KELLY A. DEISTER (NÉE QUINN)

EDUCATION

2006 **Ph.D.,** Chemical Oceanography, University of South Florida, St. Petersburg, FL, USA
Dissertation: "Influence of Solution and Surface Chemistry on Yttrium and Rare Earth Element Sorption", Advisor: Dr. Robert H. Byrne

2000 **B.S.,** Chemistry and Marine Biology, Fairleigh Dickinson University, Madison, NJ, USA
GPA of 3.89 (4.0 scale), Summa Cum Laude

Spring 2000 Study Abroad, Virgin Islands Environmental Resource Station, St. Johns, Virgin Islands

Fall 1999 Study Abroad, Wroxton College, Fairleigh Dickinson University, England

Summer 1999 Field Experience, Shoals Marine Lab, Cornell University, Appledore Island, Maine

Summer 1998 Field Experience, University of Hawaii, Hilo, Hawaii

TEACHING EXPERIENCE

Fall 2018 **Co-Instructor,** College of Marine Science, University of South Florida
- Teaching "Instrumentation in Marine Biogeochemical Analysis"
- Developed course to introduce graduate students to the instruments located at CMS

Fall 2018 **Adjunct Instructor**, College of Arts & Sciences, University of South Florida
- Teaching "General Chemistry II labs"
- Preparing quizzes and grading pre-lab and post lab reports

2009-present **Instructor,** College of Marine Science, University of South Florida
- Teaching "Principles and Applications of ICP-MS Analysis" every Spring semester
- Developed course to teach graduate students how to operate the ICP-MS

2007-present **Adjunct Instructor,** College of Natural Science & Engineering, St. Petersburg College
- Teaching "Introductory and General Chemistry lectures and labs"
- Preparing assessments and grading all assignments, including exams and lab reports

Spring 2003 **Teaching Assistan**t, College of Marine Science, University of South Florida
- TA for "Chemical Field Studies"
- Organized a cruise to Mud Hole Submarine Springs
- Assisted the professors with various other duties

1996-2000 **Tutor,** Learning Center, Fairleigh Dickinson University
- Assisted students in the subjects of Chemistry, Biology, and German
- Managed student records and advised faculty of progress

RESEARCH EXPERIENCE

2006-present **Scientific Researcher,** College of Marine Science, University of South Florida
- Performing experiments utilizing an inductively-coupled plasma mass spectrometer (ICP-MS) at USF and a synchrotron x-ray facility at the Advanced Photon Source
- Assisting and advising graduate students and undergraduate interns in the ICP-MS lab
- Training users on the Agilent 7500cx ICP-MS and Thermo Element XR HR-ICP-MS

2001-2006 **Research Assistant**, College of Marine Science, University of South Florida
- Investigated rare earth element adsorption onto common minerals using an ICP-MS
- Tested a novel ultrasensitive fluorometer cell

2001 **Contract Lab Technician,** Hershey Foods Analytical Department, Hershey, PA
- Assisted in the development and testing of the Oxygen Radical Absorbance Capacity (ORAC) Assay
- Extracted pesticides from different food stuffs using a Super-Critical Fluid Extractor

MENTORING EXPERIENCE

2008-2009 Brittany Wright, undergraduate intern from Eckerd College, St. Petersburg, FL
- Performed experiments to study neodymium phosphate complexation

2008-2009 Tara Haan, undergraduate intern from Eckerd College, St. Petersburg, FL
- Tested a novel method to study picomolar concentrations of rare earth elements in estuarine water and seawater

Summer 2009 Emily Christenson, undergraduate intern from Eckerd College, St. Petersburg, FL
- Investigated trace metal solubility and sorption

Summer 2010 Corie Charpentier, undergraduate intern from Eckerd College, St. Petersburg, FL
- Studied the influence of pH on trace metal sorption (Cu, Pb, Cd, and Zn) by iron hydroxide precipitates

Summer 2011 Andrew Maurer, undergraduate intern from Eckerd College, St. Petersburg, FL
- Voltammetric trace metal analysis of tap and riverine waters

Summer 2015 Sami Folkman, undergraduate intern from Eckerd College, St. Petersburg, FL
- Studied iron complexation with silicate and phosphate

UNIVERSITY SERVICE

2010-present **Member,** Safety Committee, College of Marine Science, University of South Florida

INSTRUMENTAL SKILLS

ICP-Mass Spectrometry, Laser Ablation ICP-MS, High-Resolution ICP-MS, Gas Chromatography, GC-Mass Spectrometry, Fluoroscopy, and UV/VIS Spectroscopy

PUBLICATIONS

Olsen, L., **Quinn, K.A.,** Siebecker, M.G., Luther, G.W., Hastings, D.W., and Morford, J.L. (2017). Trace metal diagenesis in sulfidic sediments: Insights from Chesapeake Bay. *Chemical Geology* 452, 47-59.

Hastings, D.W., Schwing, P.T., Brooks, G.R., Larson, R.A., Morford, J.L., Roeder, T., **Quinn, K.A.,** Bartlett, T., Romero, I.C. and Hollander, D.J. (2016). Changes in sediment redox conditions following the BP DWH Blowout event. *Deep Sea Research* 129, 167-178.

Williams, C., Flower, B.P., Hastings, D.W., Guilderson, T.P., **Quinn, K.A.** and Goddard, E.A. (2010). Deglacial abrupt climate change in the Atlantic warm pool: A Gulf of Mexico perspective. *Paleoceanography* 25, PA4221. doi:10.1029/2010PA001928

Quinn, K.A., Byrne, R.H. and Schijf, J. (2007). Sorption of yttrium and rare earth elements by amorphous ferric hydroxide: Influence of temperature. *Environmental Science & Technology* 41, 541-546.

Quinn, K.A., Byrne, R.H. and Schijf, J. (2006). Sorption of yttrium and rare earth elements by amorphous ferric hydroxide: Influence of solution complexation with carbonate. *Geochimica et Cosmochimica Acta* 70, 4151-4165.

Quinn, K.A., Byrne, R.H. and Schijf, J. (2006). Sorption of yttrium and rare earth elements by amorphous ferric hydroxide: Influence of pH and ionic strength. *Marine Chemistry* 99, 128-150.

Quinn, K.A., Byrne, R.H. and Schijf, J. (2004). Comparative scavenging of yttrium and the rare earth elements in seawater: Competitive influences of solution and surface chemistry. *Aquatic Geochemistry* 10, 59-80.

PRESENTATIONS

Quinn, K.A. and Byrne, R.H. (2010) Yttrium and rare earth element sorption: A study using ICP-MS and EXAFS. Presented at the USF CMS Postdoctoral Colloquium, St. Petersburg, Florida, June 18, 2010.

Quinn, K.A., Byrne, R.H. and Schijf, J. (2004) Yttrium and rare earth element adsorption onto freshly precipitated hydroxides of Fe(III), Al, Ga, and In. Abstracts of the 14th Annual V.M. Goldschmidt Conference, Copenhagen, Denmark, June 5-11, 2004 Abstract 4.1.22. *Geochimica et Cosmochimica Acta* 68(11S), A328.

Quinn, K.A., Byrne, R.H. and Schijf, J. (2004) Yttrium and rare earth element concentrations in seawater: A competition between solution and surface complexation. Presented at the USF CMS Graduate Student Symposium, St. Petersburg, Florida, May 14, 2004. (3rd place)

ABSTRACTS

Razionale, D.P., Husiak, K.A., **Quinn, K.A.,** Schwing, P.T. and Hastings, D.W. (2017) A geochemical comparison of redox sensitive metals in sediments following two blowout events in the Gulf of Mexico. Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans, LA, February 6 – 9, 2017.

Hastings, D.W., Bartlett, T.R., Brooks, G., Carr, B.E., Larson, R.A., **Quinn, K.A.,** Razionale, D., Romero, I.C., Schwing, P.T. and Hollander, D.J. (2017) Changing Sedimentary Redox Conditions Following Deepwater Horizon Blowout and Ixtoc-1 events: Geochemical and Ecological Implications. Gulf of Mexico Oil Spill and Ecosystem Science Conference, New Orleans, LA, February 6 – 9, 2017.

Hastings, D.W., Schwing, P.T., Bartlett, T.R., Brooks, G., Carr, B.E., Kostka, J., Larson, R.A., **Quinn, K.A.,** Overholt, W. and Hollander, D.J. (2017) Changes in Redox State of Sediments Following the 2010 BP Blowout. Gordon Conference in Chemical Oceanography, July 24-27, 2017.

Hastings, D.W., Bartlett, T., **Quinn, K.A.,** Carr, B.E., Razionale, D.P. and Husiak, K. 2017. Trace metals and minor elements in Southern Gulf of Mexico Sediments following the Ixtoc marine oil blow out event, 2015. Center for the Integrated Modeling and Analysis of Gulf Ecosystems II (C-IMAGE II). Distributed by: Gulf of Mexico Research Initiative Information and Data Cooperative (GRIIDC), Harte Research Institute, Texas A&M University – Corpus Christi. doi:10.7266/N7DN43JM.

Bartlett, T.R., Hastings, D.W., Brooks, G.R., Carr, B., Selden, C., **Quinn, K.A.** and Hollander, D.J. (2016) Changes in sedimentary barium following the BP DWH Blowout event. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Tampa, Florida, February 1 – 4, 2016.

Hastings, D.W., Bartlett, T.R., Carr, B.E., Husiak, K.A., Larson, R.A., **Quinn, K.A.,** Romero, I.C., Ruiz-Fernandez, A.C., Sanchez-Cabeza, J.A., Schwing, P.T. and Hollander, D.J. (2016) Comparison of sedimentary redox conditions following two major marine blowouts: Deepwater Horizon and Ixtoc. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Tampa, Florida, February 1 – 4, 2016.

Bartlett, T.R., Hastings, D.W., Brooks, G.R., Carr, B., Selden, C., **Quinn, K.A.** and Hollander, D.J. (2015) Changes in sedimentary barium following the BP DWH Blowout event. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Houston, Texas, February 16 – 19, 2015.

Hastings, D.W., Schwing, P.T., Brooks, G.R., Kostka, J., Larson, R.A., Overholt, W.A., Bartlett, T., Carr, B., **Quinn, K.A.,** Romero, I.C. and Hollander, D.J. (2015) Surface sediments became more reducing following the BP Deepwater Horizon Blowout event: Geochemical and ecological implications. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Houston, Texas, February 16 – 19, 2015.

Miller, C., Hastings, D., **Quinn, K.,** Masserini, R. and Hammaker, S. (2014) Dissolved nutrients and trace metals in sediment pore waters following the Deepwater Horizon blowout. 7th Annual Eckerd College Student Research Symposium, St. Petersburg, Florida, April 2, 2014.

Hastings, D.W., Schwing, P.T., Brooks, G.R., Selden, C. and **Quinn, K.A.** (2014) Changes in sediment redox conditions following the BP Deepwater Horizon blowout event. (Abstract ID: 2186) Ocean Sciences Meeting, Honolulu, Hawaii, February 23 – 28, 2014.

Miller, C.M., Hastings, D.W., **Quinn, K.A.,** Masserini, R. and Hammaker, S. (2014) Dissolved nutrients and trace metals in sediment pore waters following the Deepwater Horizon blowout. (Abstract ID: 2189) Ocean Sciences Meeting, Honolulu, Hawaii, February 23 – 28, 2014.

Hastings, D., Schwing, P., Bartlett, T., Brooks, G., Larson, R., **Quinn, K.,** Roeder, T., Romero, I. and Hollander, D. (2014) Changes in sediment redox conditions following the BP DWH Blowout event. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Mobile, Alabama, January 26 – 29, 2014.

Easley, R.A., **Quinn, K.A.** and Byrne R.H. (2013) Direct carbonate ion determinations using Pb(II) UV spectroscopy for in situ analysis in seawater. (Abstract ID: 248-ANYL) ACS Meeting, New Orleans, Louisiana, April 7 – 11, 2013.

Roeder, T., Hastings, D., **Quinn, K.,** Brooks, G. and Larson, R. (2011) The disappearing act: Using nickel and vanadium to trace crude oil from Deepwater Horizon spill. 4th Annual Eckerd College Student Research Symposium, St. Petersburg, Florida, March 23, 2011.

PROFESSIONAL AFFILIATIONS

2019-present American Chemical Society, Member

2007-present American Geophysical Union, Member

2004-present Geochemical Society, Member

HONORS

Fall 2005 Gulf Oceanographic Charitable Trust Endowed Fellowship, USF CMS

Fall 2003 Riggs Fellowship, USF CMS

Fall 2002 Riggs Fellowship, USF CMS

Fall 2001 Von Rosenstiel Fellowship, USF CMS

1996-1999 Presidential Scholarship, Fairleigh Dickinson University

Fall 1998 Phi Omega Epsilon Honor Society, Fairleigh Dickinson University

Spring 1998 Phi Zeta Kappa Honor Society, Fairleigh Dickinson University