

Curriculum Vitae

Robert F. Chen

Professor
University of Massachusetts, Boston
School for the Environment
100 Morrissey Blvd., Boston, MA 02125
(617)287-7491

January 8, 1965	Born, Princeton, New Jersey
1984-1985	Data Analyst, TRW, Redondo Beach, California
1986	A.B. in Chemistry and Physics, <i>cum laude</i> , Harvard University
1987-1988	Teaching Assistant, Department of Earth Science, University of California, San Diego
1990-1991	Associate in Earth Science, University of California, San Diego
1991	Instructor, San Diego City College Summer Institute in Japan Fellow
1992	Ph.D. in Oceanography, Scripps Institution of Oceanography-- University of California, San Diego NSF Postdoctoral Fellowship in Earth Science, Woods Hole Oceanographic Institution
1993 to 1999	Assistant Professor, Organic Geochemistry, Environmental, Coastal & Ocean Sciences, University of Massachusetts, Boston
1997 to 1999	Adjunct Scientist, Woods Hole Oceanographic Institution
1999 to 2000	ASEE Sabbatical Fellow, SPAWAR, San Diego
1999 to 2000	Visiting Scholar, Scripps Institution of Oceanography
1999 Winter	Visiting Associate Professor, Scripps Institution of Oceanography
1999 to 2005	Associate Professor, ECOS, University of Massachusetts, Boston
2002 to 2004	Graduate Program Director, ECOS, UMassBoston
2005 to present	Professor, School for the Environment, University of Massachusetts, Boston
2015 to present	Chair, Faculty Senate, School for the Environment

EDUCATION

Scripps Institution of Oceanography--U.C. San Diego

Ph.D. in Oceanography received in August, 1992. Graduate study in Oceanography and Geochemistry. Research Assistant and Teaching Assistant.

Harvard University

A.B. in Chemistry and Physics received *cum laude* in June, 1986. Teaching Fellow, Harvard College Scholarship, National Merit Scholarship.

EMPLOYMENT

Professor

School for the Environment, University of Massachusetts Boston. Teaching graduate courses in marine organic geochemistry, environmental biogeochemistry, analytical techniques in environmental science, and transdisciplinary environmental science, and undergraduate courses in oceanography and environmental sciences, advising MS and PhD students and Postdocs.

Associate Professor

Environmental, Coastal & Ocean Sciences, University of Massachusetts, Boston.

Visiting Associate Professor Scripps Institution of Oceanography. Taught Earth Science 102—*Geochemistry* at UC San Diego.

Assistant Professor

Environmental, Coastal & Ocean Sciences, University of Massachusetts, Boston.

Guest Investigator

NSF Postdoctoral fellowship in earth science September 1, 1992 to September 1, 1993. Characterization of dissolved organic carbon in seawater with Dr. Dan Repeta, Woods Hole Oceanographic Institution as part of DOE Ocean Margins Program.

Instructor

Taught Biology 110--*An Introduction to Oceanography* at San Diego City College, Spring and Fall semesters, 1991.

Associate in Earth Science Taught Earth Science 3--*An Introduction to the Oceans* at UC San Diego in the summer of 1990. Also taught accompanying lab class ES-3L.

Teaching Assistant

Earth Science 1--*The Oceans* in the Fall, 1988 and Earth Science 102--*Geochemistry* in the Spring, 1989 at UC San Diego.

Teaching Fellow

Chemistry 10--*Inorganic Chemistry*, 1985, Harvard University.

Summer Fellow

Research in Space Sciences at TRW, Redondo Beach, CA.

AWARDS

Association for the Sciences of Limnology and Oceanography (ASLO) Fellow, 2016.

For exceptional contributions to the benefit of the society and its publications, meetings, and other activities.

UMassBoston Chancellor's Award for Distinguished Teaching, 2014.

For exceptional contributions in Teaching at the University.

University of Massachusetts President's Award for Public Service, 2005.

For exemplary public service of the state by applying their academic or professional expertise in addressing priority needs of the Commonwealth.

UMassBoston Outstanding Achievement Award, 2005.

Overall Contributions in the Sciences, 2005.

Massachusetts Marine Educators Special Award, 2005.

UMassBoston Outstanding Achievement Award, 1999.

For Teaching in the Sciences, 1999.

Honorary Member of the Golden Key National Honor Society, 1999.

For undergraduate teaching.

ONR Young Investigator Program Award, 1997.

For "The Biogeochemistry of Chromophoric Dissolved Organic Matter in Coastal Waters"

UMassBoston Outstanding Achievement Award for Research in the Sciences, 1996.

NSF Postdoctoral Fellowship in Earth Science, 1992.

Award for study of dissolved organic carbon in seawater, Woods Hole Oceanographic Institution.

Outstanding Student Paper, 1992.

Ocean Sciences meeting of the American Geophysical Union.

Fellowship--NSF's Summer Institute in Japan, 1991.

Spent 8 weeks in Tsukuba City, Japan, working with host, Dr. Y. Suzuki, Geochemical Research Division, Meteorological Research Institute on Dissolved Organic Carbon in Seawater and Porewater.

PUBLICATIONS

- Falkenberg, L., King, E., Russell, B., and Chen, R.F., 2020. Science outreach training: maximising the benefits for facilitators, coordinators, and participants. Submitted to FACETS: A Multidisciplinary Open Access Journal. Submitted 9/18/19.
- Wilson, R., Lohmeier, J., and Chen, R.F., 2019. Using Transit Advertising to Improve Public Engagement with Climate Change Science. *Journal of Marketing Theory & Practice*. Submitted 5/19. Rejected 8/19.
- Chen, R.F., 2019. ASLO Storytellers: Getting out of the Convention Center. *Bulletin: Limnology and Oceanography*, 28: 61-62.
- Wei J., Lee, Z.P., Garcia, R., Zoffoli, L., Armstrong, R., Shang, Z., Sheldon, P., and Chen, R.F., 2018. An assessment of Landsat-8 atmospheric correction schemes and remote sensing reflectance products in coral reefs and coastal turbid waters. *Remote Sensing of Environment*, 215, 18-32. *Remote Sensing of Environment*, 215, 18-32 (PDF reprint)
- Schiebel, H.N., Peri, F., and Chen, R.F., 2019. Dissolved organic matter export from surface sediments of a New England salt marsh. Minor revisions submitted to *Wetlands*, 7/19.
- Kirshen, P., Thurson, K., McCann, B., Foster, C., Sprague, H., Roberts, H., Borelli, M. Byrnes, J., Chen, R.F., Lockwood, L., Watson, C., Starbuck, K., Wiggin, J., Noverlly, A., Uiterwyk, K., Bostma, K., Holmes, E., Stromer, Z., Famely, J., Shaw, A., Hoffnagle, B. Jin, D., 2018. Feasibility of Harbor-wide Barrier Systems: Preliminary Analysis for Boston Harbor. Sustainable Solutions Lab, UMassBoston, 250 pp.
- Najjar, R.G., M. Herrmann, R. Alexander, E. W. Boyer, D. Burdige, D. Butman, W.-J. Cai, E. A. Canuel, R. F. Chen, M. A. M. Friedrichs, R. A. Feagin, P. Griffith, A. L. Hinson, J. R. Holmquist, X. Hu, W. M. Kemp, K. D. Kroeger, A. Mannino, S. L. McCallister, W. R. McGillis, M. R. Mulholland, C. Pilskaln, J. Salisbury, S. Signorini, P. St-Laurent, H. Tian, M. Tzortziou, P. Vlahos, Z. A. Wang, and R. C. Zimmerman, 2018. Carbon budget of tidal wetlands, estuaries, and shelf waters of Eastern North America. *Global Biogeochemical Cycles* 32, DOI <https://doi.org/10.1002/2017GB005790>.
- Yang, Y., Schaaf, C.B., Tague, C., Tenenbaum, D.E., Wang, Z., Douglas, E.M., Robert F. Chen, R.F., Cialino, K., and Hwang, T., 2017. Simulating Dissolved Organic Carbon Export from an Urbanized New England Watershed Using a Process Based Model. (Submitted to *Environmental Modelling and Software*, 8/17).
- Schiebel, H.N, Wang, X.-C., Gardner, G.B., Peri, F., and Chen, R.F., 2017. Seasonal export of dissolved organic matter from a New England salt marsh. *Journal of Coastal Research* 34(4), 939-954. <https://doi.org/10.2112/JCOASTRES-D-16-00196.1>.
- Cantwell, M.G., Katz, D.R., Sullivan, J.C., Borci, T., and Chen, R.F., 2016. Caffeine in Boston Harbor past and present, assessing its utility as a tracer of wastewater contamination in an urban estuary. *Marine Pollution Bulletin*, 108, 321-324.

- Chen, R.F., 2016. Chapter 7-Energy and Natural Resources. In Teaching Energy Across the Sciences: K-12. National Science Teachers Association Press, 220 pp. J. Nordine, Ed.
- Chen, R.F. and Eisenkraft, A., 2016. Chapter 9-Professional Development for Teaching Energy. In Teaching Energy Across the Sciences: K-12. National Science Teachers Association Press, 220 pp. J. Nordine, Ed.
- Schiebel, H.N., Wang, X.-C., Chen, R.F., and Peri, F., 2015. Photochemical release of dissolved organic matter from resuspended salt marsh sediments. *Estuaries and Coasts*, 38, 1692-1705. (DOI 10.1007/s12237-014-9893-3)
- Zhang, Y., Little, T.D.C., Wetherill, B.R., Peri, F., and Chen, R.F., 2014. An Instrument Scheduler Design for Energy Neutral Coastal Monitoring Systems Deployment, Proc. 2nd Intl. Workshop on Energy Neutral Sensing Systems (ENSSys) in ACM Conf. on Embedded Networked Sensor Systems (SenSys) 2014, Memphis, TN, Nov. 2014.
- Wang, X.-C., Chen, R.F., Cable, J.E., and Cherrier, J., 2014. Leaching and microbial degradation of dissolved organic matter from salt marsh plants and seagrasses. *Aquatic Sciences*, DOI 10.1007/s00027-014-0357-4.
- Carrick Detweiler, C., Banerjee, S., Doniec, M., Jiang, M., Peri, F., Chen, R.F., and Rus, D., 2014. Adaptive Decentralized Control of Mobile Underwater Sensor Networks and Robots for Modeling Underwater Phenomena. *Journal of Sensor and Actuator Networks*, 3, 1-x; doi:10.3390/——
- Chen, R.F., Eisenkraft, A., Fortus, D., Krajcik, J., Neumann, K., Nordine, J., and Scheff, A. (Eds), 2014. Teaching and learning of energy in K-12 education. Springer, New York, 379 pp.
- Chen, R.F., Scheff, A., Fields, E., Pelletier, P., and Faux, R., 2014. Mapping Energy In the Boston Public School Curriculum. In Teaching and Learning of Energy in K – 12 Education. Chen, Eisenkraft, Fortus, Krajcik, Neumann, Nordine, Scheff, Eds., Springer, New York, pp. 135-152.
- Chaichitehrani, N., D'Sa, E.J., Ko, D.S., Walker, N., Osburn, C.L., and Chen, R.F., 2014. Colored Dissolved Organic Matter Dynamics in the Northern Gulf of Mexico from Ocean Color and Numerical Model Results. *Journal of Coastal Research*, 30: 800-814.
- Conmy, R.N., Del Castillo, C.E., Downing, B.D., and Chen, R.F., 2014. Optical spectroscopy instrument design, quality assurance, and control: *in situ* fluorescence instrumentation. Chapter in *Aquatic Organic Matter Fluorescence*. P. Coble, J.R. Read, A. Baker, and D. Reynolds, Eds., Cambridge University Press, 418 pp.
- Zhang, Y., Wetherill¹, B.R., Chen, R.F., Peri, F., Rosen, P., and Little, T.D.C., 2013. Design and Implementation of a Wireless Video Camera Network for Coastal Erosion Monitoring. *Ecological Informatics*. Available on line: www.sciencedirect.com/science/article/pii/S157495411300068X#.

- Frashure, K.M., Bowen, R.E., and Chen, R.F., 2012. An integrative management protocol for connecting human priorities with ecosystem health in the Neponset River Estuary. *Ocean & Coastal Management*, 69: 255-264.
- Chen, R.F., C. Cramer, P. DiBona, R. Faux and S. Uzzo, 2012. Ripple Effects: Small-Scale Investigations Into the Sustainability of Ocean Science Education Networks, 2012. In *Complex Networks: Third International Workshop, Complex Networks 2012*, Melbourne, Florida, March 7-9, 2012, Selected Papers. A. Evsukoff, M. González, R. Menezes, Eds. Berlin: Springer Science+Business Media.
- Tian Y.Q., Wang, D., Chen, R.F., and Huang, W., 2012. Using modeled runoff to study DOC dynamics in stream and river flow: a case study of an urban watershed southeast of Boston, Massachusetts, *Ecological Engineering*, 42: 212– 222.
- Zhu, W., Yu, Q., Tian, Y.Q., Chen, R.F., and Gardner, G.B., 2011. Estimation of chromophoric dissolved organic matter in the Mississippi and Atchafalaya River plume regions using above-surface hyperspectral remote sensing. *Journal of Geophysical Research*, 116, C02011, doi:10.1029/2010JC006523).
- Yu, Q., Tian, Y.Q., Chen, R.F., Liu, A., Gardner, G.B., Zhu, W., 2010. Functional Linear Analysis for Estimating Riverine CDOM in Coastal Environment Using In Situ Hyperspectral Data, *Photogrammetric Engineering and Remote Sensing*, 76(10), 1147-1158.
- Detweiler, C., Doniec, M., Jiang, M., Schwager, M., Chen, R., Rus, D., 2010. Adaptive Decentralized Control of Underwater Sensor Networks for Modeling Underwater Phenomena. In *Proceedings of 2010 ACM Conference on Embedded Networked Sensor Systems (SenSys 2010)*, Zurich, Switzerland, 3–5 November 2010.
- Huang, W. and Chen, R.F., 2009. Sources and transformations of chromophoric dissolved organic matter (CDOM) in the Neponset River Watershed. *J. Geophys. Research-Biogeosciences*, 114, doi:10.1029/2009JG000976.
- Wilson B., Chen, R.F., Olsen, C.R., Cantwell, M., Gontz, A, Ho, K., and Zhu, J., 2009. The partitioning of Triclosan between aqueous and particulate bound phases in the Hudson River estuary. *Marine Pollution Bulletin*, 59, 207-212.
- He, H.M, Yu, Q., Zhou, J., Tian, Y.Q., and Chen, R.F., 2008. Modeling complex flood flow evolution in middle Yellow River Basin, China. *Journal of Hydrology*, 353, 76-92.
- Chen, R.F., 2008. Ocean education and outreach for fame and fortune-A case study. *Current-The Journal of Marine Education*, 24: 36-40.
- Kuo, D.T.F., Adams, R.G., Rudnick, S.M., and Chen, R.F., and Gschwend, P.M., 2007. Investigating desorption of native pyrene from sediment on minute- to month-timescales by time-gated fluorescence spectroscopy. *Environmental Science and Technology*, 41: 7752-7758.
- Chant, R.J., Glenn, S.M., Hunter, E., Kohut, J., Chen, R.F., Houghton, R.W., Bosch, J., and Schofield, O., 2008. Bulge formation of a buoyant river outflow. *Journal of Geophysical Research* 113. 16 pp. DOI: 10.1029/2007JC004100.

- Wang, X.-C., Litz, L., Chen, R.F., and Huang, W., Feng, P., and Altabet, M.A., 2007. Release of dissolved organic matter during oxic and anoxic decomposition of salt marsh cordgrass. *Marine Chemistry*, 105: 309-321.
- He, H.M., Zhou, J., Yu, Q., Tian, Y.Q., and Chen, R.F., 2007. Flood frequency and routing processes at a confluence of the Middle Yellow River in China. *River Research and Applications*, 23: 407-427.
- Frashure, K.M., Chen, R.F., Stephen, R.A., Bolmer, T., Lavin, M., Strohschneider, D., Maichle, R., Micozzi, N., and Cramer, C., 2007. Waves and Tsunamis Project. *Science Scope*, 30 (March), 16-21.
- Drouin, P., Welty, D.J., Repeta, D., Engle-Belknap, C.A., Cramer, C., Frashure, K., and Chen, R.F., 2006. Seeing the Carbon Cycle. *Science Scope*, January, 14-18.
- Wang X.-C., Callahan, J., and Chen, R.F., 2006. Variability in radiocarbon ages of biochemical compound classes of high molecular dissolved organic matter in estuaries. *Estuarine, Coastal and Shelf Science*. 68, 188-194.
- Gardner, G.B., Chen, R.F., and Berry, A., 2005. High-resolution measurements of chromophoric dissolved organic matter (CDOM) fluorescence in the Neponset River Estuary, Boston Harbor, MA. *Marine Chemistry*, 96: 137-154.
- Chen, R.F. and Gardner, G.B., 2004. High resolution measurements of chromophoric dissolved organic matter in the Mississippi and Atchafalaya River plume regions. *Marine Chemistry*, 89: 103-125.
- Chen, R.F., Bissett, P., Coble, P., Conmy, R., Gardner, G.B., Moran, M.A., Wang, X.C., Well, M., Whelan, P., and Zepp, R.G., 2004. Chromophoric dissolved organic matter (CDOM) source characterization in the Louisiana Bight. *Marine Chemistry*, 89: 257-272.
- Callahan, J., Dai, M., Chen, R.F., Li, X., Lu, Z., and Huang, W., 2004. Dissolved organic matter in the Pearl River Estuary, China. *Marine Chemistry*, 89: 211-224.
- Hitchcock, G.L., Chen, R.F., Gardner, G.B., and Wiseman, W.J. Jr., 2004. A Lagrangian view of fluorescent chromophoric dissolved organic matter distributions in the Mississippi River plume. *Marine Chemistry*, 89: 225-239.
- Conmy, R.N., Coble, P.G., Chen, R.F., and Gardner, G.B., 2004. Optical properties of colored dissolved organic matter in the Northern Gulf of Mexico. *Marine Chemistry*, 89: 127-144.
- Wang, X.-C., Chen, R.F., and Gardner, G.B., 2004. Sources and transport of dissolved and particulate organic carbon in the Mississippi River estuary and adjacent coastal waters of the northern Gulf of Mexico. *Marine Chemistry*, 89: 241-256.
- Clark, C.D., Hiscock, W.T., Millero, F.J., Hitchcock, G., Brand, L., Miller, W.L., Ziolkowski, L., Chen, R.F., and Zika, R.G., 2004. CDOM distribution and CO₂ production on the Southwest Florida Shelf. *Marine Chemistry*, 89: 145-167.
- Wang, X.C, Callahan, J., Altabet, M., and Chen, R.F., 2004. Stable carbon and nitrogen isotopic compositions of high molecular weight dissolved organic matter from four US estuaries. *Geochimica et Cosmochimica Acta*, 68: 2681-2691.

- Zou, L., Wang, X.-C., Callahan, J., Culp, R.A., Chen, R.F., and Sun, M.Y., 2004. Bacterial roles in the formation of high-molecular-weight dissolved organic matter in estuarine and coastal waters: Evidence from lipids and compound-specific isotopic ratios. *Limnology and Oceanography*, 49: 297-302.
- Wang, X.-C., Chen, R.F., and Berry, A., 2003. Sources of organic matter in Plum Island salt marsh sediments (MA, USA): Long-chain n-alkanes and stable carbon isotope compositions. *Estuarine, Coastal and Shelf Science*, 58: 917-928.
- Chen, R.F., Zhang, Y., Vlahos, P., and Rudnick, S.M., 2002. The fluorescence of dissolved organic matter in the Mid-Atlantic Bight. *Deep-Sea Research II*, 49: 4439-4459.
- Vlahos, P., Chen, R.F., and Repeta, D.J., 2002. Fluxes of dissolved organic carbon (DOC) in the Mid-Atlantic Bight. *Deep-Sea Research II*, 49: 4369-4385.
- Aluwihare, L.I., Repeta, D.J., and Chen, R.F., 2002. Chemical composition and cycling of dissolved organic matter in the Mid-Atlantic Bight. *Deep-Sea Research II*, 49: 4421-4437.
- Wang, W.-C., Chen, R.F., Whelan, J., and Eglinton, L., 2001. Contribution of "old" carbon from natural marine seeps to sedimentary and dissolved organic carbon pools in the Gulf of Mexico. *Geophysical Research Letters*, 28: 3313-3316.
- Wang, X.-C., Zhang, Y., and Chen, R.F., 2001. Distribution and Partitioning of polycyclic aromatic hydrocarbons (PAHs) in different size fractions of sediments from Boston Harbor, United States. *Marine Pollution Bulletin*, 42, 1139-149.
- Siegener, R. and Chen, R.F., 2001. Caffeine in Boston Harbor Seawater. *Marine Pollution Bulletin*, 44: 383-387.
- Leifer, I., Clark, J.F., and Chen, R.F., 2000. Modifications of the Local Environment by Natural Marine Hydrocarbon Seeps. *Geophysical Research Letters*, 27: 3711-3714.
- Chen, R.F., Jiang, Y., and Zhao, M., 2000. Solid-Phase Fluorescence Determination of Chlorins in Marine Sediments. *Organic Geochemistry*, 31: 1755-1763.
- Siegener, R. and Chen, R.F., 2000. Detection of Pharmaceuticals Entering Boston Harbor. In: L.H. Keith, T.L. Jones-Lepp, and L.L. Needham (Eds.) *Environmental Endocrine Disruptors*, ACS Symposium Series 747, American Chemical Society, Washington D.C., 125-132.
- Chen, R.F., 1999. A Laser-Based Fiber-Optic Fluorometer for In Situ Seawater Measurements. In *Chemical Sensors in Oceanography*, M. Varney, Editor. Gordon & Breach, Amsterdam, 333 pp.
- Chen, R.F., 1999. *In Situ* Fluorescence Measurements in Coastal Waters. *Organic Geochemistry*, 30: 397-409.
- E. Blanco and R.F. Chen, 1998. Fiber Optical Chemical Sensors: Sol-gel Approach". In *Applied Sciences in the Environment*, D. Almorza and H.M. Ramos, Editors, pp 177-186.

- Rudnick, S.M. and Chen, R.F., 1998. Laser-Induced Fluorescence of Polycyclic Aromatic Hydrocarbons (PAH) in the Marine Environment. *Talanta*, **47**: 907-919.
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- Aluwihare, L.I., Repeta, D.J., and Chen, R.F., 1997. A Major Biopolymeric Component to Dissolved Organic Carbon in Seawater. *Nature*, **387**: 166-169.
- Mopper, K., Feng, Z., Bentjen, S.B., and Chen, R.F., 1996. Effects of Cross-flow Filtration on the Absorption and Fluorescence Properties of Seawater. *Marine Chemistry*, **55**: 53-74.
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- Chen, R.F., Fry, B., Hopkinson, C.S., Repeta, D.J., and Peltzer, E.T., 1996. Dissolved Organic Carbon on Georges Bank. *Continental Shelf Research*, **16**: 409-420.
- Chen, R.F. and Bada, J.L., 1994. The Fluorescence of Dissolved Organic Carbon in Porewaters of Marine Sediments. *Marine Chemistry*, **45**: 31-42.
- Yang, Y., Chen, R.F., and Shiaris, M.P., 1994. Metabolism of Naphthalene, Fluorene, and Phenanthrene: Preliminary Characterization of a Cloned Gene Cluster from *Pseudomonas putida* NCIB 9816. *Journal of Bacteriology*, **176**: 2158-2164.
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ABSTRACTS/PRESENTATIONS

- Chen, R.F., 2019. Eight Key Concepts of Ocean and Environmental Science. National Marine Educators Association (NMEA) annual meeting, Durham, NH, July 22.
- Wilson, R.T., Lohmeier, J., Lustick, D., and Chen, B. (2019), “Mind the Gap: Using Transit Advertising to Influence Consumer Attitudes Toward Climate Change,” presented at the American Academy of Advertising’s Annual Conference, Dallas, TX, March 29.
- Chen, R.F., Ivanova, M., Bender, J., Petrova, M., 2019. Coasts and Communities: Graduate Students Compare Environmental Issues in Coastal Massachusetts and Rwanda. Aquatic Sciences Summer Meeting, San Juan, Puerto Rico., February 23-March 2.
- Chen, R.F., Bosma, K., Borelli, M., Kirshen, P., and Lockwood, L., 2019. Exploring the Use of Dredge Spoils to Enhance the Ecosystem Services Provided by the Boston Harbor Islands. Aquatic Sciences Summer Meeting, San Juan, Puerto Rico., February 23-March 2.
- Davis, S.E., Chen, R.F., and Peri, F., 2019. The Effect of Episodic Rain Events on Dissolved Organic Carbon (DOC) Fluxes in a Small Urban Watershed. Aquatic Sciences Summer Meeting, San Juan, Puerto Rico., February 23-March 2.
- Chen, R.F. and Lohmeier, J., 2019 (Invited). Cool Science: Children Educating Adults Through Their Art on Buses. Xiamen Symposium on Marine Environmental Science (XMAS IV). Jan 6-9, 2019, Xiamen China.
- Chen, R.F., Davis, S., Salisbury, J. Ocean and Coastal Acidification: How It Affects the Ocean and You. Oral presentation at: NEOSEC Ocean Literacy Summit: November 15-16, 2018: Boston, MA
- Chen, R.F., Kirshen, P., Byrnes, J., Lockwood, L., and Borelli, M., 2018. Sea-level Rise in Boston Harbor: A Complex, Uncertain, Challenging Issue. Aquatic Sciences Summer Meeting, Victoria, B.C., June 10-15.
- Chen, R.F., 2018. Boston Harbor Boot Camp: Getting Graduate Students' Feet Wet Before Classes Start. Aquatic Sciences Summer Meeting, Victoria, B.C., June 10-15.
- Honig, S., Chen, R.F., and Davis, S., 2018. “First Flush” of Dissolved Organic Matter (DOM) in the Neponset Estuary, Boston, Massachusetts. Ocean Sciences Meeting 2018. Portland, OR, February 11-16.
- Davis, S., Honig, S., and Chen, R.F., 2018. The Impact of Rain Events on Dissolved Organic Matter (DOM) Fluxes in Two Small Urban Coastal Watersheds. Ocean Sciences Meeting 2018. Portland, OR, February 11-16.
- Gardner, G.B., Chen, R.F., Schiebel, H.N., and Peri, F. 2018. The Use of Mixing Curves in the Estimation of Estuarine Export of Dissolved Constituents: Justification and Error Analysis. Ocean Sciences Meeting 2018. Portland, OR, February 11-16.

- Schiebel, H.N. Peri, F., and Chen, R.F., 2018. Dissolved organic carbon (DOC) export from surface sediments of a New England salt marsh. Ocean Sciences Meeting 2018. Portland, OR, February 11-16.
- Peri, F., Chen, R.F., and Davis, S., 2018. A real-time coastal OA observatory to study potential long-term impact on the oyster aquaculture industry in Massachusetts. Ocean Sciences Meeting 2018. Portland, OR, February 11-16.
- Chen, R.F., Borelli, M., Byrnes, J., Lockwood, L., and Kirshen, P., 2018. Assessment of a Boston Harbor-Wide Barrier to Mitigate the Impacts of Sea-Level Rise. Ocean Sciences Meeting 2018. Portland, OR, February 11-16.
- Chen, R. F., 2018. The Environmental Innovation Clinic: A Transdisciplinary, Graduate Learning Experience to Train the Next Generation of Wicked Problem Solvers. Ocean Sciences Meeting 2018, Portland, OR, February 11-16.
- Najjar, R.G., M. Herrmann, R. Alexander, E. W. Boyer, D. Burdige, D. Butman, W.-J. Cai, E. A. Canuel, R. F. Chen, M. A. M. Friedrichs, R. A. Feagin, P. Griffith, A. L. Hinson, J. R. Holmquist, X. Hu, W. M. Kemp, K. D. Kroeger, A. Mannino, S. L. McCallister, W. R. McGillis, M. R. Mulholland, C. Pilskaln, J. Salisbury, S. Signorini, P. St-Laurent, H. Tian, M. Tzortziou, P. Vlahos, Z. A. Wang, and R. C. Zimmerman, 2017. Carbon budget of tidal wetlands, estuaries, and shelf waters of Eastern North America. AGU Fall Meeting, Dec. 11-15.
- Chen, R.F., Borelli, M., Byrnes, J., Lockwood, L., and Kirshen, P., 2017. Assessing the Environmental Impacts of a Harbor-Wide Strategy for Preparing for Sea-Level Rise in Boston. CERF 2017, Providence, RI, Nov. 5-9.
- Chen, R.F., 2017 (Invited). Graduate Ocean Science Education Needs for the 21st Century. Global Ocean Science Education (GOSE) workshop, Venice, Italy, May 23-25.
- Chen, R.F., Gardner, G.B., and Peri, F., 2017. CDOM vs. Salinity: an integrative tool to rapidly assess organic matter cycling in nearshore coastal waters. ASLO 2017, Honolulu, HI, February 26-March 3.
- Chen, R. F., 2017. Coasts and communities: a novel transdisciplinary graduate core course. ASLO 2017, Honolulu, HI, February 26-March 3.
- Gardner, B., Chen, R.F., and Peri, F., 2017. Strategies for measuring dissolved organic matter across steep land-ocean gradients. ASLO 2017, Honolulu, HI, February 26-March 3.
- Peri, F., Schiebel, H.N., and Chen, R.F., 2017. Dissolved organic carbon storage capacity in a New England salt marsh. ASLO 2017, Honolulu, HI, February 26-March 3.
- Franke, O.D., Sheldon, P., and Chen, R.F., 2017. The impacts of salt marsh restoration on macroinvertebrate communities in Massachusetts. ASLO 2017, Honolulu, HI, February 26-March 3.
- Wei, J., Lee, Z., Armstrong, R.A., Chen, R.F., Garcia, R., Sheldon, P., Peri, F., and Shang, Z., 2017. Remote sensing of water properties from Landsat-8 OOLI

- measurements in shallow and deep coastal waters. ASLO 2017, Honolulu, HI, February 26-March 3.
- Schiebel, H.N., Wang, X., Gardner, G.B.; Peri, F., and Chen, R.F., 2017. Seasonal export of dissolved organic matter from a New England Salt Marsh. ASLO 2017, Honolulu, HI, February 26-March 3.
- Sheldon, P.D.; Chen, R.F., Schaaf, C., Lee, Z., Wei, J., Shang, Z., and Pahlevan, N., 2017. Water quality monitoring of the Boston Harbor recovery from space: implication for estuarine management. ASLO 2017, Honolulu, HI, February 26-March 3.
- Chen, R.F., Lohmeier, J., and Lustick, D., 2017 (Invited). Novel strategies towards increasing public understanding of marine and climate science. In Special Session on Marine Public Education. Xiamen Symposium on Marine Environmental Sciences (XMAS III). Xiamen, China, January 9-11.
- Pahlevan, N., Sheldon, P., Peri, F., Wei, J., Shang, Z., Sun, Q., Chen, R.F., Lee, Z., Schaaf, C.B., Schout, J. R., and Loveland, T., 2016. Calibration/Validation of Landsat-derived Ocean Colour Products in Boston Harbour. International Society for Photogrammetry and Remote Sensing (ISPRS XXIII). Prague, July 12-19.
- Chen, R.F., Gardner, G.B., and Peri, F., 2016. Dissolved Organic Matter (DOM) Export from Watersheds to Coastal Oceans. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Chen, R.F., Lustick, D., Lohmeier, J., and Lockwood, L., 2016. Can Ozzie the Ostrich Prepare the Public for Better Learning about Climate Change? Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Bulpett, K.L., 2016. Carbon Dioxide Emissions Associated with the Restoration of a Tidal Salt Marsh in Boston, Massachusetts. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Gardner, G.B., Chen, R.F., Olivasen, J., and Peri, F. 2016. Anthropogenic inputs of dissolved organic matter in New York Harbor. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Peri, F., Gardner, G.B., Chen, R.F., Sheldon, P., and Wetherill, B., 2016. Evolution of long-term water quality monitoring buoys to ground truth Landsat 7 and 8 satellite observations in Boston Harbor. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Lustick, D.L., Lohmeier, J., Chen, R.F., Wilson, R., Rabkin, D., and Thompson, S., 2016. ScienceToGo.org: The Strengths and Weaknesses of Communicating Climate Change through Mass Transit Advertising Spaces. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Schiebel, H.N. and Chen, R.F., 2016. Science Cafes: Engaging Graduate Students One Drink at a Time. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.

- Schiebel, H.N., Chen, R.F., and Peri, F., 2016. Closing the salt marsh dissolved organic carbon (DOC) outwelling budget: sediment fluxes. Ocean Sciences Meeting (OSM16), New Orleans, LA, February 21-26.
- Chen, R.F., Lustick, D.S., Lohmeier, J., and Thompson, S., 2015. Cool Science: K-12 Climate Change Art Displayed on Buses. AGU Fall Meeting, San Francisco, Dec. 15.
- Lustick, D.S., Lohmeier, J., Chen, R.F., Wilson, R., Rabkin, D., and Thompson, S., 2015. ScienceToGo.org: Using 'Ozzie the Ostrich' to Build Local Partnerships around Climate Change Learning. AGU Fall Meeting, San Francisco, Dec. 15.
- Najjar, R., Chen, R.F., et al, 2015. The Carbon Budget of Coastal Waters of Eastern North America. AGU Fall Meeting, San Francisco, Dec. 14.
- Pahlevan, N., Sun, Q., Chen, R.F., Schaaf, C.B., and Schott, J., 2015. Cross-calibration of Landsat 5 for Long-term Historical Monitoring of Coastal Waters. IEEE International Geoscience and Remote Sensing Society (IGARSS 2015). Milan, Italy, July 26-31.
- Chen, R.F., Cable, J.E., Cherrier, J.E., Meile, C., Schelles, J., Gardner, G.B., Wang, X.-C., Schalles, J., Peri, F., and Schiebel, H.N., 2015. A dissolved organic carbon (DOC) budget for a pristine salt marsh. Aquatic Sciences Meeting, Granada, Feb. 22-27.
- Schiebel, H.N., Peri, F., and Chen, R.F., 2015. Dissolved organic carbon production from salt marsh sediments. Aquatic Sciences Meeting, Granada, Feb. 22-27.
- Peri, F., Chen, R.F., Gardner, G.B., and Schiebel, H.N., 2015. A systematic approach to quantifying the dissolved organic carbon flux from a New England salt marsh. Aquatic Sciences Meeting 2015, Granada, Feb. 22-27.
- Chen, R.F., Lowmeier, J., Lustick, D., Rabkin, D., Thompson, S., and Wilson, R., 2015. "Ozzie" the ostrich addresses climate literacy on the subway in Boston, Massachusetts, USA. Aquatic Sciences Meeting 2015, Granada, Feb. 22-27.
- Schiebel, H.N., Chen, R.F., Lustick, D., Rabkin, D., Berhmann, K., Morse, M., Thompson, S., Wilson, R., and Lohmeier, J., 2015. Science Cafes: Making social media personal. Aquatic Sciences Meeting 2015, Granada, Feb. 22-27.
- Chen, R.F., Lustick, D., Lohmeier, J., Rabkin, D., and Wilson, R., 2014 (INVITED). Climate change education on the "T". Climate Change Education Partnership Alliance meeting, Washington D.C., June 11.
- Chen, R.F., Cable, J.E., Meile, C., Cherrier, J.E., Gardner, G.B., Wang, X.-C., Schalles, J., Peri, F., and Schiebel, H.N., 2014. Dissolved organic carbon (DOC) export from salt marshes. Joint Aquatic Sciences Meeting, Portland, May 18-23.
- Schiebel, H.N., Gardner, G.B., Peri, F., and Chen, R.F., 2014. Seasonal variation in outwelling of dissolved organic matter (DOM) from salt marshes. Joint Aquatic Sciences Meeting, Portland, May 18-23.
- Schiebel, H.N. and Chen, R.F., 2014. The role of salt marshes in the global carbon cycle. Joint Aquatic Sciences Meeting, Portland, May 18-23.

- Pelletier, P., Scheff, A., and Chen, R.F., 2014. Using Energy to Connect Disciplinary Science Curricula. National Science Teachers Association, 2014 National Conference, Boston, April 4.
- Chen, R.F., Gardner, G.B., Cable, J., Cherrier, J. and Meile, C., 2014. The significance of dissolved organic carbon (DOC) outwelling from salt marshes. Ocean Sciences Meeting, Honolulu, February 23-28.
- Chen, R.F., Douglas, E., Lustick, D., Lohmeier, J., Rabkin, D., and Wilson, R., 2014. Climate Change Education on the "T": Using Advertising Strategies for Disseminating Scientific Research. Ocean Sciences Meeting 2014, Honolulu, HI, February 25.
- Schiebel, H.N., Wang, X.-C., Peri, F., Chen, R.F., and Gardner, G.B., 2014. A carbon outwelling budget for a New England salt marsh. Ocean Sciences Meeting, Honolulu, February 23-28.
- Gardner, B., Chen, R.F., Peri, F., Schiebel, H.N., and Wang, X.-C., 2014. Sources, transport, and fate of DOC in a shallow bay. Ocean Sciences Meeting, Honolulu, February 23-28.
- Peri, F., Schiebel, H.N., Chen, R.F., Gardner, G.B., 2014., Analysis of dissolved organic carbon outwelling from creek bank seepage and rivulets within a New England salt marsh. Ocean Sciences Meeting, Honolulu, February 23-28.
- Schiebel, H.N. and Chen, R.F., 2014. The graduate students for ocean education (GrOE) Facebook page: Using social media to create a broader impacts community. Ocean Sciences Meeting, Honolulu, February 23-28.
- Lustick, D.S., Lohmeier, J., Chen, R.F., Wilson, R., Rabkin, D., 2014. ScienceToGo.org: First look at a model's efficacy to engage mass transit riders with climate change science. Ocean Sciences Meeting, Honolulu, February 23-28.
- Chen, R.F., Eisenkraft, A., Pelletier, P., and Scheff, A., 2014. Boston Energy in Science Teaching. In *The Central Role of Energy Concepts in K-12 Science Education*, Organizer, A. Eisenkraft. AAAS, 2014 Annual Meeting, Chicago, February 16.
- Levy, A.J., Scheff, A., Chen, R.F., Pelletier, P., and Fields, E., 2013. The BEST Observation Protocol: Looking at Next Generation Science Standards' Crosscutting Concepts in the Classroom. National Association for Research in Science Teaching, 2013 Annual Conference, April 6-9, Rio Mar, Puerto Rico.
- Eisenkraft, A., Fortus, D.L., Krajcik, J.S., Neumann, K., Nordine, J., and Chen, R.F., 2013. Symposium - Energy as a Crosscutting Concept: Research and Impact on Teaching and Learning of Science. National Association for Research in Science Teaching, 2013 Annual Conference, April 6-9, Rio Mar, Puerto Rico.
- Chen, R. F., Cable, J. E., Cherrier, J., Meile, C., Gardner, G. B., Wang, X. C., Esch, M., Gray, E., Lyons, G., and Peri, F., 2013. Outwelling of dissolved organic carbon from salt marshes. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.

- Cable, J. E., Gardner, G. B., and Chen, R. F., 2013. Response of CDOM in salt marsh groundwater to wind and tidally driven inundation patterns. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Chen, R. F., Uzzo, S., Cramer, C., DiBona, P., Faux, R., 2013. Sensor networks and social networks: effective strategies for education and outreach. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Peri, F., Chen, R. F., Meile, C. D., Esch, M., Cable, J. E., and Cato, H. S., 2013. Developing sensors to study creekbank exchange and ebb tide drainage of chromophoric dissolved organic matter (CDOM) in an urban macrotidal salt marsh. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Cialino, K. T., Chen, R. F., Huang, W., Wang, X., Peri, F., and Heath, T. D., 2013. High resolution measurements of dissolved organic carbon during episodic events in an urban New England river. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Gardner, B., Chen, R. F., Peri, F., Wang, X., Arriola, J., Meile, C., and Esch, M., 2013. Examination of chromophoric dissolved organic matter (CDOM) dynamics in a microtidal salt marsh with high temporal and spatial resolution observations. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Wetherill, B. R., Wood, J. D., Chen, R. F., and Peri, F., 2013. Real-time predictions of microbial pathogens in the Charles River, MA using on-line weather stations and river flow gauges. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Cato, H. S., Chen, R. F., Wang, X., Gardner, G. B., Peri, F., 2013. Seasonal Changes in dissolved organic matter outwelling in an urban salt marsh system. Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Chen, R.F., S.M. Uzzo, R. Faux, P. DiBona, C.B. Cramer, 2012. Measuring Success of Federally-Funded STEM Education. NetworksNetSciEdSymposium, NetSci2012 Evanston, Illinois. NetSciEd Satellite Symposium on Education @ NetSci2012: Infuse Network Science into K-12 and Undergraduate Education, June. (Presentation).
- Chen, R.F., C. Cramer, P. DiBona, R. Faux, and S. Uzzo, 2012. Ripple Effects: Small-Scale Investigations Into the Sustainability of Ocean Science Education Networks. CompleNet 2012, Melbourne, Florida, March (Poster).
- Chen, R.F., Dorsen, J.D., Eisenkraft, A., Karp, J., Levy, A., Osche, E., Pelletier, P., Rodriguez, K., Scheff, A., Sevian, H., and Zahopoulos, C., 2012. Disciplinary Content-Focused vs. Cross-Disciplinary Concept-Focused Professional Development for Science Teachers. American Educational Research Association, Annual Meeting 2012, Vancouver, B.C., April 13-17.
- Chen, R.F., Gardner, G.B., Wang, X.-C., and Peri, F., 2012. Sources of outwelled dissolved organic matter in salt marshes. Ocean Sciences Meeting, February 20-24, Salt Lake City.

- Schneeweis, M., Wang, X.-C., and Chen, R.F., 2012. The contribution of chromophoric dissolved organic matter (CDOM) by spartina species rhizomes to the Neponset River Estuary. Ocean Sciences Meeting, February 20-24, Salt Lake City.
- Gardner, G.B., Chen, R.F., and Jiang, M., 2012. Thin surface layer transport of chromophoric dissolved organic matter (CDOM) in estuaries. Ocean Sciences Meeting, February 20-24, Salt Lake City.
- Cramer, C.B., Griswold, A., Shapiro, A.D., Uiterwyk, K., and Chen, R.F., 2012. The 3-minute solution: communicating your research in short, effective videos. Ocean Sciences Meeting, February 20-24, Salt Lake City.
- Chen, R.F., Wang, X.-C., Dai, M., and Gao, H., 2012. COSEE goes international: COSEE China. Ocean Sciences Meeting, February 20-24, Salt Lake City.
- Peri, F., M. Jiang, M. Zhou, and R.F. Chen, R.F., 2012. A real-time sea-level monitoring network for Massachusetts Bay. Ocean Sciences Meeting, February 20-24, Salt Lake City.
- Chen, R.F., DiBona, P., Cramer, C., Uzzo, S., and Faux, R., 2011. The New England Ocean Science Collaborative (NEOSEC): a sustainable network. North American Associations of Environmental Educators, annual meeting, October 12-16, Raleigh, NC.
- Chen, R.F., S.M. Uzzo, R. Faux, C.B. Cramer, 2011. Ripple Effects: Small-scale investigations into the sustainability of ocean education networks. Workshop on Information in Networks (WIN) 2011, September 30-October 1, 2011, New York University. (poster). (<http://www.winworkshop.net/>)
- Koepfler, E, Cook, S., Glynn, J., Mike, H., Mourad, T., Godoy-Gonzalez, M., Chen, R.F., Moses, M., Asher, P., and C. Randolph, C., 2011. TeachOceans.org - societies promoting a networking effort and related resources for ocean science K-16 education. Coastal and Estuarine Research Federation, November, 6-10, 2011, Daytona Beach, FL.
- Chen, R.F., 2011 [INVITED]. Water quality forecasting—using networks of optical sensors to better understand and predict water quality, carbon cycling, and climate change. CUAHSI/USGS Joing workshop on In Situ Optical Water Quality Sensor Networks, June 8-10, Shepardstown, West Virginia.
- Chen, R.F., Gardner, G.B., Cherrier, J., Cable, J.E., Meile, C., Wang, X.-C., Peri, F., 2011. Outwelling of chromophoric dissolved organic matter (CDOM) from tropical salt marshes. Aquatic Sciences Meeting (ASLO), February 13-18, Puerto Rico.
- Chen, R.F., 2011. Broader impacts of carbon cycle research: teaching large undergraduate courses and providing professional development for teachers. Aquatic Sciences Meeting (ASLO), February 13-18, Puerto Rico.
- Bernie Gardner, Robert F. Chen, Wei Huang, 2011. Chromophoric dissolved organic matter (CDOM) dynamics in urban estuaries: implications for sources and transport processes relating to multiple constituents of urban aquatic systems.

- Detweiler, C., Doniec, M., Jiang, M., Schwager, M., Chen, R.F., and Rus, D., 2010. Adaptive Decentralized Control of Underwater Sensor Networks for Modeling Underwater Phenomena. 2010 ACM Conference on Embedded Networked Sensor Systems (SenSys 2010).
- Chen, R.F., Jiang, M., Tian, Y., Gardner, G.B., Peri, F., Huang, W., and Cialino, K.T., 2010. Understanding the Temporal Evolution of the Flux of Organic Matter from a Watershed to the Coastal Ocean. Ocean Sciences Meeting, February 22-26, Portland, OR.
- Huang, W., Chen, R.F., Gardner, G.B., 2010. Chromophoric Dissolved Organic Matter (CDOM) in Spring Hudson River Plume. Ocean Sciences Meeting, February 22-26, Portland, OR.
- Peri, F., Chen, R.F., Gardner, G.B., Arriola, J., 2010. The Boston Environmental Area Coastal Observation Network (BEACON) - a nearshore testbed for monitoring an urban estuary. Ocean Sciences Meeting, February 22-26, Portland, OR.
- Osburn, C.L., Bianchi, T.S., Chen, R.F., Coble, P.G., and D'Sa, E.J., 2010. Geospatial Data Synthesis Activity for Chromophoric Dissolved Organic Matter (CDOM) to the Northern Gulf of Mexico. Ocean Sciences Meeting, February 22-26, Portland, OR.
- Zhu, W., Yu, Q., Tian, Y., Chen, R.F., and Gardner, G.B., 2010. Examination of transport dynamics in a small urban estuary through the combination a system of cost effective buoys, high resolution numerical modeling and periodic surveys. Ocean Sciences Meeting, February 22-26, Portland, OR.
- Chen, R.F., Pelletier, P., Dorsen, J., Douglas, E.M., Pringle, M.S., and Karp, J., 2009. Contextualizing Earth Science Professional Development Courses for Geoscience Teachers in Boston. AGU Fall Meeting, December, 13-18, San Francisco, CA.
- Chen, R.F., 2009. (INVITED PLENARY) Needs for Sensor Networks in the Nearshore Environment. WUWNet 09, The Fourth ACM International Workshop on UnderWater Networks (WUWNet), In conjunction with ACM SenSys 2009, November 3, 2009, Berkeley, California.
- Bodkin, M., Ellis, D., Grimsby, J., DeForce, E., Chen, R.F., and Plonski, B., 2009. "Smooosh Cup" madness: "Smoooshing" styrofoam cups expands fifth graders' scientific curiosity. GK-12 National Meeting, March 27-29, Washington D.C.
- Matsumoto, C., Weinstein, W., Chen, R.F., Smith, J.P., Callahan, J., and Theoharides, K., 2009. GK-12 Works! Stories from Alumni. GK-12 National Meeting, March 28, Washington DC.
- Chen, R.F., Gardner, G.B., Huang, W., Cialino, K., Peri, F., and Tian, Y., 2009. Towards understanding the flux of dissolved organic carbon (DO) and chromophoric dissolved organic matter (CDOM) from coastal watershed to coastal ocean. American Society of Limnology and Oceanography, January 26-30, Nice, France.
- Gardner, G.B., Chen, R.F., Huang, W., and Peri, F., 2009. Subsurface sources of chromophoric dissolved organic matter (CDOM) associated with the Mississippi

- River Plume. American Society of Limnology and Oceanography, January 26-30, Nice, France.
- Huang, W., Chen, R.F., and Gardner, B.G., 2009. Changes of CDOM from land to ocean: affect of land-cover types. American Society of Limnology and Oceanography, January 26-30, Nice, France.
- Chen, R.F., 2008. High resolution measurements of chromophoric dissolved organic matter (CDOM) in coastal areas. AGU Chapman Conference on Fluorescence of Organic Matter, Birmingham, UK, October 20-23, 2008.
- Chen, R.F., Gardner, G.B., and Huang, W., 2008. Chromophoric dissolved organic matter (CDOM) in United States estuaries. 10th International Estuarine Biogeochemistry Symposium: Estuaries in a Changing World. Xiamen, China, May 19-23.
- Chen, R.F., Peri, F., and Pollard, M., 2008. A real-time environmental monitoring “Swan” in a local pond, Milton Massachusetts. Session on Using innovative technologies in GK-12 projects. GK-12 Annual Meeting, Washington, D.C., February 29-March 2.
- Sevian, H., Chen, R.F., and Gonsalves, L., 2008. A rubric for assessing GK-12 Fellows’ ability to communicate their research to non-scientific audiences. Session on Assessing Communication Skills. GK-12 Annual Meeting, Washington, D.C., February 29-March 2.
- Chen, R.F., Cai, W.J., Chant, R., Gardner, G.B, Huang, W., Reinfelder, J., and Schofield, O., 2008. Carbon cycling in the Hudson River Plume. Ocean Sciences Meeting: From the Watershed to the Global Ocean, March 2-7, Orlando, Florida.
- Tian, Y.Q., Chen, R. F., Huang, W., Yu, Q., Gardner, B.G., and Lee, J., 2008. Use of remote sensing and process-based models to examine the distribution and transport of dissolved organic carbon in watersheds and adjacent coastal waters. Ocean Sciences Meeting: From the Watershed to the Global Ocean, March 2-7, Orlando, Florida.
- Yu, Q., Chen, R.F., Tian, Y.Q., Gardner, G.B., and Zhu, W.N., 2008. Estimating colored dissolved organic matter (CDOM) in a coastal river plume using in situ and imaging hyperspectral remote sensing. Ocean Sciences Meeting: From the Watershed to the Global Ocean, March 2-7, Orlando, Florida.
- Huang, W., Chen, R.F., Tian, Y., Gardner, G.B., Cialino, K.T., 2008. Seasonal variations in the source of chromophoric dissolved organic matter (CDOM) in the Neponset River Watershed. Ocean Sciences Meeting: From the Watershed to the Global Ocean, March 2-7, Orlando, Florida.
- Gardner, G.B., Chen, R.F., Huang, W., and Peri, F., 2008. Subsurface sources of chromophoric dissolved organic matter (CDOM) associated with the Mississippi River Plume. Ocean Sciences Meeting: From the Watershed to the Global Ocean, March 2-7, Orlando, Florida.
- Chen, R.F., 2008. Invited Panel Member. Education & Outreach Workshop: How Scientists Can Become Involved in Education & Public Outreach (EPO). Ocean

- Sciences Meeting: From the Watershed to the Global Ocean, March 5, Orlando, Florida.
- Chen, R.F., 2008. Invited Speaker. Student Development Workshop on “Communicating your Science to Non-Scientists”, March 4, Ocean Sciences Meeting, Orlando, Florida.
- Chen, R.F., 2008. Invited Panel Member. STEM Education. April 30, COSEE Network Meeting, Catalina, California.
- Gardner, G.B., Chen, R.F., Huang, W., and Peri, F., 2007. Colored Dissolved Organic Matter: From Watershed to Ocean. Estuarine Research Federation 2007. Science and Management: Observations, Synthesis and Solutions, Providence, Rhode Island, November 4-8.
- Huang, W., Chen, R.F., and Gardner, G.B., 2007. Behavior of Riverine Dissolved Organic Matter in Hudson Estuary. Estuarine Research Federation 2007. Science and Management: Observations, Synthesis and Solutions, Providence, Rhode Island, November 4-8.
- Peri, F., Chen, R.F., Gardner, G.B., Pollard, M., and Calder, M., 2007. Wireless Sensor Network Measurements of the Temperature Field in Savin Hill Cove. Estuarine Research Federation 2007. Science and Management: Observations, Synthesis and Solutions, Providence, Rhode Island, November 4-8.
- Frashure, K., Chen, R.F., Logan, C., Plonski, B., and Mazel, C., 2007. Promoting Ocean Science Literacy--Partners in Ocean Science Education (POSE). National Marine Educators Association National Meeting, Portland, ME, July 23-27.
- Chen, R.F., Gardner, G.B., Huang, W., and Peri, F., 2007. Chromophoric dissolved organic matter (CDOM) dynamics in the Hudson River Plume. ASLO, Santa Fe, February 4-9, 2007.
- Chen, R.F., and Sevian, H., 2007. Presenting your science to non-scientists. Student workshop, ASLO, Santa Fe, February 4-9, 2007. INVITED.
- Gardner, G.B., Chen, R.F., Huang, W., Peri, F., Blumberg, A., Georgias, N., 2007. Measurement and Modeling of Chromophoric Dissolved Organic Matter in an Urban Estuary. ASLO, Santa Fe, February 4-9, 2007.
- Huang, W., Chen, R.F., Bandla, V., and Tian, Y., 2007. Using Geographical Information Systems for Modelling Sources of Estuarine Dissolved Organic Carbon. ASLO, Santa Fe, February 4-9, 2007.
- Frashure, K, Chen, R.F., Bowen, R.A., and Frankic, 2007. A protocol for selecting indicators of ecosystem health in urban estuaries. ASLO, Santa Fe, February 4-9, 2007.
- Wilson, B., Olsen, C., Chen, R.F., 2007. The use of radionuclides to track sewage contaminants in estuary systems. ASLO, Santa Fe, February 4-9, 2007.
- Frazer, T.K., S.R. Keller, O. Schofield, S.M. Glenn, J. Kohut, R.J. Chant, M. Oliver, J.R. Reinfelder, M.A. Moline, M. Zhou, R.F. Chen (2006) Coastal Ocean

- Observatories Enable Biological Investigations in a Buoyant Plume. Marine Technology Society, Boston Meeting, September 2006.
- Chen, R.F. and Decker, M., 2006. Doing Science. ASLO Summer Meeting, June 5-9, Victoria, British Columbia.
- Chen, R.F., Bandla, V., Gardner, G.B., Peri, F., Tian, Y., and Huang, W., 2006. Chromophoric dissolved organic matter (CDOM) in the Neponset watershed. ASLO Summer Meeting, June 5-9, Victoria, British Columbia.
- Cobb, D.M., Chen, R.F., and Plonski, B., 2006. Jump start environmental science curriculum with local environmental issues. ASLO Summer Meeting, June 5-9, Victoria, British Columbia.
- Chen, R.F., Gardner, G.B., and Wang, X.-C., 2006. Dissolved organic carbon cycling in the Hudson River Plume. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Chen, R.F., 2006. Education and outreach for fame and fortune. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Calabro, J., Zettler, E., Decker, M., Saucer, V., Chen, R.F., 2006. The Stellwagen Bank Ecoscenario: a FOSS Populations and Ecosystems Module for New England. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Frashure, K., Chen, R.F., and Bowen, R.A., 2006. Assessing the Health of Estuaries. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Frashure, K., Chen, R.F. and Padawer, S., 2006 The Ocean Science Education Institute(OSEI): Bridging Scientists and Educators. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Huang, W., Chen, R.F., and Wang, X.-C., 2006. Sources and characteristics of dissolved organic carbon in Hudson River Tributaries. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Saucer, V., Steinback, J., Wilson, B, Padawer, S., Chen, R.F., and Decker, M., 2006. Mud Snails—A Local, Marine Replacement in Diversity of Life, a FOSS module. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Gardner, G.B. and Chen, R.F., 2006. High resolution sampling for urban oceanography. Ocean Sciences Meeting, Honolulu, Feb. 20-24.
- Smith, J. P., Shopis, A., Zhu, J., Green, S., Olsen, C.R., and R. F. Chen, R.F., 2006. Geoscience Education Success Stories from the Watershed Integrated Sciences Partnership (WISP) and the Boston Science Partnership (BSP). Geological Society of America Meeting, Harrisburg, PA, Mar. 20-22.
- Chen, R.F. and Gardner, G.B., 2005. Integrated observations of coastal water quality. Regional Association for Research in the Gulf of Maine (RARGOM) Modeling Workshop, Ogunquit, Maine, July 6-7. (invited)
- Chen, R.F. and Gardner, G.B., 2005. Integrated coastal observation system (ICOS): High resolution detection of pollution in estuaries. American Chemical Society, San Diego, March 13-17. (invited)

- Chen, R.F., Gardner, G.B., Rudnick, S.M., Wang, X.-C., Wang, Z., Litz, L., Cobb, D., Saffert, H., Wright, D., Sherrell, E., Peri, F., and Reinfelder, J., 2005. The Schmutz of New York. ASLO, Salt Lake City, February 20-25.
- Maurer, S. N. and Chen, R.F., 2005. Watersheds: Natural bridges for integrating disciplines in middle school learning. ASLO, Salt Lake City, February 20-25.
- Brabander, D.J., Beattie, R.B., Chen, R.F., and Ford, D.J., 2005. From inquiry in the schoolyard to the powerpoint large lecture hall Strategies for re-kindling curiosity about earth processes. ASLO, Salt Lake City, February 20-25. (invited)
- Gardner, G.B., Chen, R.F., and Wright, D., 2005. Transport and fate of CDOM and hydrocarbons in the low salinity region of the Hudson River Estuary. ASLO, Salt Lake City, February 20-25.
- Chen, R.F. and Gardner, G.B., 2004. Dissolved organic matter in the Hudson River plume. AGU, San Francisco, Dec. 13-17. (invited)
- Chen, R.F. and Frashure, K., 2004. Engaging Ocean Science Researchers and Middle School Teachers In Excellent Ocean Science Curriculum Development: Ocean Science Education Institute (OSEI). AGU, San Francisco, Dec. 13-17.
- Callahan, J., Wang, X.-C. and R.F. Chen, 2004. Analysis of the acid insoluble fraction of HMWDOM using direct temperature resolved pyrolysis-mass spectrometry. ASLO, Savannah, June 13-18.
- Litz, L. and Chen, R.F., 2004. CDOM production by the salt marsh cordgrass, *Spartina Alterniflora*, and its fate in estuaries. ASLO, Savannah, June 13-18.
- Chen, R.F., 2004. Fluorescence Sensors in Coastal Oceans. EUROPTRODE VII, Madrid, April 4-7, 2004. (invited)
- Peri, F. and Chen, R.F., 2003. Real-Time Monitoring of Chromophoric Dissolved Organic Matter (CDOM) and Water Quality in the Neponset River: Use In Local Schools. The Ocean Research Conference, Honolulu, Feb. 16-20, 2004.
- Chen, R.F., Gardner, G.B., Rudnick, S.M., Peri, F., Callahan, J., and Litz, L., 2004. Chromophoric Dissolved Organic Matter (CDOM) in the Hudson River Estuary. The Ocean Research Conference, Honolulu, Feb. 16-20, 2004.
- Chen, R.F., Stevenson, R., and Glennon-Annoub, T., 2004. An Inquiry-Based Middle School Activity Based on Chromophoric Dissolved Organic Matter (CDOM) Research. The Ocean Research Conference, Honolulu, Feb. 16-20, 2004.
- Chen, R.F., Crago, T., Padawar, S., Stevenson, R., Brabander, D., and Beattie, R., 2003. Ocean Science Concept Mapping: What do People need to know about Ocean Sciences. OCEANS 03, San Diego, Sept. 22-26, 2003.
- Chen, R.F., Gardner, G.B., Rudnick, S.M., Peri, F., Urban-Rich, J., and Zhou, M., 2003. The Integrated Coastal Observation System (ICOS): A Real-time Underway Measurement System for Coastal Waters. OCEANS 03, San Diego, Sept. 22-26, 2003.

- Chen, R.F., Levi, C., Spitzer, W., and Smith, D., 2003. New England Regional COSEE-Strategies to Involve Research Scientists in Ocean Science Education. OCEANS 03, San Diego, Sept. 22-26, 2003.
- Chen, R.F., Stevenson, R.F., Beattie, R., and Brabander, D.J., 2003. An innovative web-based survey for establishing core-learning goals for all ocean and environmental science students. ASLO 2003, Salt Lake City, February 10-14.
- Chen, R.F., Gardner, G.B., Moran, M.A., Zepp, R., Wells, M., Bissett, P., Conmy, R., and Whelan, P., 2003. Chromophoric dissolved organic matter (CDOM) source characterization in the Louisiana Bight. ASLO 2003, Salt Lake City, February 10-14.
- Gardner, G.B., Chen, R.F., 2003. Importance of salt marshes as sources of CDOM in microestuaries. ASLO 2003, Salt Lake City, February 10-14.
- Brabander, D.J., Beattie, R., Stevenson, R., and Chen, R.F., 2003. Participatory activities for core ocean science and environmental science concepts: an example and call to action. ASLO 2003, Salt Lake City, February 10-14.
- Chen, R.F., Gardner, G.B., Zhang, Y., and Berry, A., 2002. Chromophoric dissolved organic matter in the Mississippi River plume. AGU/ASLO Ocean Science Meeting, Honolulu, HI.
- Callahan, J., Dai, M., Chen, R.F., Li, X., Lu, Z., Guo, W., and Chen, W., 2002. Dissolved organic matter in the Pearl River Estuary. AGU/ASLO Ocean Science Meeting, Honolulu, HI.
- Chen, R.F. and Brabander, D.J., 2002. Inquiry Based Learning and Assessment in General Education Science Courses. AGU/ASLO Ocean Science Meeting, Honolulu, HI.
- Gardner, G.B. and Chen, R.F., 2002. Dynamics of Chromophoric Dissolved Organic Matter (CDOM) in a Microestuary. AGU/ASLO Ocean Science Meeting, Honolulu, HI.
- Wang, X.-C., Gardner, G.B., and Chen, R.F., 2002. Sources and Cycling of Dissolved and Particulate Organic Carbon in the Mississippi River Plume and Adjacent Coastal Waters of the Northern Gulf of Mexico. AGU/ASLO Ocean Science Meeting, Honolulu, HI.
- Zhang, Y., Chen, R.F., and Wang, X.-C., 2002. Laser-Induced Fluorescence Measurements of Natural and Anthropogenic Organic Compounds in Coastal Marine Sediments. AGU/ASLO Ocean Science Meeting, Honolulu, HI.
- Siegener, R., Chen, R.F., and Soto, A., 2001. Identification of Environmental Endocrine Disruptors in Boston Harbor Seawater-Initial Results. SETAC Annual Meeting, Baltimore, MD., September 12-16, 2002.
- Chen, R.F., Zhang, Y., and Rudnick, S.M., 2001. The fluorescence of Dissolved Organic Matter in the Mid-Atlantic Bight. ASLO 2001, Albuquerque, February 12-16.

- Gardner, B. and Chen, R.F., 2001. High Resolution Measurements of Chromophoric Dissolved Organic Matter (CDOM) in the Mississippi River Plume. ASLO 2001, Albuquerque, February 12-16.
- Wang, X.-C., Whelan, J., Chen, R.F., and Eglinton, L., 2001. Oil and Gas Seepage in the Ocean: Contributions of "Old" Carbon to the Sedimentary and Dissolved Organic Carbon Pools. ASLO 2001, Albuquerque, February 12-16.
- Clark, C.D., Hiscock, W.T., Brand, L., Millero, F.J., Tremblay, R., Chen, R.F., Pos, W.H., Riemer², D., and Zika, R.G., 2000. Field Measurements of CO₂ Production in Surface Waters on the Southwest Florida Shelf. AGU Fall Meeting.
- Chen, R.F., Chadwick, D.B., and Leather, J., 2000. Benthic Fluxes of Organic Matter and Contaminants in San Diego Bay. ASLO 2000, Copenhagen, June 5-9.
- Gardner, G.B., Chen, R.F., Wang, X., 2000. Studying the Sources of Dissolved Organic Carbon in Estuaries with an Undulating Vehicle. ASLO 2000, Copenhagen, June 5-9.
- Callahan, J. and Chen, R.F., 2000. Differences in the photoreactivity of terrestrial and marine DOM as indicated by fluorescence excitation emission matrix (EEM) spectroscopy. ASLO 2000, Copenhagen, June 5-9.
- Vlahos, P., Wallace, D. and Chen, R.F., 2000. Dissolved Inorganic Carbon in the Mid-Atlantic Bight. ASLO 2000, Copenhagen, June 5-9.
- Chen, R.F., Gardner, G.B., Zhang, Y., Vlahos, P., Wang, X., and Rudnick, S.M., 1999. Chromophoric Dissolved Organic Matter (CDOM) in Four US Estuaries. EOS Transactions, 80: OS92.
- Whelan, J.K., Chen, R.F., Wang, X., Seewald, J., and Roberts, H., 1999. Gas & Oil Seepage in the Ocean bottom-Contributor to "old" DOC in the Deep Ocean? EOS Transactions, 80: OS243.
- Chen, R.F., Wang, X., Vlahos, P., Zhang, Y., and Gardner, G.B., 1999. The Biogeochemistry of Dissolved Organic Carbon in Four US Estuaries. In: Proceedings of the EAOG. Istanbul, Turkey, September 6-10.
- Chen, R.F., Gardner, G.B., Rudnick, S.M., and Y Zhang, Y., 1999. High Resolution, In Situ Optical Measurements of Dissolved Organic Components in Estuaries. EOS Transactions 80: S68.
- Gardner, G.B. and Chen, R.F., 1999. Physical Measurements From Deployments of the ECOSHuttle, the UMASS Boston Towed Undulating Vehicle in Boston Harbor, Chesapeake/Delaware Bays and San Diego Bay. EOS Transactions 80: S68.
- Gruesz, C.D., R F Chen, R.F., G B Gardner, G.B., J W Bales, J.W., Zayhowski, J., and Johnson, B., 1999. Development of a Compact, Microlaser-Based Fluorometer for the Measurement of CDOM and Photosynthetic Pigments From an Autonomous Underwater Vehicle. EOS Transactions 80: S68.
- Chen, R.F., Gardner, G.B., Zhang, Y., and Vlahos, P., 1999. Chromophoric Dissolved Organic Matter in the Chesapeake Bay. ASLO 99, Santa Fe, February 1-5.

- Gardner, G.B., Chen, R.F., Rudnick, S.M., Edwards, P.E., and Goodkind, T., 1999. Development of an Undulating Towed Vehicle for the Study of Coastal Biogeochemistry. ASLO 99, Santa Fe, February 1-5.
- Rudnick, S.M., Chen, R.F., and Gardner, G.B., 1999. Time-Resolved, Laser-Induced Fluorescence Monitoring and Modeling of Pyrene Concentration and Distribution in Boston Harbor. ASLO 99, Santa Fe, February 1-5.
- Vlahos, P., Chen, R.F., and Gardner, G.B., 1999. Delivery of Dissolved Organic Carbon to the Mid-Atlantic Bight from the Chesapeake and Delaware Estuaries. ASLO 99, Santa Fe, February 1-5.
- Callahan, J. and Chen, R.F., 1999. Characterization of Dissolved Organic Matter in Surface Waters of Boston Harbor and Chesapeake Bay. ASLO 99, Santa Fe, February 1-5.
- Whelan, J.K., Chen, R.F., Wang, X., Eischeid, G., 1998. Gas and Oil Seepage in the Ocean Bottom--Detection with CTD Fluorescence. MTS Ocean Community Conference '98, Baltimore, MD, Nov 16-19.
- Chen, R.F., 1998. In Situ Fluorescence Measurements in the Marine Environment. In *Applied Sciences in the Environment*, 1998. D. Almorza, C.A. Brebbia, and H.M. Ramos, Editors, pp 5-16.
- Siegener, R. and Chen, R.F., 1998. Detection and Measurement of Pharmaceuticals Entering Boston Harbor. ACS Abstracts (216th ACS meeting, Boston, MA).
- Chen, R.F., Jiang, Y., Johnson, A., Shull, D., Siegenger, R., Vlahos, E., and Zhang, Y., 1998. Organic Carbon Cycling in Boston Harbor. EOS Transactions, 79: S187.
- Siegenger, R. and Chen, R.F., 1998. Caffeine Measurements in Boston Harbor Seawater. EOS Transactions, 79: S187.
- Jiang, Y., Chen, R.F., and Zhao, M., 1998. High-resolution, Non-Destructive Determination of Chlorins in Boston Harbor Sediments. EOS Transactions, 79: S188.
- Gardner, G.B., Chen, R.F., and Rudnick, S.M., 1998. Estuarine circulation in Boston Inner Harbor. EOS Transactions, 79: S187.
- Chen, R.F., Zhang, Y., and Rudnick, S.M., 1998. Optical Properties of Chromophoric Dissolved Organic Matter (CDOM) on the Mid-Atlantic Bight. EOS Transactions, 79: OS53.
- Rudnick, S.M., Chen, R.F., and Gardner, G.B., 1998. In Situ Time-Resolved Fluorescence Measurements in Boston Harbor. EOS Transactions, 79: OS6.
- Zhang, Y. and Chen, R.F., 1998. Fluorescence Measurements of Coastal Sediments. EOS Transactions, 79: OS164.
- Vlahos, P. and Chen, R.F., 1998. Fluxes of Dissolved Organic Carbon off the Mid-Atlantic Bight. EOS Transactions, 77: OS183.

- Chen, R.F. and Rudnick, S.M., 1997. Time-Resolved Fluorescence Spectroscopy of Seawater. Federation of Analytical Chemistry and Spectroscopy Societies (FACSS XXIV, '97), Providence, October 26-30.
- Chen, R.F., 1997. In Situ Fluorescence Measurements in Coastal Waters. International Symposia on Environmental Biogeochemistry XIII, Bari, Italy, September 21-26.
- Rudnick, S.M. and Chen, R.F., 1997. Real-Time, In Situ Instrumentation for the Detection of Pollutants in the Coastal Environment. Coastal Zone '97, Boston, July 22-24.
- Chen, R.F., 1997. Photobleaching of Dissolved Organic Matter Fluorescence in Seawater Inferred from In Situ Measurements. ASLO 97, Santa Fe, February 10-14.
- Hopkinson, C.S., Fry, B., Altabet, M., and Chen, R.F., 1997. Continental Shelf DOM Stoichiometry. ASLO 97, Santa Fe, February 10-14.
- Chen, R.F. and Rudnick, S.M., and Gardner, G.B., 1996. Dissolved Organic Matter Fluorescence in Coastal Waters. *EOS Transactions*, 77: F291.
- Vlahos, P. and Chen, R.F., 1996. Dissolved Organic Carbon Fluxes in the Mid-Atlantic Bight. *EOS Transactions*, 77: F293.
- Zhang, Y. and Chen, R.F., 1996. Chromophoric Dissolved Organic Matter (CDOM) in the Mid-Atlantic Bight Measured by Absorption and Fluorescence. *EOS Transactions*, 77: F293.
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- Chen, R.F. and Rudnick, S.M., and Gardner, G.B., 1996. Continuous Fluorescence Measurements for High Temporal and Spatial Resolution of Organic Compounds in Marine Systems. Gulf of Maine Ecosystems Dynamics, St. Andrews, Sept. 16-19, 1996.
- Lei, G. and Chen, R.F., 1996. Benthic Fluxes of Polycyclic Aromatic Hydrocarbons out of Boston Harbor Sediments. Gulf of Maine Ecosystems Dynamics, St. Andrews, Sept. 16-19, 1996.
- Rudnick, S.M. and Chen, R.F., 1996. Time-Resolved, Laser-Induced Fluorescence for the Detection of Polycyclic Aromatic Hydrocarbons in the Marine Environment. Gulf of Maine Ecosystems Dynamics, St. Andrews, Sept. 16-19, 1996.
- Chen, R.F., Lei, G., Rudnick, S.M., Leather, J., and Chadwick, D.B., 1996. Benthic Fluxes of Organic Compounds in San Diego Bay Determined by Fluorescence. *EOS Transactions*, 76, 3: OS210.
- Lei, G. and Chen, R.F., 1996. An Initial Examination of Benthic Fluxes of Polycyclic Aromatic Hydrocarbons from Boston Harbor Sediments. *EOS Transactions*, 76, 3: OS210.
- Rudnick, S.M. and Chen, R.F., 1996. The Effect of Humic Substances on the Fluorescence of Polycyclic Aromatic Hydrocarbons in Coastal Waters. *EOS Transactions*, 76, 3: OS72.

- Bentjen, S., Mopper, K., Feng, Z., and Chen, R.F., 1996. Effects of Cross-Flow Filtration on the Absorption and Fluorescence Properties of Seawater. *EOS Transactions*, **76**, 3: OS173.
- Aluwihare, L., Repeta, D.J., and Chen, R.F., 1996. Structural Characterization of High Molecular Weight Colloidal Organic Matter. Is DOC a Biopolymer? *EOS Transactions*, **76**, 3: OS41.
- Chen, R.F., Chadwick, D.B., and Lieberman, S.H., 1995. Benthic Fluxes of Organic Compounds by Time-resolved Spectrofluorometry. In: Organic geochemistry: developments and applications to energy, climate, environment, and human history. A.I.G.O.A., The Basque Country, Spain, pp. 742-745.
- Repeta, D.J., Eglinton, T.I., Chen, R.F., and Aluwihare, L., 1995. Export and molecular-level characterization of dissolved organic matter from the northeastern US continental shelf. In: Organic geochemistry: developments and applications to energy, climate, environment, and human history. A.I.G.O.A., The Basque Country, Spain, pp. 1156-1157.
- Chen, R.F. and Repeta, D.J., 1994. Dissolved organic Carbon on the Northeast Continental Shelf of the United States. *EOS Transactions*, **75**, 44: 311.
- Rudnick, S.M. and Chen, R.F., 1994. Tracking Organics in the Ocean by Time-Resolved, Laser-Induced Fluorimetry. *EOS Transactions*, **75**, 4: 375.
- Chen, R.F. and Repeta, D.J., 1994. Dissolved Organic Carbon on Georges Bank. *EOS Transactions*, **75**, 3: 57.
- Chen, R.F., Repeta, D.J., and Eglinton, T.I., 1994. Characterization of Dissolved Organic Matter in Seawater by ¹H NMR and Analytical Pyrolysis. ACS Abstracts (207th ACS Meeting, San Diego, CA)
- Chen, R.F., Bada, J.L., and Suzuki, Y. 1991. Laser-induced Fluorescence and DOC in Anoxic Porewaters. *EOS Transactions*, **72**: 20.
- Chen, R.F. and Bada, J.L., 1989. Dissolved Fluorescent Organic Components in Oceanic Waters and Porewaters. ACS Abstracts (197th ACS meeting, Dallas, Texas).
- Chen, R.F. and Farley, K.A., 1988. Model Dissolved Organic Carbon Consumption Rates in Pacific Deep Water. *EOS Transactions*, **69**, 1122.
- Chen, R.F. and Bada, J.L., 1987. Laser-Induced Fluorescence Measurements of Filtered Seawater. *EOS Transactions*, **68**, 1320.

PROFESSIONAL SOCIETIES American Geophysical Union
The Oceanography Society
American Society of Limnology and Oceanography

PROFESSIONAL ACTIVITIES

- Chair, Special Session, Innovations in teaching, mentoring, and outreach practices to improve education and broaden participation, ASLO 2017, Honolulu, HI, February 26-March 3.
- Chair, Special Session, Innovations in Environmental and Ocean Science Education, Ocean Sciences Meeting 2016, New Orleans, LA.
- Chair, Special Session, Carbon Fluxes in Coastal Environments: Research and Education: Ocean Sciences Meeting 2016, New Orleans, LA.
- Convener, Special Session, Climate Literacy: Improving Climate Literacy through Informal Learning and Citizen Science II Posters. AGU Fall Meeting, San Francisco, December 15.
- Chair, Special Session, Advances in Blue Carbon Research: The Role of Coastal Ecosystems in the Carbon Cycle, Aquatic Sciences Meeting 2015, Granada, February 22-27.
- Chair, Special Session, Aquatic Science Education and Outreach: Expanding International Science Literacy, Aquatic Sciences Meeting 2015, Granada, February 22-27.
- Chair, Special Session, Carbon Fluxes at the Land-Water Interface: Research and Education, Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Chair, Special Session, Sensor Networks in the Aquatic Environment: Research and Education, Aquatic Sciences Meeting 2013, New Orleans, February 17-22.
- Program Committee Member, Aquatic Sciences Meeting 2013, New Orleans.
- Chair, Special Session, International Education and Outreach Activities, Ocean Sciences Meeting 2012, Salt Lake City, UT.
- Chair, Special Session, Communications Challenges in Aquatic Sciences. ASLO, Victoria, BC, June 5-9, 2006.
- Chair, Special Session on Making Science Fun: Scientists and Educators Working Together, Ocean Sciences Meeting, 2006, Honolulu.
- Member, Technical Advisory Panel for CORE's National Ocean Science Bowl 2000-2003
- Chair, Special Session on Dissolved Organic Matter Sources-Characterization, Distribution, and/or Quantification--Freshwater and Marine, ASLO, 2003 Meeting, Salt Lake City.
- Chair, Session on Underwater vehicle Technology and Estuarine Processes. AGU Spring Meeting, Boston, June 1, 1999.
- Chair, Session on "Boston Harbor: The Experiment", June 5, 1998
- Member, Outfall Monitoring Science Advisory Panel (EPA & MADEP) 1998-1999.
- Member, Outfall Monitoring Task Force (Massachusetts Water Resources Authority) 1997-1998

Chair, Session on “Eutrophication and Contaminants in Estuarine and Coastal Systems”,
AGU/ASLO Ocean Sciences, San Diego, 1998.

Chair, Session on “Dissolved Organic Matter in Coastal Waters”,
AGU Fall Meeting, San Francisco, 1996.

Reviewer, Massachusetts Water Resources Authority, Harbor and Outfall Monitoring
Workshop, May, 1996.

Exhibitor, New Bedford Aquarium “Polar Blast”, February 28, 1998. “Measuring
Pollution with Lasers”, 10,000 attendees.

Reviewer: *Science, Nature, Limnology and Oceanography, L&O Methods, Marine
Chemistry, Deep-Sea Research, Ecosystems, Estuaries and Coasts, Estuarine,
Coastal & Shelf Science, Geochimica et Cosmochimica Acta, Geophysical
Research Letters, Global Biogeochemical Cycles, Journal of Geophysical
Research, Oceanography, Organic Geochemistry, Photonics, Remote Sensing of
the Environment, Water Resources*

Reviewer: Department of Energy, National Science Foundation, NOAA, NASA,
SeaGrant, Department of Commerce, EPA.

EDUCATIONAL ACTIVITIES

Undergraduate Courses Taught

Introduction to Oceanography	1996s
Introduction to Environmental Science	98s, 98f, 2001f, 04s, 06f, 07f, 08f, 09f, 10f, 11f, 12f, 13f, 14f, 15f, 16f
Geochemistry (UCSD)	00w
The Ocean/The Ocean Lab	90

Graduate Courses Taught

Coasts and Communities I	14f, 15f, 16f
Coasts and Communities II	15s, 16s
Environmental Biogeochemistry	94f, 97s, 99s, 02s, 05s, 08s, 09s, 12s
Analytical Techniques in Environmental Sciences	95s, 96f, 98f, 02f
Organic Geochemistry	93f, 95f, 97f, 01s, 03s
Chemistry of Natural Waters	13s
Teaching Environmental Science and Technology	03f, 04f, 05f, 06f
Environmental Science Content Institute	03su, 04su, 05su, 06su, 07su, 08su, 09su, 10su, 11su, 12su
Integrating Ocean Science Research Into the Classroom	03su, 04su, 07su
Integrating the Sciences through Energy (Energy I)	07f, 08f, 09f, 10f 13su, 14su, 15su, 16su
WISP Seminar/Graduate Education Seminar	03s-09s
Using Energy In the Classroom (Energy II)	11s, 12s, 13s
Freshman Gateway Seminar (EEOS)	12f
Coasts and Communities I (Analyzing Environ Problems)	14f, 15f, 16f
Coasts and Communities II (Implementing Environ Solutions)	15s, 16s, 17s

Advisor

Postdoctoral: Eduardo Blanco (1996-1998), Julie Carruthers (2002-2004), Bridget Benson (2010-2011)

Doctoral: Steven Rudnick (1998), Penny Vlahos (2001), Yixian Zhang (2003), Julie Callahan (2004), Ray Siegener (2005), Wei Huang (2010), Keith Cialino (2015), Kim Frashure (2016), Hayley Schiebel (2016), Lynette Laffea (2014-), Chris DiPerna (2012-), Patrick Sheldon (2014-), Shannon Davis (2016-)

Masters: Gongmin Lei (1997), Yuan Jiang (1998), Carl Griesz (T), David Hammond (T), Paul Whelan (2003), Liannea Litz (2005), Zhen Wang (2005), Deborah Cobb (2006), Venkata Bandla (2006), Whitney Hammons (T), Jason Olavesen (2012), Jaclyn O'Riley (2012), Ben Wetherill (2014), Kristin Bulpett (T), Susan Tully (2019), Lucy Lockwood

Undergraduate: Ayora Berry, Crystal Baker, Hung Nguyen, Katy Georges, Jill Ariola, MaryKate Schneeweis, Tom Heath, Keith Reese, Esra Mescioglu, Peter Hamscher, Ryan McCarthy, Jennifer Rooney, Mercedes Thompson, Lee Mabry, Nicole Lewis-Dellaporta, Megan Riley, Dianne Simms

Educational Programs Directed

Boston Science Partnership (BSP)—Principal Investigator of this NSF Math Science Partnership. Worked closely with Boston Public Schools to offer professional development for over 600 science teachers.

Boston Energy in Science Teaching (BEST)—Principal Investigator of this NSF Math Science Partnership-Phase II, focused on Energy Education.

Center for Ocean Science Education Excellence-New England (COSEE-NE)—Co-Principal Investigator; Director, Ocean Science Education Institute (Professional Development of Middle School Science Teachers, Summers, 2003, 2004, 2007).

COSEE Ocean Communities in Education and social Networking (COSEE OCEAN)—Principal Investigator; produced Best of COSEE Hands-on Activities CD (10,000 units distributed, published Opportunities for Creating Lifelong Ocean Science Literacy (Boyle et al., 2014; over 1000 downloads), established GRaduate students for Ocean Education (GrOE Facebook page, >4000 likes), initiated Science Cafes for greater Boston area graduate students.

Watershed Integrated Sciences Partnership (WISP), an NSF GK-12 program, Principal Investigator; Director, Environmental Science Content Institute (Professional Development for Middle School Science Teachers and Graduate Science Fellows, 2003-2012), produced watershed mural of 1100 tiles painted by middle school students on display in the New England Aquarium.

Coasts and Communities, an NSF Integrated Research Education Graduate Training (IGERT) program. Principal Investigator; teach Coasts and Communities, coordinated faculty and graduate students from 5 doctoral programs in 4 colleges, coordinate transdisciplinary field research in coastal communities.

Workshops Facilitated

Broader Impacts Workshop. ASLO Aquatic Sciences, Puerto Rico. Feb 24, 2019.

Teaching Introductory Aquatic Sciences Courses. ASLO Aquatic Sciences, Puerto Rico. Feb 25, 2019.

Broader Impacts Workshop. University of Hong Kong, Biology Department. Jan 14, 2019.

Broader Impacts Workshop. Xiamen University, Marine and Environmental Sciences. Jan 10, 2019.

Mentoring Workshop. Xiamen, China, XMAS IV, Jan 8, 2019. 30 participants.

Town Hall in International Ocean Education Partnerships: OSM 2018

Publishing Methods in Aquatic Science Education: OSM 2018, ASLO Summer Meeting 2018.

Best Practices in Mentoring: OSM 2016, ASLO 2017

Ocean Science Education and Outreach: Broadening the Reach of Your Science: ASM 2015, NMEA 2015, OSM 2016, NEOSEC 2016, ASLO 2017, OSM 2018, ASLO Summer Meeting 2018.

Teaching Introductory Ocean and Environmental Sciences: ASM 2015, OSM 2016, ASLO 2017, OSM 2018.

Coaching Science: OSM 2014, Nerd Nite Honolulu 2017, ASLO Summer Meeting 2018.

ASLO Home Videos: OSM 2014.

GEARS for early career scientists: OSM 2012, OSM 2014.

The Future of Ocean Science Education—Hosted by COSEE: OSM 2014.

Understanding and Using Network Science for Better Collaboration: ASM 2011.

Partners in Ocean Science Education (POSE): Bridging Ocean Scientists and Educators: OCEANS 2006; NMEA 2007

Telling Your Story: UConn-Avery Point 2005, UMassBoston 2006.

Peer Instruction: UMB Faculty Development, 1998.

Center for Improvement in Teaching (UMassBoston)

Seminar participant, Spring, 1997.

Workshop participant Spring, 1999.

Led seminar on Effective Teaching in the Large Classroom, Spring, 2003, 2004, 2012, 2013, 2014.

Led seminar on Differentiation in Teaching, Spring, 2017.

High School Science Day--1995, 1996, 1997, 1998, 1999

SUPPORT

Past:

UMass-Boston Faculty Development Research Grant ('93) "The Fluorescence of Polycyclic Aromatic Hydrocarbons in the Coastal Environment"	\$2,000
UMass-Boston Professional Development Grant for Junior Faculty ('93) "Benthic Fluxes of Organic Pollutants in Coastal Marine Environments"	\$2,500
UMass-Boston Summer/Fall Faculty Research Grant ('94) "The Fate of Pharmaceuticals in the Environment"	\$2,900
UMass-Boston Professional Development Grant for Junior Faculty ('94) "Time-Resolved Fluorescence Spectroscopy of Environmental Samples"	\$2,500
MIT Sea Grant (8/95-7/97) "Real-Time Measurement of Boston Harbor Organics by Time-Resolved Spectrofluorometry"	\$161,622
UMassBoston--Healy Grant (4/97-3/98) "High Resolution, Non-Destructive Determination of Chlorin Concentrations in Marine Sediments"	\$2,000
Department of Energy--Ocean Margins Program (7/95-6/98) "Export and Molecular Level Characterization of Dissolved and Particulate Organic Matter from the Mid-Atlantic Bight" Joint with Dan Repeta and Tim Eglinton (WHOI)	\$81,000 (UMB share)
UMassBoston--Junior Faculty Grant (6/97-5/98) "Analysis of Environmental Estrogens"	\$5,000
MIT Sea Grant (8/96-10/98) "Development of a Fiber Optic UV Fluorometer for Autonomous Underwater Vehicles" Joint with Jim Bales, MIT	\$150,000
Department of Energy--Measurement Sciences Program (5/95-4/99) "A Fiber-Optic Profiler for Studying the Distribution and Transport of Organic Contaminants in Marine Sediments"	\$515,284
Office of Naval Research (7/99-3/00) "Biological Production of CDOM" Subcontract from Dan Repeta, WHOI	\$23,075
Office of Naval Research--Young Investigator's Program (6/97-5/00)	

“The Biogeochemistry of Chromophoric Dissolved Organic Matter in Coastal Waters”		\$439,000
NATO--Collaborative Research Grants “Sol-gel Cladding Fiber Optic Chemical Sensors for Environmental Monitoring” Joint with Eduardo Blanco (U. of Cadiz)	(3/98-3/00)	\$8,400
Navy-ASEE—Sabbatical Leave Program “Fluorescent Imaging of Contaminated Sediments” With Stephen Lieberman, SPAWAR, San Diego	(8/99-7/00)	\$28,765
NSF-International Programs “Dissertation Enhancement—Characterization of High Molecular Weight Dissolved Organic Matter in the Pearl River Estuary”	(9/00-8/01)	\$ 36,050
Office of Naval Research “The Delivery of Chromophoric Dissolved Organic Matter to the Sea” (2 months summer)	(3/00-9/02)	\$388,815
MIT SeaGrant “Identification of Endocrine Disruptors in Coastal Waters” (With Ana Soto, Tufts School of Medicine) (1 month summer)	(3/01-2/03)	\$190,000
Defense University Research Instrumentation Program “Integrated Coastal Observation System” (With Bernie Gardner, Juanita Urban-Rich, and Meng Zhou (0 months)	(5/02-5/03)	\$428,058
MIT SeaGrant “Development of a Rapid, In Situ Sensor System for Monitoring Bacteria in Coastal Waters” Co-PI with Julie Carruthers and Michael Shiaris (UMB) (0 months)	(1/03-12/03)	\$10,000
Office of Naval Research “The Delivery of Chromophoric Dissolved Organic Matter to the Sea” (1 month summer)	(10/02-9/05)	\$460,476
MIT SeaGrant “Development of a Rapid, In Situ Sensor System for Monitoring Bacteria in Coastal Waters” Co-PI with Julie Carruthers (PI) and Michael Shiaris (UMB) (0 months)	(3/04-2/06)	\$150,000

National Science Foundation—GK-12 program “Watershed-Integrated Sciences Partnership (WISP) between UMassBoston and Local School Districts” (1 month summer)	(1/03-12/06)	\$1,497,458
NSF—Centers for Ocean Science Education Excellence (9/02-8/07) “A New England Regional COSEE” (Co-PI with Carolyn Levi, NEAq, PI & Judy MacDowell, WHOI, Co-PI) (1 month summer)		\$2,459,515
NSF Coastal Ocean Processes “Langrangian studies of the transport, transformation, and biological impact of nutrients and contaminant metals in a buoyant plume: A process study in an operational ocean observatory” (Co-PI with Meng Zhou) (1 month summer)	(3/03-2/08)	\$426,785
Massachusetts Technology Transfer Center “Coastal Bacterial Sensor Network” (.5 months academic)	(4/07-3/08)	\$40,000 (plus \$14k UMB match)
Office of Naval Research “Predicting Chromophoric Dissolved Organic Matter Distributions in Coastal Waters” (1 month summer)	(12/05-8/08)	\$528,697
UMass President’s Office-Science and Technology Fund “Center for Coastal Environmental Sensor Networks” (1 month academic)	(7/06-6/08)	\$450,000 (with UMB match)
NSF International Planning Visits and Workshops “COSEE-China Planning Workshop” (0 months academic)	(12/08-5/10)	\$49,397
NASA Earth Science for Decision Making: Gulf of Mexico Region “Geospatial Synthesis of Chromophoric Dissolved Organic Matter Distribution in the Gulf of Mexico for Water Clarity Decision Making” Co-PI with Chris Osburn (PI, NC State University) (0.25 months academic)	(6/09-12/11)	\$75,000
Office of Naval Research A Chromophoric Dissolved Organic Matter (CDOM) Observatory PI with Yong Tian and Bernie Gardner	(11/08-12/11)	\$692,402
National Science Foundation—GK-12 program	(1/06-9/12)	

“Watershed-Integrated Sciences Partnership II (WISP-2)” (1 month summer)		\$1,999,361
Department of Energy Boston Environmental Area Coastal Observation Network (BEACON) (0 months academic)	(9/08-6/12)	\$941,500
NSF-Math Sciences Partnerships “Boston Sciences Partnership” Co-PI with Hannah Sevian (UMB, PI), Arthur Eisenkraft (UMB), Marilyn Decker (BPS), Christos Zahopoulos (NEU) (1 month summer)	(9/04-8/12)	\$14.1M
NSF-Chemical Oceanography “Collaborative Research: DOC Outwelling from Salt Marshes” PI with Jennifer Cherrier (FAMU), Jaye Cable (LSU), and Christof Meile (UGA) (0.75 months academic)	(12/09-9/13) (UMB part)	\$274,527
NSF-Math Sciences Partnerships “Boston Energy in Science Teaching (BEST)” PI with Arthur Eisenkraft (UMB), Hannah Sevian (UMB) Christof Zahopoulos (NEU), and Pam Pelletier (BPS) (1 month academic)	(12/1/09-11/30/14)	\$2,100,000
MIT SeaGrant-Focused Research Proposal Consortium for Ocean Sensing of the Nearshore Environment (COSINE) PI with Ferdi Hellweger (NEU), Tom Little (BU), Jun Suzuki, John Duff 0.25 months summer	(3/10-2/16)	\$550,000
NSF-COSEE “COSEE: Ocean Communities in Education And social Networks (COSEE-OCEAN)” PI with Arthur Eisenkraft, Pam Pelletier, Adrienne Sponberg, and Alan Friedman	(10/10-9/16)	\$1,000,000
NSF-Informal Science Education (ISE) Collaborative Research: Full-Scale Development: Innovative Engagement: A Mass Transit Model for Informal Science Learning (Chen, PI Collaborative part with Lustick, PI, UMassLowell)	(10/1/12-9/30/16)	\$154,140
MIT SeaGrant (w/MWRA match) Satellite Monitoring of Boston Harbor Water Quality: Past and Future (Chen PI with Schaaf, Lee, Pahlevan)	(2/1/15-6/30/18)	\$240,000
Massachusetts Coastal Zone Management	(10/1/16-6/30/17)	

Shore-based Ocean Acidification Monitoring Station in Duxbury Bay, MA \$65,000
PI

Barr Foundation (1/1/17-5/31/2018)
Assessment of a Harbor-Wide Barrier for Boston Harbor \$300,000
With PI Paul Kirshen (Chen is leading Environmental Considerations group)

NSF IGERT (9/1/13-8/31/19)
Coasts and Communities - Natural and Human Systems in \$3,099,804
Urbanizing Environments
PI with Robyn Hannigan, Maria Ivanova, and David Levy

NSF IGERT (Supplement) (awarded 8/27/17)
INTERN Supplement for Sean McNally \$38,562
PI with Robyn Hannigan and Maria Ivanova

Current:

MIT SeaGrant (2/1/18-1/31/20)
Making Sense of the Variability of Coastal Ocean Acidification:
Potential Long-Term Impacts on the Oyster Aquaculture Industry \$130,000
PI with Robyn Hannigan and Prassede Vella

Stone Living Lab ~\$500,000
Co-PI with PI Paul Kirshen and co-PI Mark Borrelli.

NSF AISL (8/1/19-7/31/23)
Collaborative Research: Cool Science: Art as a Vehicle for Intergenerational
Learning. NSF DRL#1906793. \$1,389,450. PI Chen with Co-PI Hetland
(MassArt Subcontract is \$165,027). Total with UMassLowell
(co-PI Jill Lohmeier) and University of Kansas (Co-PI Steven Schrock) \$1,389,450
is \$3,006,710.

EPA (1/1/20-12/31/22)
Community-driven assessment of environmental health risks in
Vieques, Puerto Rico. Co-PI with Lorena Estrada-Martinez (PI),
Adan Colon-Carmona, Lorna Rivera, Helen Poynton. \$800,000

Pending:

Proposals Submitted

Denied (2017-2018)

NOAA Environmental Literacy Grants (10/1/18-9/30/21)
Building the Environmental Literacy of K-12 Students and the Public for
Community Resilience \$499,996

PI with White-Hammond, Hetland, Kirshen
Submitted 4/6/18

NSF NRT (9/1/18-8/31/23)
NRT: Preparation for Impacting Environmental Resilience and
Sustainability (PIERS) \$3,000,000
PI with Robyn Hannigan, Ellen Douglas, John Duff, Ken Reardon
Submitted 2/6/18

NSF AISL
Collaborative Research: Cool Science: Art as a Vehicle for
Intergenerational Learning \$2,003,068
Chen-PI with Jill Lohmeier (UML) and Lois Hetland (Mass Art)
Submitted 11/6/17

Denied (2016-2017)

NSF AISL
Collaborative Research: Cool Science 2020: Children's Artwork
as a Vehicle for Intergenerational Learning \$1,702,087
Chen-PI with Jill Lohmeier (UML)
Submitted 11/16

NSF INCLUDES
Preliminary Proposal: NSF INCLUDES: STEM Stories of Diversity \$299,867
Chen (Co-PI) with Arthur Eisenkraft & Ayana McCoy
(Submitted 4/15/16; denied 5/6/16)

NSF DUE
Student Self-Advocacy for Improved STEM Learning
Chen (co-PI with Arthur Eisenkraft et al)
Submitted 1/10/17; Denied 7/25/17)

Denied (2015-2016)

NASA CCS \$1,116,112
Event-driven carbon FLUXes in river-Estuary Systems (E-FLUXES)
PI with Crystal Schaaf, Aleck Wang (WHOI), and Mingshun Jiang (FAU)
(Submitted 6/15/2016)

NASA Water Resources \$1,457,334
Managing Coastal Urban Water Quality from Space
PI with Nima Pahlevan (GSSC) and Dan Codiga (MWRA)
(Submitted 8/31/2016)

NSF AISL \$184,728

Collaborative Research: Full-Scale Development: Innovative Engagement: (UMB part)
A Mass Transit Model for Informal Science Learning
Co-PI with David Lustick and Jill Lohmeier (UML)
Submitted

NASA CMS \$1,499,791
Linking Satellite and In Situ Data to Validate Coastal Wetland
"Blue Carbon" Fluxes for Salt Marshes: Upscaling LTER Coastal
sites to an East Coast Flux Product
PI with Crystal Schaff, Chuck Hopkinson (UGA), Sergio Fagherrazzi (BU) and Aleck
Wang (WHOI)
(Submitted 3/29/2016; Denied 8/29/2016)

NOAA Environmental Literacy Grants \$499,385
Visualizing Resilience (VR): Connecting Students and Community
through Integrated Science Education and Art
PI with Jack Wiggin
Submitted 2/8/2016; Denied 8/26/2016)

NOAA-OOI: NERACOOS: The integrated ocean observing system for
the northeast region \$20,000,000
(Chen, collaborator with Ru Morrison, NERACOOS, PI)
(Submitted 8/31/2015) (level funded, but did not include UMB)

Denied (2014-2015)

NSF-STC: Center for Blue Carbon Research: Understanding and Assessing
Natural Carbon Sequestration Processes \$24,000,000
(Chen, PI-Pre-proposal, submitted 12/11/14)

NSF-AISL: Collaborative Research: Cool Science 2020: Children's
Artwork as a Vehicle for Intergenerational Learning \$386,336
(Chen, co-PI with David Lustick, PI, UMassLowell; submitted 11/14/14)

NOAA-Environmental Literacy Grants: Visualizing Resilience (VR):
Connecting Students and Community through Integrated Science \$432,439
Education and Art
(Chen, PI; submitted 4/15; denied 8/15)

NOAA-Environmental Literacy Grants: Cool Science: Communicating
Community Resilience to a Changing Climate through Children's Art on \$480,084
Public Transit
(Chen, co-PI; Lustick, PI; submitted 4/15; denied 8/15)

Denied (2013-2014)

NSF-CybeSEES
CyberSEES: Type 1: Collaborative Research: Development (1/1/15-12/31/16)

of a Climate Change Event "Black Box" to Increase
Human-Natural System Resilience \$240,000
(Chen, PI with Little, Peri, Duff, Gray)

NASA-Carbon Monitoring Systems
Monitoring Event-driven carbon FLUXes in river-Estuary (1/1/15-12/31/17)
Systems (ME-FLUXES) \$1,206,503
(Chen, PI with Schaaf, Lee, Jiang, Wang, Huntington, Cook)

NASA-Carbon Cycle Science. Event-driven carbon FLUX (1/1/14-12/31/16)
in river-Estuary Systems (E-FLUXES)
Full Proposal Encouraged & Submitted (Chen, PI) \$923,142

NASA-Carbon Cycle Science. Salt Marsh Carbon Fluxes (1/1/14-12/31/16)
Full Proposal Encouraged & Submitted (Chen, PI) \$908,086

Denied (2012-2013)

NSF-TUES. Collaborative Research: TUES Type 2: From Explanation to Exploration:
Customizable Virtual Laboratories for Transforming Undergraduate Online Education
(E2E)
\$63,779 (Cherner, PI)

NSF, Cyber-Physical Systems. CPS: Frontiers: Collaborative Research: Persistent
Marine Observing Systems: Control for Data-driven Modeling of Underwater
Phenomena
\$360,000 (Rus, PI)

FESD Preliminary Proposal, Type II: Salt Marsh Networks: Understanding
and Assessing Natural Carbon Sequestration Processes
\$5,000,000 (10/13-9/18)
Chen, Douglas, Hopkinson, Pidgeon, Schaaf
Pending
CCEP-II Cool Science: Learning the Science of Climate Change while Commuting (CS)
\$2,438,977 (Lustick, UML, PI)

NSF-Cyber/Physical System. CPS: Synergy: Collaborative Research: Persistent Marine
Observing Systems: Control for Data-driven Modeling of Underwater Phenomena
\$360,000 (Rus, MIT, PI)

Denied (2011-2012)

NSF-Cyber/Physical Systems (9/11-8/14)
"CPS: Medium: Collaborative Research: Persistent Marine Observing
Systems: Control for Data-driven Modeling of Underwater Phenomena" \$400,000.00
Co-PI with Daniela Rus (MIT)

NSF-Informal Science Education (pre-proposal) (1/12-12/13)
“Pathways: The Hub: Creating A Coordinated System of Informal Science
Education That Benefits Urban Youth in Grades K-12” \$250,000.00
PI with Dawn Chavez (Boston Beyond), George Barnett (BC), John Zuman (INCRE)

NSF Climate Change Education Partnerships. CCEP-II Cool Science: Learning the
Science of Climate Change while Commuting (CS) \$2,438,977
Co-PI with Lustick, PI, UMassLowell

NSF Transforming Undergraduate Education. Collaborative Research: TUES Type 2:
Virtual Interdisciplinary Online Laboratories for Energy and Telecommunications
education (VIOLET) \$60,000
(Chen, PI of collaborative part; Yakov Cherner, PI)

NSF Partnerships in International Research and Education: Sustainable Coastal Ocean
Research and Education (SCORE) (Chen, PI) \$3.8M
Pre-Proposal declined

NSF Informal Science Education. Pathways: The Hub: Creating A Coordinated System
of Informal Science Education That Benefits Urban Youth in Grades K-12
Chen, PI, \$250,000

NASA Carbon Monitoring Program: Carbon Fluxes at the Land-Ocean-Watershed
interface (C-FLOW)” \$441,502
Chen, PI

Recreational Boating and Fishing Foundation: Boating for Urban Outdoor Youth
(BUOY) \$250,000
Chen, PI

EPA Small Water Grants: Real-Time Water Quality Prediction in the Charles River, MA
Chen, PI, \$60,000

Denied (2010-2011)

NSF-Informal Science Education (12/11-12/14)
“Collaborative Research: Full-Scale Development - Carbon Smarts:
Learning the Science of Climate Change while Commuting (CS)” \$212,135
Co-PI with David Lustwick (PI, UMassLowell)

NSF STEP Centers (6/11-5/16)
“Defining the Geosciences for Recruiting, Education and Employment (DEGREE)”
PI with Arthur Eisenkraft, Robyn Hannigan, Alan Christian \$10,000,000

NSF GK-12 Programs (1/11-12/15)
“A GK-12 program at UMass Boston focused on Energy, Science and Technology
(GUEST)

Co-PI with Rob Stevenson (PI), Pam Pelletier, Arthur Eisenkraft, Alan Christian	\$3,100,000
Denied (2009-2010):	
NSF-INTEROP	
"CONet-a Coastal Zone Environmental Community Network" (3/10-2/12)	
Co-PI with Robert Morris (PI)	
(0.3 months academic)	\$723,388
NSF-Informal Science Education (Full Proposal Encouraged)	
"Car Cards for Carbon (C3)" (6/10-5/13)	
Co-PI with David Lustwick (PI, UMassLowell)	
(0.3 months academic)	\$1,561,093
NASA-Interdisciplinary Research in Earth Science (5/10-5/13)	
Modeling the production and transport of dissolved organic carbon (DOC)	
from upland ecosystems through watersheds to the coast in response	
to climate change	
Co-PI with Qian Yu (PI, UMassAmherst) and Yong Tian (PI, UMB)	
0.5 months summer	\$998,220
Denied (2008-2009):	
NSF-CCLI (1/10-12/12)	
"Testing the Assumptions--Are Labs Effective in Promoting	
Environmental Literacy?"	
Co-PI with William Robinson (PI)	
0.3 months summer	\$199,667
NSF Collaborative Research in Mathematics and Geosciences	
"CMG Collaborative Research: Varying coefficient	
modeling of DOC dynamics at land-sea interface regions" (12/09-11/12)	
Co-PI with Yong Tian	
(0.5 months academic)	\$186,440
NSF Informal Science Education (1/09-12/11)	
"Collaborative Research: T-Riders Education on	\$192,795
Carbon Footprints (TREC)" (UMassBoston part)	
Co-PI with David Lustick (PI), UMassLowell	
(0.5 months academic)	
NASA Water	
"Observing, Understanding and Quantifying Nutrient	(2/09-1/12)
Loading from Submarine Groundwater Discharge to the	
CoastalOcean using satellite products"	\$706,469
Co-PI with Ellen Douglas (PI, UMB)	
(0.5 months academic)	

NSF Collaborative Research in Mathematics and Geosciences
“CMG Collaborative Research: Varying coefficient
modeling of DOC dynamics at land-sea interface regions” (12/09-11/12)
Co-PI with Yong Tian
(0.5 months academic) \$??