FIELDWORK

- *Monthly Water Quality Monitoring in Baffin Bay, Texas, 30 days*, 2014-2016 (30 cruises in total )
- *Annual Shelfwide Cruise in northern Gulf of Mexico, 12 days*, 2016 (2 cruises)
- *China National Sharing Cruise at East China Sea, 20 days*, 2011
- *Oxygen Minimum Zone in Changjiang Estuary, 15 days*, 2011
- *Carbon Cycle Cruise in Pearl River Estuary, 7 days*, 2010
- *Seawater Quality in Qingdao Coastal Region, 4 days*, 2009

## PROFESSIONAL SERVICE

**Professional Committee** for Ocean-based Carbon Dioxide Removal Task Force

**Guest Associate Editor**, *Frontiers in Marine Science*- Acidification and hypoxia in marginal seas, <https://www.frontiersin.org/research-topics/12104/acidification-and-hypoxia-in-marginal-seas>

**Convener**, session “Time-series analysis of ocean biogeochemical and ecological data”, *The Fourth Xiamen Symposium on Marine Environmental Sciences*, Xiamen, China (Jan 4-9, 2019), <https://mel.xmu.edu.cn/conference/4xmas/phone/Sessions.asp>

**Review Editor**, *Frontiers in Marine Science*, 2018-present

**Peer Reviewer**, Earth System Science Data, Limnology & Oceanography, Biogeosciences, Journal of Geophysical Research - Oceans, Scientific Reports-Nature, Global Biogeochemical Cycles, Progress in Oceanography, Marine Chemistry, Estuaries and Coasts, Journal of Hydrology, Journal of Marine Systems, Frontiers in Marine Science, and Journal of Ocean University of China

## OUTREACH SERVICE

- **Speaker, NOAA Science Camp webinar**: what’s up with carbon? the 5 W’s of ocean acidification – Ocean acidification
- **Guest Speaker**, “*Ocean Acidification The Other Carbon Dioxide Problem*” for Tohoku International School in Sendai, Japan
- **Guest Speaker**, “*How are we connected to the oceans*” for North Ridgeville Academic Center, North Ridgeville, Ohio
- **Guest Speaker**, “*‘The Dead Zone’ in the Gulf of Mexico*” for Newville Elementary School, Newville, Pennsylvania
- **Guest Speaker**, “*How are we connected to the oceans*” for Roosevelt School - Manville, New Jersey
- **Guest Speaker**, “*How does the wind impact ocean pollutions?*” for Auburn Elementary School, Auburn, Kansas (Twice)

## DIVERSITY, EQUITY AND INCLUSION SERVICE

- Panelist for UW-CICOES Summer Intern Seminar Series
- Book Discussion for “Uncomfortable Conversations With A Black Man”

## MEDIA COVERAGE

- March/April 2019 Newsletter, “Decadal Scale Acidification Trends in Adjacent North Carolina Estuaries.” *Southeast Ocean and Coastal Acidification Network*, <https://myemail.constantcontact.com/SOCAN-March-April-Newsletter.html?soid=1103098301442&aid=8D1n6r-CDqU>
- August 3, 2018, ‘Shelf-wide  $p\text{CO}_2$  increase across the South Atlantic Bight’, *Ocean Carbon & Biogeochemistry*, <https://www.us-ocb.org/pco2-increase-across-sab/>
- May 29, 2018, “Coastal Ocean Warming Adds to  $\text{CO}_2$  Burden”, *EOS, Transactions, American Geophysical Union, Editors’ Vox*, <https://eos.org/editors-vox/coastal-ocean-warming-adds-to-co2-burden>
- September 28, 2017, “Student uncovers story hidden in data”, *Islander Waves* <http://islandwavesnews.com/2017/09/student-uncovers-story-hidden-in-data/>
- September 11, 2017, “A&M-CC Ph.D. Student Uncovers New Carbon Cycle Information”, *TAMUCC* <http://tamucc.edu/news/2017/09/091117%20co2%20research.html#.Wi8gBLQ-czY>
- August 03, 2017, “15 Island University Students Receive Texas Sea Grant Funds”, *TAMUCC* <https://tamucc.edu/news/2017/08/080517%20Sea%20Grant.html#.XM6jrZNKiWw>