KYRA H. ADAMS (née KIM)

NASA Jet Propulsion Laboratory • Water & Ecosystems Group • M/S 300-331C, 4800 Oak Grove Drive, Pasadena, CA 91109 • kyra.kim@jpl.nasa.gov • https://science.jpl.nasa.gov/people/HKim2

EDUCATION

2019 **University of Delaware (Newark, DE)**
Ph.D., Hydrogeology
Dissertation: Spatiotemporal dynamics of biogeochemical reactions in an intertidal beach aquifer: a field, laboratory, and numerical modeling study.
Advisors: Holly A. Michael and William J. Ullman

2013 **University of Texas at Austin (Austin, TX)**
B.S., General Geology, *High Honors in Geology*
Thesis: The 2500 B.P. Savanna Expansion of west central Africa: humans or climate?

University of Texas at Austin (Austin, TX)
B.A., Music, Ethnomusicology (Instrument: piano)

PROFESSIONAL EXPERIENCE

2022-current	Research Scientist, Sea Level and Ice Group, JPL
2021-2022	Postdoctoral Fellow, Jet Propulsion Laboratory (JPL)
2019-2021	NASA Postdoctoral Fellow, JPL
2017-2019	Delaware Environmental Institute (DENIN) Environmental Fellow
2013-2017	Graduate Research Assistant, Hydrogeology Lab, Univ. of Delaware
2013	Geographic Information System (GIS) Analyst, Univ. of Texas
2011-2013	Undergraduate Research Assistant, Paleogeochemistry Lab, Univ. of Texas
2010	Intern, Geoscience Research at Storm Peak Program, reactive Hg research
2008	Intern, Jisung (now Jipyong) Law Firm, South Korea

Professional Memberships
Geological Society of America, American Geophysical Union, National Ground Water Association

AWARDS

Awards

2023 Wiley Journal of American Water Resources Association Top Cited Article Award 2021-2022
2022 Kenneth J. Lanfear Award for Outstanding Technology Paper Award, American Water Resources Association

PUBLICATIONS

Adams, K; J. Reager; B. Hamlington; B. Buzzanga; C. David and A. Sawyer, Global quantification of future saltwater intrusion vulnerability, submitted.

Pradhan, A., **K. Kim**, D. Holder, K. Yun, Z. Liu, J. Reager, M. Turmon, V. Chandrasekaran, and A. Stuart, Interpreting water-level fluctuation and surface deformation trends in the San Joaquin Valley with multivariate Gaussian processes, submitted.

NASA Sea Level Change Team; **Adams, K**.; C. Blackwood; R. Cullather; B. Hamlington; E. Heijkoop; K. Karnauskas; R. Kopp; E. Larour; T. Lee; R.S. Nerem; S. Nowicki; C. Piecuch; R. Ray; D. Rounce; P. Thompson; N. Vinogradova; O. Wang; M. Willis, Assessment of Sea Level Rise and Associated Impacts for Tuvalu, N-SLCT-2023-01 Technical Report, http://doi.org/10.5281/zenodo.8069320.

Hamlington, B.; A. Tripathi; D. Rounce; M. Weathers; K. Adams; C. Blackwood;…R. Kopp (2023), Satellite Monitoring for Coastal Dynamic Adaptation Policy Pathways, *Climate Risk Management*, https://doi.org/10.1016/j.crm.2023.100555.

Liu, P.W.; J. Famiglietti; A. Purdy; **K. Adams (Kim)**; A. McEvoy; J. Reager; R. Bindlish; D. Wiese; M. Rodell, and C. David (2022), Nearly two decades of groundwater storage variations in California's Central Valley from GRACE and GRACE-FO, *Nature Communications*, https://doi.org/10.1038/s41467-022-35582-x.

Yun, K.S.; **K. Adams**; J. Reager; Z. Liu; C. Chavez; M. Turmon; T. Lu (2022), Remote estimation of geologic composition using interferometric synthetic-aperature radar in California's Central Valley, *NuerIPS 2022 Tackling Climate Change with Machine Learning ARXIV*, https://tinyurl.com/hydrogeoCV.

Adams (Kim), K.; J. Reager; D. Wiese; T. Farr,…and P. Rosen (2022), Remote Sensing of Groundwater: Current Capabilities and Future Directions, *Water Resources Research,* http://doi.org/10.1029/2022WR032219.

Kim, K.; J. Heiss; W. Ullman; H. Michael; W. Cai (2022), Seasonal variation in dissolved inorganic carbon and total alkalinity fluxes across a shallow sandy beach aquifer: temperature and hydrological controls, *Frontiers in Marine Science*, https://doi.org/10.3389/fmars.2022.856281.

Kim, K. (2022), To pursue a career in science, I had to buck cultural expectations, *Science*, https://doi.org/10.1126/science.caredit.abq3008.

Vasco, D.; **K. Kim**; T. Farr; J. Reager; D. Bekaert; S. Singh; J. Rutqvist; H. Beaudoing (2022) Using Sentinel-1 and GRACE satellite data to monitor the long- and short-term hydrological variations within the Tulare Basin, California, *Nature Scientific Reports*, www.nature.com/articles/s41598-022-07650-1.

Kim, K & J. Heiss, Methods in capturing the spatiotemporal dynamics of flow and biogeochemical reactivity in beach aquifers: A review (2021), ***invited***, *Water*, https://www.mdpi.com/2073-4441/13/6/782.

Kim, K.; Z. Liu; M. Rodell; H. Beaudoing;… J. Reager (2020), An evaluation of remotely sensed and in-situ data sufficiency for SGMA-scale groundwater studies in the Central Valley, California, ***invited***, *Journal of American Water Resources Association,* https://doi.org/10.1111/1752-1688.12898.

Kim, K.; J. Heiss; X. Geng; H. Michael (2020), Modeling hydrologic controls on particulate organic carbon contributions to beach aquifer biogeochemical reactivity, *Water Resources Research*, 56(10), https://doi.org/10.1029/2020WR027306.

Kim, K.; H. Michael; E. Field; W. Ullman (2019), Hydrologic shifts create complex transient distributions of particulate organic carbon and biogeochemical responses in beach aquifers, *Journal of Geophysical Research: Biogeosciences*, https://doi.org/10.1029/2019JG005114.

Kim, K.; J. Heiss; H. Michael; W. Cai; T. Laattoe; V. Post; W. Ullman (2017), Spatial patterns of groundwater biogeochemical reactivity in an intertidal beach aquifer, *Journal of Geophysical Research: Biogeosciences*, 122(10): 2548-2562, https://doi.org/10.1002/2017JG003943, **EOS Research Highlight**.

PUBLICATIONS IN PREPARATION

Jankowski, S.; **K. Kim**; M. Sneed; J. Reager; C. Faunt, Mitigating regional subsidence using managed aquifer recharge: A modeling case study in the Central Valley, USA, awaiting submission authorization from U.S. Geological Survey.

PUBLISHED DATASETS

Kim, K. (2020), Modeling hydrologic controls on particulate organic carbon contributions to beach aquifer biogeochemical reactivity, *HydroShare*, http://www.hydroshare.org/resource/7e8f77da6bd345ed9bf74c0b7f7c911f.

Kim, K. (2019), Cape Shores Porewater Data Compilation 2014-2015, *HydroShare*, https://doi.org/10.4211/hs.440e89b8cc8c4c43bdbc6176e8f38a70.

GRANTS, FELLOWSHIPS, SCHOLARSHIPS

Research Grants

2023	3-year funds	**PI: NASA ROSES Interdisciplinary Research in Earth Sciences**
	3-year funds	**Co-I: NASA ROSES Coastal Resilience;** "Coastal groundwater variability during the satellite era and beyond" (PI: Philip Thompson, U. Hawaii)
2022	$25,000	**PI: JPL;** Research on Campus (JROC), 1-year residency at Caltech
	4-year funds	**Technical Lead: Department of Defense**: "Deployable satellite-based model for assessing saltwater intrusion impacts under future sea-level rise scenarios" (PI**:** Benjamin Hamlington)
2018	$1,944	International Association of Hydrogeologists 2018 Congress Attendance Travel Support
	$1,000	The Consortium of Universities for the Advancement of Hydrologic Science, Inc. Instrumentation Discovery Grant
2017	$1,500	Wharry Research Grant
	$2,000	Univ. of Delaware Summer Doctoral Fellowship
2016	$2,400	"Let's Talk About Water" Challenge Grant, The Consortium of Universities for the Advancement of Hydrologic Science, Inc. & Delaware Environmental Institute
2015	$1,412	Univ. of Delaware Professional Development Award 2015
2014	$2,217	Univ. of Delaware Professional Development Award 2014

Academic Fellowships

2019	2-year salary & travel funds	NASA Postdoctoral Fellowship, Universities Space Research Association
2017	2-year salary & research funds	Delaware Environmental Institute Environmental Fellowship

Undergraduate Scholarships

2013	$12,000*	Univ. of Texas non-resident tuition waiver
2009-2013	$3500/semester*	Univ. of Texas Jackson School of Geosciences Merit-based Scholarship, *highest GPA bracket*
2012	$6,900	Wayne Franklin Bowman Endowed Presidential Scholarship
	$1,412	Univ. of Texas Undergraduate Research Fellowship

$900/month*	Thomas and Ray Burke Student Job Program
$12,000*	GEO660A&B field course full tuition (top 10% student)
$12,000*	Univ. of Texas non-resident tuition waiver

*****approximate amounts

TEACHING

Courses Taught

Jan. 04, 2019	• Introduction to PMWIN and PHT3D modeling short course, China University of Geosciences, Wuhan, China
Spring 2018	• Teaching Assistant, Geological Hazards Laboratory, Univ. of Delaware
Spring 2013	• Teaching Assistant, Research Field Methods for Environmental Sciences, Univ. of Texas

Pedagogy Training

Spring 2018	• Center for Teaching and Assessment of Learning, Univ. of Delaware, *developed upper-level geoscience course with complete syllabus and course materials*

Guest Instructor

Apr. 27, 2018	• Invited science lecturer, Eagle's Nest Kindergarten
July 2015, 2016, 2017	• Field lecturer, Taking an Interest in Delaware's Estuary Camp
July 2014	• Invited field lecturer, Univ. of Delaware Institute for Public Administration Water Resources Agency

MENTORING

Students Advised

Summer 2023	• NASA DEVELOP Program (JPL) Scientific Lead & Mentor "*Investigating ghost forest development due to saltwater intrusion along the Savannah River*" with Emma Cherigate, Eleri Griffith, Quinton Munoz, Vivienne von Welczeck.
Summer 2021	• Data2Discovery, Project Mentor, Hydrologic data set visualization project with Malika Khurana (Carnegie Mellon) and Noah Deutsch (Harvard), **NASA-AGU Student Visualization competition Grand Prize Winner**
Fall 2020	• Water Data Lab (WaDL), Project PI and co-Mentor, "*Groundwater bibliometric & Water Sentiment Project*" with Neel Kandlikar and Neeraj Rattehalli • NASA DEVELOP Program (JPL) Scientific Lead & Mentor *"Central Valley Groundwater II: VIRGO software tool development"* with James Kitchens, Katie Lange, Vanessa Valenti, Elizabeth Perez
Spring 2020	• NASA DEVELOP Program (JPL) Scientific Lead & Mentor *"Improving California groundwater assessments using GRACE and InSAR datasets for water resource management"* with James Kitchens, Marissa Dudek, Patrick Saylor, Forrest Corcoran
Fall 2017	• Allie Bailey (Univ. of Delaware, Civil Engineering), *"Spatial patterns of groundwater biogeochemical reactivity in an intertidal beach aquifer on a weekly time-scale"*
Summer 2016	• Sam Blackburn (Carleton College, Geology), *"Controls on microbial respiration in the sandy beach face at Cape Henlopen, DE"*

Summer 2014

- Haley Glos (Univ. of Delaware, Marine Biosciences), *"Bromide tracer experiment to quantify submarine groundwater discharge at Cape Shores, DE"*

COMMITTEE

Masters Students

2023 Olasunkanmi Olorunsaye, University of Massachusetts L

TECHNICAL SKILLS

Software: ArcGIS Pro, MATLAB, Canvas X, MODFLOW, SEAWAT, PHT3D reactive transport modeling, Python.

Remote Sensing / Large Dataset Experience: GRACE, GRACE-FO, GRACE-DA, Sentinel-1, GLDAS (NOAH, VIC, CLSM), NLDAS, MODIS, ECOSTRESS, ISIMIP Climate Outputs, IPCC AR6 SLR projection datasets, GPS, In-situ well data.

Instruments: Costech CHN Analyzer, Bayshore Instruments Membrane Inlet Mass Spectrometer, SEAL Autoanalyzer, Shimadzu TOC Analyzer, Teledyne TOC Analyzer, Apollo SciTech DIC Analyzer, Apollo SciTech Total Alkalinity Titrator, ApolloSciTech Spec pH, Biotage RapidTrace, 10AU Turner Fluorometer, CEM MARS 6 Microwave Digestion System, sample preparation for gas-liquid chromatography (urea separation, fatty acid methyl ester methods, transfers).

Field: Participated in various geologic field excursions and efforts, both domestic and international **2013** Top 10% student in GEO660A&B (UT), an intensive six-week geology field course **2013-2019** Planned and led several field campaigns for groundwater well construction and deployment (via hand-augering), sensor network wiring and installation, porewater sampling, sediment vibracoring, and horseshoe crab egg collection **2019** PADI Open Water Scuba Certified, participated in a trip to Anilao, Batangas, Philippines led by Dr. M. Bayani Cardenas to obtain ocean geochemical transects.

R/V PELICAN (Aug. 13-22, 2018): Expedition to Gulf of Mexico

INVITED PRESENTATIONS

2023 **Adams, K**, *Chasing Coastal Freshwater*, Carnegie Mellon University, CREST Invited Seminar, Oct. 13, 2023, Pittsburgh, PA.

2022 **Adams, K**, *Different remote sensing approaches to study the Central Valley aquifer system*, Texas Tech University Seminar, Oct. 06, 2022, Lubbock, TX.

Kim, K, *Using remote sensing to study the Central Valley aquifer system*, California Institute of Technology Seismology Laboratory Seminar, May 13, 2022, Pasadena, CA.

Kim, K, *Water Science at NASA: Measuring groundwater from space using satellites*, GLOBE Italia 2nd World Water Day, Mar. 15, 2022, virtual seminar.

2021 **Kim, K**, *Groundwater management in California using observations from space*, Roanoke College Environmental Studies Seminar, Sep. 14, 2021, virtual seminar.

2020 **Kim, K.**; W. Ullman; J. Heiss; H. Michael, *Spatiotemporal dynamics of intertidal biogeochemical reactions*, University of Texas at Austin, Sep. 18, 2020, virtual seminar.

2019 **Kim, K.**; W. Ullman; J. Heiss; H. Michael, *Coastal carbon cycling and remote sensing methods,* University of Philippines, Nov. 17, 2019, Manila, Philippines.

Kim, K.; W. Ullman; J. Heiss; H. Michael, *Spatiotemporal dynamics of carbon cycling in a beach aquifer*, JPL Carbon Club, Nov. 07, 2019, Pasadena, CA.

Kim, K.; W. Ullman; J. Heiss; H. Michael, *Dynamic migration of chemical reactions in a beach aquifer*, CUAHSI-AGU Cyberseminar H3S, Apr. 04, 2019, link here.

Kim, K.; W. Ullman; J. Heiss; H. Michael, *Dynamic migration of chemical reactions in a beach aquifer*, Hohai University, Jan. 11, 2019, Nanjing, China.

Kim, K.; W. Ullman; J. Heiss; H. Michael, *Modeling the dynamics of particulate carbon and reactants across the intertidal aquifer*, China University of Geosciences Wuhan, Jan. 04, 2019, Wuhan, China.

2018 **Kim, K.**; H. Michael; J. Guimond; J. Heiss; C. Russoniello; C. Duque; A. Sawyer; W. Brooks; P. Kreyns, *Submarine groundwater discharge dynamics across scales*, Korea Institute of Geoscience and Mineral Resources, Groundwater and Ecohydrology Research Center Seminar, Sep. 06, 2018, Daejeon, South Korea.

CONFERENCE PRESENTATIONS

2023 **Adams, K**; J. Reager; B. Hamlington; B. Buzzanga; C. David and A. Sawyer, *Deployable satellite-based model for assessing saltwater intrusion impacts under future sea-level rise scenarios*, SERDP/ESTCP Symposium, poster, Nov. 28- Dec. 1, 2023, Arlington, VA.

Adams, K; J. Reager; B. Hamlington; B. Buzzanga; C. David and A. Sawyer, *Estimating saltwater intrusion using spatial datasets and analytical approaches*, Geological Society of America, oral presentation, Oct. 15-18, 2023, Pittsburgh, PA.

Adams, K.; B. Hamlington; C. David; J. Reager; A. Sawyer*; B. Buzzanga, *Satellite-based model for assessing saltwater intrusion impacts under future sea-level rise scenarios*, European Geosciences Union, poster, Apr. 23-28, 2023, Vienna, Austria.

2019 Reager, J.; **K. Kim***; T. Farr; C. Faunt, *California's groundwater future: Relating subsidence and consumption in the Central Valley for SGMA*, AGU Chapman, poster, Oct. 21-24, 2019, Valencia, Spain.

Kim, K.; W. Ullman; H. Michael, *Spatiotemporal variability of chemical reactions in beach aquifer*, The Fourth Xiamen Symposium of Marine Environmental Sciences, oral presentation, Jan. 06-09, Xiamen, China.

2018 **Kim, K.**; H. Michael; W. Ullman, *Short-timescale variability in redox conditions of a coastal aquifer*, American Geophysical Union, oral presentation, Dec. 10-14, Washington, D.C.

2017 **Kim, K.**; H. Michael; W. Cai; W. Ullman, *Spatial distributions of biogeochemical reactions in freshwater-saltwater mixing zones of sandy beach aquifers*, American Geophysical Union, poster, Dec. 11-15, 2017, New Orleans, LA.

Kim, K.; H. Michael; W. Cai; W. Ullman, *Dynamic migration of biogeochemical reaction zones in an intertidal beach aquifer,* Geological Society of America, oral presentation, Oct. 22-25, 2017, Seattle, WA.

Kim, K.; H. Michael; W. Cai; W. Ullman, *Oxygen consumption and denitrification rates in sandy beach aquifers*, Delaware Environmental Institute Research Symposium, poster, Mar. 15, 2017, Newark, DE.

2016 **Kim, K.**; H. Michael; W. Ullman, *Spatial characterization of reactivity in an intertidal beach aquifer,* Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI) Biennial Symposium, poster, Jul. 24-27, 2016, Shepherdstown, WV.

Kim, K.; H. Michael; W. Ullman, *Spatial characterization of reactivity in an intertidal beach aquifer,* Delaware Environmental Institute Research Symposium, oral presentation, Mar. 16, 2016, Newark, DE.

2015 **Kim, K.**; H. Michael; W. Ullman, *Sediment and porewater oxygen demand in a sandy beach aquifer, Cape Henlopen, Delaware*, Geological Society of America Annual Meeting, oral presentation, Nov. 1-4, 2015, Baltimore, MD.

Kim, K.; H. Michael; W. Ullman, *Spatial dynamics of reactive zones in intertidal circulation cells*, Lewes Graduate Student Symposium, oral presentation, May 3, 2015, Lewes, DE.

Kim, K.; H. Michael; W. Ullman**,** *Physical and biogeochemical dynamics in the shallow freshwater-saltwater mixing zone of an intertidal beach aquifer (Cape Henlopen, Delaware),* UD Graduate Research Forum, oral presentation, Apr. 21, 2015, Newark, DE.

Kim, K.; H. Michael; W. Ullman, *Physical and biogeochemical dynamics of intertidal beach mixing zones*, UD Annual Geoscience Poster Symposium, poster, Feb. 26, 2015, Newark, DE.

2014 **Kim, K.**; H. Michael; W. Ullman, *Relationship between the physical and biogeochemical dynamics in the shallow freshwater-saltwater mixing zone of an intertidal beach aquifer (Cape Henlopen, Delaware),* Geological Society of America Annual Meeting, oral presentation, Oct. 19-24, 2014, Vancouver, BC.

2013 **Kim, K.**; T. Shanahan; V. Anderson, *The 2500 B.P. rainforest crisis of Western Cameroon: humans or climate?*, UT Jackson School of Geosciences Research Symposium, poster, Feb. 2, 2013, Austin, TX.

2010 **Kim, K.**; D. Schlotter; Z. Valdez, *Gaseous elemental mercury in the atmosphere*, Howard University Program of Atmospheric Sciences Seminar, oral presentation, Nov. 5, 2010, Washington D.C.

***presenting author**

CONTRIBUTED ABSTRACTS

2023 Yang, Y.; Z. Shen; X. Fu; **K. Adams**; Z. Zhan, *Fiber-optic monitoring of the vadose zone*, Seismological Society of America, Apr. 17-20, 2023, Puerto Rico.

2022 Yun, K.S.; **K. Adams**; J. Reager; Z. Liu; C. Chavez; M. Turmon; T. Lu, *Remote estimation of geologic composition using interferometric synthetic-aperature radar in California's Central Valley*, NuerIPS 2022 Tackling Climate Change with Machine Learning, Nov. 28-Dec. 9, 2022, New Orleans, LA.

Michael, H.; **K. Kim**; J. Heiss; X. Geng…, *Hydrologic and geologic drivers of redox dynamics, biogeochemical hotspots, and solute fluxes in coastal aquifers*, Geological Society of America, Oct. 9-12, 2022, Denver, CO.

2021 Yun, K.; **K. Kim**; A. Pradhan; J. Reager; Z. Liu; M. Turmon; A. Huyen; T. Lu; V. Chandrasekaren; A. Stuart, *Filling the gap: Estimation of soil composition using InSAR, groundwater depth, and precipitation data in California's Central Valley*, American Geophysical Union, Dec. 13-17, 2021, New Orleans, LA.

Pradhan, A.; D. Holder; **K. Kim**; K. Yun; Z. Liu; J. Reager; M. Turmon; V. Chandrasekaran; A. Stuart, *Spatio-temporal gaussian process modeling of land subsidence with well water level and InSAR data*, American Geophysical Union, Dec. 13-17, 2021, New Orleans, LA.

Reager, J.; H. Chandanpurkar; M. Pascolini-Campbell; **K. Kim**; J. Famiglietti; M. Rodell; M. Lo, *The global water cycle from a land perspective: Progress in space-based measurement*, American Geophysical Union, invited presentation, Dec. 13-17, 2021, New Orleans, LA.

Vellanoweth, J.; J. Li; C. Lee; B. Holt; S. Cooley; M. Bonnema; **K. Kim**, *Monitoring thermal plumes from power plants using ECOSTRESS and Landsat*, Dec. 13-17, 2021, New Orleans, LA.

Liu, P.W.; J. Famiglietti; A. Purdy; **K. Kim**; R. Bindlish; J. Reager; A. McEvoy; M. Rodell, *Nearly two decades of groundwater dynamics in California's Central Valley from GRACE and GRACE-FO*, GRACE Science Team Meeting, Oct. 12-20, 2021.

2019 Michael, H.; **K. Kim**; J. Heiss; J. Guimond; W. Ullman; C. Chan; S. McAllister, *Dynamic hydrologic and biogeochemical processes along coastlines as potential targets for biogeophysical methods*, American Geophysical Union, invited presentation, Dec. 9-13, 2019, San Francisco, CA.

2017 Michael, H.; **K. Kim**; J. Guimond; J. Heiss; W. Ullman; A. Seyfferth, *Hydrologic influence on redox dynamics in estuarine environments,* American Geophysical Union, invited presentation, Dec. 11-15, 2017, New Orleans, LA.

Michael, H.; C. Duque; X. Geng; J. Guimond; J. Heiss; **K. Kim**; M. Koneshloo; P. Kreyns; C. Russionello; K. Scott; X. Yu, *Submarine groundwater discharge across scales from marsh to shelf,* Geological Society of America, invited presentation, Oct. 22-25, 2017, Seattle, WA.

Field, E.; K. Hoppes, **K. Kim**; H. Michael; T. Hanson and C. Chan, *The microbial role in nutrient cycling in a dynamic coastal aquifer system*, Goldschmidt Conference (Geochemical Society), Aug. 13-18, 2017 Paris, France.

Michael, H.; C. Duque; J. Heiss; **K. Kim**; K. C. Scott; W. Brooks and C. Russoniello, *Upscaling physical-biogeochemical linkages controlling land-sea solute fluxes*, The Association for the Sciences of Limnology and Oceanography (ASLO) Aquatic Sciences Meeting, oral presentation, Feb. 26-Mar. 3, 2017, Honolulu, HI.

2016 Michael, H.; X. Yu; J. LeMonte; D. Sparks; **K. Kim**; J. Heiss; W. Ullman; J. Guimond and A. Seyfferth, *Geochemical response to hydrologic change along land-sea interfaces*, American Geophyscial Union Annual Meeting, poster, Dec. 12-16, 2016, San Francisco, CA.

Michael, H.; J. Heiss; **K. Kim**; W. Ullman; C. Russionello; C. Duque and T. Brooks, *The influence of groundwater flowpaths and mixing on nutrient fluxes to estuaries and the ocean*, Geological Society of America Annual Meeting, invited presentation, Sep. 25-28, 2016 Denver, CO.

Field, E.; K. Hoppes; **K. Kim**; H. Michael; T. Hanson and C. Chan, *Just another day at the beach? The microbial role in iron and sulfur cycling in a beach aquifer system*, International Symposium on Microbial Ecology, oral presentation, Aug. 21-26, 2016, Montreal, Canada.

PROFESSIONAL SERVICES AND OUTREACH

Services to Discipline

2023
- Co-founder and co-host for biweekly Earth Science Postdoc Teatime, JPL

2022
- Water & Ecosystems Group Weekly Meeting Coordinator, JPL (July 2020-2022)

2021
- Led more than 20 panel discussions on voice-only app Clubhouse (3k+ followers) on topics such as: ocean plastics, zero-waste lifestyles, California drought, groundwater law, diversity in STEM, new frontiers in space industry, women in space. Often reached up to 300-1000 listeners per room with 2-3k+ audio traffic. Notable guests include **John Chiang, 33rd Treasurer of California.**
- NASA DEVELOP Career Event Professional Advisor, Jun. 28, 2021.

- Young Astronauts Korea Space Talk Concert, Panelist, Aug. 28, 2021, https://www.youtube.com/watch?v=2RplmaLjD6k.

2020
- Primary convener, American Geophysical Union Session H087. *Advances in subsurface characterization and monitoring using ground-based and remote geophysical, hydrogeological methods*, with Adrian Borsa, Deqiang Mao, Chen Wang, virtual conference.
- Organizer, "A Practical Guide to InSAR for Science and Applications Workshop" with Tom Farr, Jet Propulsion Laboratory, Pasadena, CA.

2019
- Program Committee Chair and Panel moderator, 4th Delaware Environmental Institute Research Symposium, Newark, DE.

2018
- The International Association of Hydrogeologists Congress coordination staff, Korea Institute of Geoscience and Mineral Resources, Daejeon, South Korea.
- Program Committee and Panel moderator, 3rd Delaware Environmental Institute Research Symposium, Newark, DE.

2017
- Co-organizer, "Let's Talk About Water" panel event, Univ. of Delaware, Newark, DE.

2015
- Panel moderator, "Understanding Environmental Challenges", Univ. of Delaware Research Forum, Newark, DE.

Administrative Services

2019
- Geological Sciences Department Graduate Student Mentor, UD

2017
- Geological Sciences Department Faculty-Graduate Liaison, UD
- Secretary, Graduate Student Government, UD

2016
- Vice President, Graduate Student Government, UD
- Graduate Student Representative for Campus Framework Working Group, UD

2015
- Departmental Senator, Geological Sciences, Graduate Student Government, UD

Reviewer Services

Geophysical Research Letters, Water Resources Research, Geochimica Cosmochimica Acta, Journal of Hydrology, Hydrogeology Journal, Groundwater, Biogeochemistry, NASA ROSES proposal review panels.

MEDIA COVERAGE

2022 MBC I AM, Speaker Keynote "Do not silence your unquantifiable talent": https://tinyurl.com/kyrambc, Aug 27, 2022.

Washington Post, "These maps illustrate the seriousness of the western drought": https://www.washingtonpost.com/climate-environment/2022/06/16/drought-west-california-mountains/, June 16, 2022.

My Ag Life, "NASA Groundwater Research, Automated vs. Mechanical Cultivators in Tomatoes": https://dailynews.myaglife.com/podcast/episode-328-may-6-2022-nasa-groundwater-research-automated-vs-mechanical-cultivators-in-tomatoes/, May 6, 2022.

AccuWeather, "Parts of the planet are sinking as groundwater gets used up": https://www.accuweather.com/en/videos/aITR4Gz4, May 3, 2022.

Fox Weather, "NASA using satellites to monitor California's groundwater crisis": https://www.foxweather.com/watch/play-5a0c6464f000d7d, Apr. 29, 2022.

Popular Science, "NASA is watching California's groundwater crisis from space": https://www.popsci.com/science/california-groundwater-shortage-nasa-satellites/, Apr. 21, 2022.

NPR Marketplace, "NASA satellites reveal groundwater levels beneath the surface": https://www.marketplace.org/shows/marketplace-tech/nasa-satellites-reveal-groundwater-levels-beneath-the-surface/, Apr. 21, 2022.

Courthouse News, "Scientists develop new method to monitor underground water loss in California's Central Valley": https://www.courthousenews.com/scientists-develop-new-method-to-monitor-underground-water-loss-in-californias-central-valley/, Apr. 7, 2022.

KCRA News, "New NASA research will help CA water managers make better predictions for groundwater supply": https://www.kcra.com/article/nasa-research-california-water-managers-groundwater-supply/39666714#, Apr. 7, 2022.

JPL Science News Release, "NASA finds new way to monitor underground water loss": https://www.jpl.nasa.gov/news/nasa-finds-new-way-to-monitor-underground-water-loss, Apr. 5, 2022.

2021 The Secret to Success…Isn't So Secret! Podcast Episode 47, hosted by Kristi Maggio of Multicultural Foundation, "The Journey of Kyra Kim", https://podcasts.apple.com/us/podcast/episode-47-the-journey-of-kyra-kim/id1555114254?i=1000520248776, May 5, 2021.

Role Model Magazine, hosted by Sandra Brogdan, "Unstoppable Girls and Women Series Interview", in press.

First of All Podcast Episode 144, hosted by Minji Chang, "First of All Interview with Kyra Kim", https://firstofall.simplecast.com/episodes/144-ldYRspSU, April 20, 2021.

Flourishing Coaching, hosted by Lisa Marker Robbins, "Career Advice Interview for Teens Interested in Science", https://flourishcoachingco.com/blog/kyra-kim_-an-interview-with-a-nasa-earth-scientist/, Apr. 6, 2021.

Silicon Valley Insider Radio Show, hosted by Keith Koo, "SVI Interview with Kyra Kim on California Groundwater", Feb. 24, 2021.

2018 Delaware Environmental Institute, Students in Action Highlight, "Kyra Han Kyul Kim, Beach Chemist": http://www.denin.udel.edu/2018/10/16/kyra-han-kyulkim-beach-chemist/, Oct.15, 2018.

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