J.T. REAGER

Jet Propulsion Laboratory | California Institute of Technology| 4800 Oak Grove Dr. | Pasadena, CA 91109
john.reager@jpl.nasa.gov | http://science.jpl.nasa.gov/people/Reager/ | 818 354 0552

RESEARCH INTEREST

My research focuses on the study of water in the Earth system, primarily using space-based observations. I am most interested in working on questions and hypothesis improving our understanding of hydrological processes across the interfaces of ocean/land water cycling, carbon/water interactions, and water/solid earth interactions, with implications for ecosystem health and water resources sustainability.

CURRENT POSITION

Scientist 2014-present
Water and Ecosystems Group, Earth Sciences Section
Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA

Associate Project Scientist 2014-present
Joint Institute for Regional Earth System Sciences (JIFRESSE)
University of California, Los Angeles, CA

EDUCATION

Postdoctoral Researcher, UC Center for Hydrological Modeling 2012-2014
University of California, Irvine, CA

PhD Earth System Science, 2012 2007-2012
University of California, Irvine, CA
Advisor: Dr. James Famiglietti

M.S. Physical Oceanography and Engineering, 2005 2002-2004
University of Delaware, College of Marine Studies, Newark, DE
Advisor: Dr. Richard Garvine

B.S. Aerospace Engineering, B.S. Ocean Engineering, 2001 1996-2001
Virginia Polytechnic Institute and State University, Blacksburg, VA

SELECTED AWARDS & HONORS

JPL Voyager Award (2020) for leadership in the Surface Deformation and Change D.O. Study Hydrology Science and Applications Traceability team

JPL Voyager Award (2019) for advancements in the application of satellite data for the Hydrological Sciences and for student mentoring

PECASE: Presidential Early Career Award for Science and Engineering (2019) for studies of the Terrestrial Water Cycle using spaceborne gravity

NASA Early Career Achievement Medal (2017) for Contributions to understanding hydrologic extreme events

NOAA David Johnson Early Career Award (2016) for Innovative application of Earth observation satellite data for operational purposes.

Newkirk Center for Science and Society Fellowship (2011-2012) for Estimating long-range global flood potential using GRACE terrestrial water storage and CMIP precipitation.

ARCS Foundation Scholar Achievement Award (2010-2012) for GRACE and the critical limits of the global water cycle.

NASA Earth and Space Science Fellowship (2009-2012) for Applications of a frequency-domain terrestrial water balance using GRACE.

FUNDED GRANTS AND PROJECTS (ACTIVE)

PI: NASA GRACE-FO Science Team [2020-2023] – Advancing groundwater science using GRACE
PI: NASA Applied Sciences Water Resources [2020-2023] – California groundwater: relating long-term subsidence and depletion in the Central Valley
Co-I: DoD [2022-2025] – Deployable Satellite-Based Model for Assessing Saltwater Intrusion Impacts Under Future Sea-Level Rise Scenarios [PI: Hamlington]
Co-I: NASA Salinity Science Team [2022-2024] – Coastal Salinity, a proxy to study human and natural Earth system changes [PI: Fournier]
Co-I: NASA Sea Level Rise Change Team [2021-2023] – Sea Level Extreme Events [PI: Piecuch]
Co-I: NASA Terrestrial Hydrology Program [2021-2023] – High-Resolution Estimation of Groundwater Withdrawals using Machine Learning Integration of Satellite Datasets

FUNDED GRANTS AND PROJECTS (PREVIOUS)

PI: JPL Topical Research & Technological Development [2017-2018]- The JPL Fire Danger Assessment System (FDAS)
PI: NASA Science Utilization of SMAP (SUSMAP) [2016-2019] *for* SMAP observations to trace the lifecycle of hydrologic extreme events from land to ocean.
PI: NASA GRACE Science Team [2016-2019] *for* Advancing the science on hydrologic states using GRACE: The role of terrestrial water storage in extreme events.
Co-I: NASA Sea Level Change Team [2017-2020] *for* Predicting Decadal Sea Level [PI: Hamlington]
Co-I: NASA Ocean Surface Topography Science Team [2017-2020] *for* The Role of Decadal Climate Variability in Global and Regional Sea Level Change [PI: Hamlington].
Co-I: NASA GRACE Science Team [2016-2019] *for* Combining GRACE and GRACE-FO measurements with in-situ GNSS displacements to gain increased spatial resolution of mass flux signals [PI: Wiese].
Co-I: NASA GRACE Science Team [2016-2019] *for* Using GRACE to advance precipitation analysis in cold regions [PI: Behrangi].
Co-I: NASA Precipitation Measurement Mission [2016-2019] for PMM for Improved Forcing in Hyper-Resolution Land Surface Models [PI: Famiglietti]
NASA Applied Sciences Deputy Project Applications Lead [2015-2020] for the NASA GRACE and GRACE-Follow On missions

PEER-REVIEWED PUBLICATIONS

Citations: 6822; H-index: 36; i10-index: 70 (as of 04/2023)

1. Rodell, M., & **Reager, J. T.** (**2023**). Water cycle science enabled by the GRACE and GRACE-FO satellite missions. ***Nature Water***, *1*(1), 47-59.
2. Liu, P. W., Famiglietti, J. S., Purdy, A. J., Adams, K. H., McEvoy, A. L., **Reager, J. T**., ... & Rodell, M. (**2022**). Groundwater depletion in California's Central Valley accelerates during megadrought. ***Nature Communications***, *13*(1), 7825.
3. Yun, K., Adams, K., **Reager, J.**, Liu, Z., Chavez, C., Turmon, M., & Lu, T. (**2022**). Remote estimation of geologic composition using interferometric synthetic-aperture radar in California's Central Valley. ***arXiv preprint*** *arXiv:2212.04813*.
4. Chandanpurkar, H. A., Hamlington, B. D., & **Reager, J. T.** (**2022**). Global Terrestrial Water Storage Reconstruction Using Cyclostationary Empirical Orthogonal Functions (1979–2020). ***Remote Sensing***, *14*(22), 5677.
5. Adams, K. H., **Reager, J. T.,** Rosen, P., Wiese, D. N., Farr, T. G., Rao, S., ... & Rodell, M. (**2022**). Remote sensing of groundwater: current capabilities and future directions. ***Water Resources Research***, *58*(10), e2022WR032219.

6. Wiese, D. N., Bienstock, B., Blackwood, C., Chrone, J., Loomis, B. D., … **Reager, J. T.,** Sauber, J. & Zlotnicki, V. (**2022**). The mass change designated observable study: overview and results. ***Earth and Space Science***, *9*(8), e2022EA002311.
7. Chandanpurkar, H.A., Lee, T., Wang, X., Zhang, H., Fournier, S., Fenty, I., Fukumori, I., Menemenlis, D., Piecuch, C.G., **Reager, J.T.** and Wang, O. (**2022**). Influence of Nonseasonal River Discharge on Sea Surface Salinity and Height. ***Journal of Advances in Modeling Earth Systems***, *14*(2).
8. Massoud, E. C., Bloom, A. A., Longo, M., **Reager, J. T.**, Levine, P. A., & Worden, J. R. (**2022**). Information content of soil hydrology in the Amazon as informed by GRACE. ***Hydrology and Earth System Sciences***, 26(5), 1407-1423.
9. Vasco, D. W., Kim, K. H., Farr, T. G., **Reager, J. T.**, ... & Beaudoing, H. K. (**2022**). Using Sentinel-1 and GRACE satellite data to monitor the hydrological variations within the Tulare Basin, California. ***Nature Scientific Reports***, *12*(1), 1-14.
10. Piecuch, C. G., Coats, S., Dangendorf, S., Landerer, F. W., **Reager, J. T.**, Thompson, P. R., & Wahl, T. (**2022**). High-Tide Floods and Storm Surges During Atmospheric Rivers on the US West Coast. ***Geophysical Research Letters***, *49*(2), e2021GL096820.
11. Yang, Y., Bloom, A. A., Ma, S., Levine, P., Norton, A., Parazoo, N. C., **Reager, J.T.** ... & Saatchi, S. (**2022**). CARDAMOM-FluxVal version 1.0: a FLUXNET-based validation system for CARDAMOM carbon and water flux estimates. ***Geoscientific Model Development***, *15*(4), 1789-1802.
12. Harvey, T.C., Hamlington, B.D., Frederikse, T., Nerem, R.S., Piecuch, C.G., Hammond, W.C., Blewitt, G., Thompson, P.R., Bekaert, D.P.S., Landerer, F.W. and **Reager, J.T.** (**2021**). Ocean mass, sterodynamic effects, and vertical land motion largely explain US coast relative sea level rise. ***Communications Earth & Environment***, *2*(1), pp.1-10.
13. Kim, K. H., Liu, Z., Rodell, M., Beaudoing, H., Massoud, E., Kitchens, J., ... & **Reager, J. T.** (**2021**). An Evaluation of Remotely Sensed and In Situ Data Sufficiency for SGMA-Scale Groundwater Studies in the Central Valley, California. ***JAWRA Journal of the American Water Resources Association***, *57*(5), 664-674.
14. Pascolini-Campbell, M., Fisher, J. B., & **Reager, J. T.** (**2021**). GRACE-FO and ECOSTRESS Synergies Constrain Fine-Scale Impacts on the Water Balance. ***Geophysical Research Letters***, *48*(15).
15. Farahmand, A., **Reager, J. T.**, & Madani, N. (**2021**). Drought Cascade in the Terrestrial Water Cycle: Evidence from Remote Sensing. ***Geophysical Research Letters***, e2021GL093482.
16. Cheon, S. H., Hamlington, B. D., **Reager, J. T.**, & Chandanpurkar, H. A. (**2021**). Identifying ENSO-related interannual and decadal variability on terrestrial water storage. ***Nature Scientific Reports***, *11*(1), 1-10.
17. Pascolini-Campbell, M., **Reager, J. T.**, Chandanpurkar, H. A., & Rodell, M. (**2021**). A 10-percent increase in global land evapotranspiration from 2003 to 2019. ***Nature***, *593*(7860), 543-547.
18. Chandanpurkar, H. A., **Reager, J. T.**, Famiglietti, J. S., Nerem, R. S., Chambers, D. P., Lo, M. H., ... & Syed, T. H. (**2021**). The seasonality of global land and ocean mass and the changing water cycle. ***Geophysical Research Letters***, *48*(7), e2020GL091248.
19. Singh, A., **Reager, J. T**., & Behrangi, A. (**2021**). Estimation of hydrological drought recovery based on precipitation and Gravity Recovery and Climate Experiment (GRACE) water storage deficit. ***Hydrology and Earth System Sciences***, *25*(2), 511-526.
20. Worden, J., Saatchi, S., Keller, M., Bloom, A., Fu, R., Worden, S., **Reager, J.T.**, ... & Schimel, D. (**2021**). Satellite Observations of the Tropical Terrestrial Carbon Balance and Interactions with the Water Cycle During the 21st Century. ***Reviews of Geophysics***, e2020RG000711.
21. Bloom, A.A., Bowman, K.W., Liu, J., Konings, A.G., Worden, J.R., Parazoo, N.C., Meyer, V., **Reager, J.T.**, Worden, H.M., Jiang, Z. and Quetin, G.R. (**2020**). Lagged effects regulate the inter-annual variability of the tropical carbon balance. ***Biogeosciences***, *17*(24), pp.6393-6422.

22. Sharma, D., Patnaik, S., Biswal, B., & **Reager, J. T.** (**2020**). Characterization of Basin-Scale Dynamic Storage–Discharge Relationship Using Daily GRACE Based Storage Anomaly Data. ***Geosciences***, *10*(10), 404.
23. Hamlington, B. D., Gardner, A. S., Ivins, E., Lenaerts, J. T., **Reager, J. T**., Trossman, D. S., ... & Beckley, B. D. (**2020**). Understanding of Contemporary Regional Sea-Level Change and the Implications for the Future. ***Reviews of Geophysics***, *58*(3), e2019RG000672.
24. Wu, W. Y., Lo, M. H., Wada, Y., Famiglietti, J. S., **Reager, J. T.**, Yeh, P. J. F., ... & Yang, Z. L. (**2020**). Divergent effects of climate change on future groundwater availability in key mid-latitude aquifers. ***Nature Communications***, *11*(1), 1-9.
25. Hamlington, B. D., Piecuch, C. G., **Reager, J. T**., Chandanpurkar, H., Frederikse, T., Nerem, R. S., ... & Cheon, S. H. (**2020**). Origin of interannual variability in global mean sea level. ***Proceedings of the National Academy of Sciences***.
26. Sadeghi, M., Lun Gao, Ardeshir Ebtehaj, Jean-Pierre Wigneron, Wade T Crow, **John T Reager**, Arthur W Warrick (**2020**) Retrieving Global Surface Soil Moisture from GRACE Satellite Gravity Data. ***Journal of Hydrology***.
27. Stephens, G. L., Slingo, J. M., Rignot, E., **Reager, J. T.**, Hakuba, M. Z., Durack, P. J., ... & Rocca, R. (**2020**). Earth's water reservoirs in a changing climate. ***Proceedings of the Royal Society A***, *476*(2236), 20190458.
28. Farahmand, A., Stavros, E. N., **Reager, J. T.,** Behrangi, A., Randerson, J. T., & Quayle, B. (**2020**). Satellite hydrology observations as operational indicators of forecasted fire danger across the contiguous United States. ***Natural Hazards and Earth System Sciences***, *20*(4), 1097-1106.
29. Charlotte M Emery, Cédric H David, Konstantinos M Andreadis Michael J Turmon, **John T Reager**, Jonathan M Hobbs, Ming Pan, James S Famiglietti, Edward Beighley, Matthew Rodell (**2020**) Underlying Fundamentals of Kalman Filtering for River Network Modeling. ***Journal of Hydrometeorology***.
30. Lucey, J. T., Reager, J. T., & Lopez, S. R. (**2020**). Global partitioning of runoff generation mechanisms using remote sensing data. ***Hydrology & Earth System Sciences***, *24*(3).
31. Massoud, E., Turmon, M., **Reager, J.,** Hobbs, J., Liu, Z., & David, C. H. (**2020**). Cascading Dynamics of the Hydrologic Cycle in California Explored through Observations and Model Simulations. ***Geosciences***, 10(2), 71.
32. Pascolini-Campbell, M. A., **Reager, J. T.**, & Fisher, J. B. (**2020**). GRACE-based mass conservation as a validation target for basin-scale evapotranspiration in the contiguous United States. ***Water Resources Research***, *56*(2), e2019WR026594.
33. Salguero, J., Li, J., Farahmand, A., & **Reager, J. T.** (**2020**). Wildfire Trend Analysis over the Contiguous United States Using Remote Sensing Observations. ***Remote Sensing***, *12*(16), 2565.
34. Farahmand, A., Stavros, E. N., **Reager, J. T.**, & Behrangi, A. (**2020**). Introducing Spatially Distributed Fire Danger from Earth Observations (FDEO) Using Satellite-Based Data in the Contiguous United States. ***Remote Sensing***, *12*(8), 1252.
35. Singh, A., **Reager, J. T.**, & Behrangi, A. (**2019**). Estimation of hydrological drought recovery based on GRACE water storage deficit. ***Hydrology and Earth System Sciences Discussions***, 1-23.
36. Sehler, R., Li, J., **Reager, J. T.,** & Ye, H. (**2019**). Investigating Relationship Between Soil Moisture and Precipitation Globally Using Remote Sensing Observations. ***Journal of Contemporary Water Research & Education***, 168(1), 106-118.
37. Yang, Y., Lin, P., Fisher, C.K., Turmon, M., Hobbs, J., Emery, C.M., **Reager, J.T.**, David, C.H., Lu, H., Yang, K. and Hong, Y. (**2019**). Enhancing SWOT discharge assimilation through spatiotemporal correlations. ***Remote Sensing of Environment***, 234, 111450.
38. Chandanpurkar, H. A., Fasullo, J. T., **Reager, J. T.**, Nerem, R. S., & Famiglietti, J. S. (**2019**). Asymmetric Response of Land Storage to ENSO Phase and Duration. ***Water***, *11*(11), 2249.
39. Morris, M., Chew, C., **Reager, J. T.**, Shah, R., & Zuffada, C. (**2019**). A novel approach to monitoring wetland dynamics using CYGNSS: Everglades case study. ***Remote Sensing of Environment***, *233*, 111417.

40. Ehalt Macedo, H., Beighley, R. E., David, C. H., & **Reager, J. T.** (**2019**). Using GRACE in a streamflow recession to determine drainable water storage in the Mississippi River basin. ***Hydrology and Earth System Sciences***, *23*(8), 3269-3277.
41. David, C. H., Hobbs, J. M., Turmon, M. J., Emery, C. M., **Reager, J. T.,** & Famiglietti, J. S. (**2019**). Analytical Propagation of Runoff Uncertainty Into Discharge Uncertainty Through a Large River Network. ***Geophysical Research Letters***, 46(14), 8102-8113.
42. Fournier, S., **Reager, J. T.**, Dzwonkowski, B., & Vazquez-Cuervo, J. (**2019**). Statistical Mapping of Freshwater Origin and Fate Signatures as Land/Ocean "Regions of Influence" in the Gulf of Mexico. ***Journal of Geophysical Research: Oceans***, *124*(7), 4954-4973.
43. Stampoulis, D., **Reager, J. T**., David, C. H., Andreadis, K. M., Famiglietti, J. S., Farr, T. G., ... & Lundgren, P. R. (**2019**). Model-data fusion of hydrologic simulations and GRACE terrestrial water storage observations to estimate changes in water table depth. ***Advances in Water Resources***, *128*, 13-27.
44. Sinha, D., Syed, T. H., & **Reager, J. T.** (**2019**). Utilizing combined deviations of precipitation and GRACE-based terrestrial water storage as a metric for drought characterization: A case study over major Indian river basins. ***Journal of Hydrology***, *572*, 294-307.
45. Hamlington, B. D., **Reager, J. T.**, Chandanpurkar, H., & Kim, K. Y. (**2019**). Amplitude Modulation of Seasonal Variability in Terrestrial Water Storage. ***Geophysical Research Letters***, *46*(8), 4404-4412.
46. Tapley, B. D., Watkins, M. M., Flechtner, F., Reigber, C., Bettadpur, S., Rodell, M., ... & **Reager, J. T.** (**2019**). Contributions of GRACE to understanding climate change. ***Nature Climate Change***, 1.
47. Hamlington, Benjamin D., Se-Hyeon Cheon, Christopher G. Piecuch, Kristopher B. Karnauskas, P. R. Thompson, K-Y. Kim, **John T. Reager**, F. W. Landerer, and Thomas Frederikse. "The dominant global modes of recent internal sea level variability." ***Journal of Geophysical Research: Oceans*** 124, no. 4 (**2019**): 2750-2768.
48. Purdy, A. J., David, C. H., Sikder, M., **Reager, J. T.**, Chandanpurkar, H., Jones, N. L., & Matin, M. A. (**2019**). An open-source tool to facilitate the processing of GRACE Observations and GLDAS outputs: An evaluation in Bangladesh. ***Frontiers in Environmental Science***, *7*, 155.
49. Oaida, C.M., **J.T. Reager**, K.M. Andreadis, C.H. David, S.R. Levoe, T.H. Painter, K.J. Bormann, A.R. Trangsrud, M. Girotto, and J.S. Famiglietti (**2019**): A high-resolution data assimilation framework for snow water equivalent estimation across the Western United States and validation with the Airborne Snow Observatory. ***J. Hydrometeor.,*** **0**.
50. Wang, J., Song, C., **Reager, J. T.,** Yao, F., Famiglietti, J. S., Sheng, Y., ... & Wada, Y. (**2018**). Recent global decline in endorheic basin water storages. ***Nature geoscience***, *11*(12), 926.
51. Adhikari, S., Caron, L., Steinberger, B., **Reager, J. T.,** Kjeldsen, K. K., Marzeion, B., ... & Ivins, E. R. (**2018**). What drives 20th century polar motion?. ***Earth and Planetary Science Letters***, *502*, 126-132.
52. Behrangi, A., Gardner, A., **Reager, J. T.,** Fisher, J. B., Yang, D., Huffman, G. J., & Adler, R. F. (**2018**). Using GRACE to Estitmate Snowfall Accumulation and Assess Gauge Undercatch Corrections in High Latitudes. ***Journal of Climate***, *31*(21), 8689-8704.
53. Vazquez-Cuervo, J., Fournier, S., Dzwonkowski, B., & **Reager, J.** (**2018**). Intercomparison of In-Situ and Remote Sensing Salinity Products in the Gulf of Mexico, a River-Influenced System. ***Remote Sensing***, *10*(10), 1590.
54. Dzwonkowski, B., Fournier, S., **Reager, J. T.,** Milroy, S., Park, K., Shiller, A. M., ... & Sanial, V. (**2018**). Tracking sea surface salinity and dissolved oxygen on a river-influenced, seasonally stratified shelf, Mississippi Bight, northern Gulf of Mexico. ***Continental Shelf Research***, *169*, 25-33.
55. Dzwonkowski, B., Fournier, S., Park, K., Dykstra, S. L., & **Reager, J. T.** (**2018**). Water Column Stability and the Role of Velocity Shear on a Seasonally Stratified Shelf, Mississippi Bight, Northern Gulf of Mexico. ***Journal of Geophysical Research: Oceans***, *123*(8), 5777-5796.
56. Chew, C., **Reager, J. T.,** & Small, E. (**2018**). CYGNSS data map flood inundation during the 2017 Atlantic hurricane season. ***Scientific Reports (Nature Publisher Group)***, *8*, 1-8.
57. Singh, A., Behrangi, A., Fisher, J. B., & **Reager, J. T.** (**2018**). On the Desiccation of the South Aral Sea Observed from Spaceborne Missions. ***Remote Sensing***, *10*(5), 793.
58. Rodell, M., Famiglietti, J. S., Wiese, D. N., **Reager, J. T.,** Beaudoing, H. K., Landerer, F. W., & Lo, M. H. (**2018**). Emerging trends in global freshwater availability. ***NATURE***, 1.

59. Tourian, M. J., **Reager, J. T.,** & Sneeuw, N. (**2018**). The Total Drainable Water Storage of the Amazon River Basin: A First Estimate Using GRACE. ***Water Resources Research***, *54*(5), 3290-3312.
60. Hamlington, B. D., A. Burgos, P. R. Thompson, F. W. Landerer, C. G. Piecuch, S. Adhikari, L. Caron, **J. T. Reager**, and E. R. Ivins (**2018**) "Observation-Driven Estimation of the Spatial Variability of 20th Century Sea Level Rise." ***Journal of Geophysical Research: Oceans*** 123, no. 3: 2129-2140.
61. Jensen, D., **Reager, J. T.**, Zajic, B., Rousseau, N., Rodell, M., & Hinkley, E. (**2018**). The sensitivity of US wildfire occurrence to pre-season soil moisture conditions across ecosystems. ***Environmental research letters***, 13(1), 014021.
62. Taeb, A., **J.T. Reager,** V. Chandrasekaran and M. Turmon (**2017**) California reservoir drought sensitivity and exhaustion risk using statistical graphical models, ***Water Resources Research.***
63. Chandanpurkar, H.A., **J.T. Reager**, J.S. Famiglietti and TH. Syed (**2017**) Satellite- and reanalysis-based mass balance estimates of global continental discharge (1993-2015), ***Journal of Climate.***
64. Solander, K. C., **Reager, J. T.**, Wada, Y., Famiglietti, J. S., & Middleton, R. S. (**2017**). GRACE satellite observations reveal the severity of recent water over-consumption in the United States. ***Nature Scientific Reports***, *7*.
65. Hamlington, B.D., **J.T. Reager**, B. Leben and K. Karnauskas (**2017**) Mapping the causes and impacts of decadal sea level variability, ***Science Advances***.
66. Sinha, D., T.H. Syed, J.S. Famiglietti, **J.T. Reager**, and R.C. Thomas (**2017**) Characterizing Drought in India Using GRACE Observations of Terrestrial Water Storage Deficit. ***J. Hydrometeor.,*** **18**, 381–396.
67. Behrangi, A., Gardner, A. S., **Reager, J. T**., & Fisher, J. B. (**2017**). Using GRACE to constrain precipitation amount over cold mountainous basins. ***Geophysical Research Letters***, *44*(1), 219-227.
68. Wada, Y., **Reager, J. T.**, Chao, B. F., Wang, J., Lo, M. H., Song, C., & Gardner, A. S. (**2016**). Recent Changes in Land Water Storage and its Contribution to Sea Level Variations. ***Surveys in Geophysics***, 1-22.
69. Fournier, S., **J.T. Reager**, T. Lee, C.H. David, J. Vazquez and M. Gierach (**2016**) A Texas flood from land to ocean observed by SMAP, ***Geophysical Research Letters***.
70. Zuffada, C., Chew, C., Nghiem, S.V., Shah, R., Podest, E., Bloom, A.A., Koning, A., Small, E., Schimel, D., **Reager, J.T.** and Mannucci, A., (**2016**). Advancing Wetlands Mapping and Monitoring with GNSS Reflectometry. In ***Living Planet Symposium***, 740, p. 83.
71. Wada, Y., M.-H. Lo, **J.T. Reager** et al. (**2016**) Fate of water pumped from underground and contributions to sea level rise, ***Nature Climate Change.***
72. Castle, S. S., **Reager, J. T**., Thomas, B. F., Purdy, A. J., Lo, M. H., Famiglietti, J. S., & Tang, Q. (**2016**). Remote detection of water management impacts on evapotranspiration in the Colorado River Basin. ***Geophysical Research Letters***, *43*(10), 5089-5097.
73. Richey, A. S., Thomas, B. F., Lo, M. H**., Reager, J. T.,** Famiglietti, J. S., Voss, K., et al.. (**2016**). Reply to comment by Sahoo et al. on "Quantifying renewable groundwater stress with GRACE". **Water Resources Research,** *52*(5), 4188-4192.
74. Solander, K. C., **J. T. Reager**, and J. S. Famiglietti (**2016**), How well will the Surface Water and Ocean Topography (SWOT) mission observe global reservoirs?, ***Water Resources Research,*** 52, 2123-2140.
75. Solander, K.C., **J.T. Reager**, B.F. Thomas, C.H. David and J.S. Famiglietti (**2016**) Simulating the human operator: the development of an optimal complexity, climate-adaptive reservoir management model for an LSM. ***J. Hydrometeorology.***
76. **Reager, J.T.,** A.S. Gardner, J.S. Famiglietti, D.N. Weiss, A. Eicker and M.H. Lo (**2016**) A decade of sea level rise slowed by climate-driven hydrology***, Science, 351 (6274).***
77. Famiglietti, J.S., A. Cazenave, A. Eicker, **J.T. Reager,** M. Rodell, and I. Velicogna (**2015**) Satellites Provide the 'Big Picture' for Global Hydrology. ***Science, 349 (6249).***
78. Sproles, E.A., S.G. Leibowitz, **J.T. Reager**, P.J. Wigington and S.D. Patil, (**2015**) GRACE storage-streamflow hystereses reveal the dynamics of regional watersheds. ***Hydrol. Earth Sys. Science, 19 (7), 3253-3272.***
79. Wu, W.-Y., C.-W. Lan, M.-H. Lo, **J.T. Reager**, J.S. Famiglietti (**2015**) Increases in the Annual Range of Soil Water Storage at Northern Mid- and High-Latitudes under Global Warming. ***Geophysical Research Letters.***
80. Richey, A.S., B.F. Thomas, M.-H. Lo, J.S. Famiglietti, **J.T. Reager**, K.S. Voss, S.C. Swenson and M. Rodell (**2015**) Uncertainty in Global Groundwater Storage Estimates in a Total Groundwater Stress Framework. ***Water Resources Research.***

81. Singh, R.S., **J.T. Reager** and N.L. Miller, J.S. Famiglietti (**2015**) Towards hyper-resolution land surface modeling: The effects of fine-scale model grid resolution on CLM4.0 simulations in the Southwestern US. ***Water Resources Research,*** *50.*
82. Billah, M.M., J.L. Goodall, U. Narayand, **J.T. Reager**, V. Lakshmi, J.S. Famiglietti (**2015**) Evaluation of regional-scale evapotranspiration estimates using GRACE observations of anomaly in terrestrial water storage: An application to South Carolina, USA. ***Journal of Hydrology,*** *523, 574-586.*
83. Bierkens, M.F.P., V.A. Bell, P. Burek, N. Chaney, L. Condon, C.H. David, A. de Roo, P. Döll, N. Drost, J.S. Famiglietti, M. Flörke, D.J. Gochis, P. Houser, R. Hut, J. Keune, S. Kollet, R. Maxwell, **J.T. Reager**, L. Samaniego, E. Sudicky, E.H. Sutanudjaja, N. van de Giesen, H. Winsemius and E.F. Wood (**2015**) Hyper-resolution global hydrological modeling: what's next? ***Hydrological Processes,*** *29 (2), 310-320.*
84. **Reager, J.T.,** A.C. Thomas, E.A. Sproles, M. Rodell, H.K. Beaudoing, B.-L. Li, J.S. Famiglietti *(***2015**) Assimilation of GRACE terrestrial wáter storage observations into a land surface model for the assesment of regional flood potential. ***Remote Sensing*** *7 (11), 14663-14679*.
85. Castle, S.S., B.F. Thomas, **J.T. Reager**, M. Rodell, S.C. Swenson and J.S. Famiglietti (**2014**) Groundwater Depletion During Drought Threatens Future Water Security of the Colorado River Basin. ***Geophysical Research Letters,*** *41, 5904–5911*.
    ^Highlighted in *Science, Editors' choice*, "Looking beneath the drying surface", August 2014.
86. Thomas, A.C., **J.T. Reager,** J.S. Famiglietti and M. Rodell (**2014**) GRACE-observed water storage deficits for hydrological drought characterization*.* ***Geophysical Research Letters,*** *41, 1537–1545.*
87. **Reager, J.T.**, B.F. Thomas and J.S. Famiglietti (**2014**) River basin flood potential inferred using GRACE gravity observations at several months lead-time. ***Nature Geoscience,*** *7, 588-592.*
    ^Highlighted in *Science,* "Gravity measurements can predict river flooding", July, 2014.
88. **Reager, J.T**. and J.S. Famiglietti (**2013**), Characteristic mega-basin water storage behavior from GRACE. ***Water Resources Research,*** *49, 3314–3329.*
89. **Reager, J.T.** and J.S. Famiglietti (**2009**), Global terrestrial water storage capacity and flood potential using GRACE. ***Geophysical Research Letters,*** *36, L23402.*
90. Tilburg, C.E., M.M. Whitney and **J.T. Reager** (**2005**), The physics of blue crab larval recruitment in Delaware Bay: A model study. ***Journal of Marine Research,*** *63, 2, pp. 471-495.*

(Mentored student/postdoc/researcher)*

OTHER PUBLICATIONS

1. **Reager, J.T.** and 17 co-authors (**2018**) The influence of Land Hydrology on Sea Level, chapter in WCRP report on Sea Level Rise, editor: Anny Cazenave.
2. Wada, Y., **Reager, J. T.**, Chao, B. F., Wang, J., Lo, M. H., Song, C. & Gardner, A. S. (**2017**). Satellite Altimetry-Based Sea Level at Global and Regional Scales. In ***Integrative Study of the Mean Sea Level and Its Components*** (pp. 133-154). Springer International Publishing.
3. Famiglietti, J.S., **J.T. Reager**, and 27 co-authors (**2016**), *Water beneath the land surface: the holy grail of hydrologic sciences*, White paper to the National Academies of Sciences Decadal Survey, RFI2.
4. Manucci, T, C. Chew, A. Koenings, **J.T. Reager,** et al., (**2016**), *GNSS-R reflections for global high resolution soil moisture*, White paper to the National Academies of Sciences Decadal Survey, RFI2.
5. Wiese, D., M. Watkins, C. Boening, F. Landerer, **J.T. Reager,** et al., (**2016**), *Observations of mass flux in the Earth System*, White paper to the National Academies of Sciences Decadal Survey, RFI2.
6. Lo, Min-Hui, Jay Famiglietti, **J.T. Reager**, Matt Rodell and Sean Swenson (**2015**), *GRACE-based estimates of global groundwater depletion* in Terrestrial Water Cycle and Climate Change: Natural and Human-Induced Impacts, AGU Geophysical Monograph Series, 22 pp., AGU press.
7. **Reager, J.T.** (**2015**), *The weight of a river basin: using gravity to predict floods* in International Water Power and Dam Construction, Global Trade Media*,* Volume 67, No. 4, April 2015, pp. 42-45.
8. **Reager, J.T**. (**2012**), Terrestrial water storage across scales: Applications of the GRACE satellite mission for global hydrology. University of California, dissertation #3540046, 110 pp.
9. **Reager, J.T.** (**2005**) The ingredients of sub-tidal coastal sea level variability on the Mid-Atlantic Bight, University of Delaware, Masters Thesis, 80 pp.

RECENT CONFERENCE PRESENTATIONS (*FIRST AUTHOR ONLY*)

Reager, J.T. (2021) The global water cycle from land: progress in space-based measurement, Invited talk, AGU Fall meeting, New Orleans.

Reager, J.T (2021) Advancing the use of gravity for groundwater: building around GRACE/GRACE-FO in the Central Valley of California, GRACE-FO Science Team meeting, October, virtual.

Reager, J.T. (2021) California's groundwater future: relating subsidence and depletion in the Central Valley, NASA Water Resources Applied Sciences Meeting, October, virtual.

Reager, J.T. (2021) Satellite hydrology observations as operational indicators of forecasted fire danger across the contiguous United States, NIFC/USFS Soil moisture for Fire management workshop, Invited lecture, May, Virtual.

Reager, J.T. and Pascolini-Campbell, M. **(2020)** GRACE/GRACE-FO to constrain regional to global Evapotranspiration , GRACE/GRACE-FO Science Team Meeting 2020, Oct 2020, GSTM2020-7.

Reager, J.T., K. Kim, Z. Liu (2020) California's groundwater future: linking observations and models in the central valley, NASA ASP Water Resources Team meeting 2020, July 2020, Virtual.

Reager, J.T. (2019) Hydrological predictors of fire danger: using satellite observations for monthly to seasonal forecasting. AGU Fall Meeting, San Francisco.

Reager, J.T. and Madeleine Pascolini-Campbell (**2019**) Characteristic Spatio-temporal scales of hydrologic extreme events. GRACE-FO Science Team Meeting 2019, Pasadena CA.

Reager, J.T., K. Kim, T. Farr **(2019)** California's groundwater future: linking observations and models in the central valley, NASA ASP Water Resources Team meeting 2019, Portland.

Reager, J.T., S. Fournier, B. Dzwonkowski, J. Vazquez **(2018)** Using NASA's SMAP satellites to link the land and ocean water cycle. AGU Fall meeting, December 2018, Washington DC.

Reager, J.T., S. Fournier, B. Dzwonkowski, J. Vazquez **(2018)** SMAP to monitor river outflows into the coastal ocean. SUSMAP Science Team meeting, November 2018, Pasadena.

Reager, J.T., A. Singh, A. Behrangi **(2018)** Predicting the end of a drought. GRACE Science Team Meeting, October 2018, Potsdam.

Reager, J.T., B.D. Hamlington, D. Wiese, M. Lo, H. Chandanpurkar **(2018)** The influence of water cycle variability on sea level. AOGS meeting, June 2018, Honolulu.

Reager, J.T. David Wiese and B. Hamlington **(2018)** Rapid sea level burst events and the limits of hydrology influences on sea level variability. AGU Ocean Sciences meeting, February 2018, Portland.

Reager, J.T. (2017) Using NASA's GRACE and SMAP satellites to measure human impacts on the terrestrial water cycle. AGU Fall meeting, December 2017, New Orleans.

Reager, J.T., MJ Tourian and H. Macedo **(2017)** Measuring total (not anomalous) water storage with GRACE. GRACE science team meeting, December 2017, Austin.

Reager, J.T. (**2016**) NASA hydrology: Satellite observations of the terrestrial water cycle. United Nations Conference of the Partied (COP-22), November, Marrakech.

Reager, J.T., J. Famiglietti, C. David, H.E. Macedo, E. Beighley and A. Trefler (**2016**) Progress in the study of floods using GRACE. GRACE Science Team Meeting, October 2016, Potsdam, Germany.

Reager, J.T., J. Famiglietti, C. David, K. Andreadis, R. Basilio, A. Transgrund (**2016**) The Western States Water Mission: A high resolution hydrologic modeling and data integration platform. GEWEX North American Regional Hydroclimate Project Workshop, May 2016, Columbia.

Reager, J.T., A. Gardner, D. Wiese, A. Eicker, J. Famiglietti, M. Lo, I. Velicogna, Y. Wada (**2016**) The importance of land hydrology changes in sea level rise on decadal time scales: results from 2002-2014 using GRACE. European Geophysical Union, Annual assembly, April 2016, Vienna.

Reager, J.T., J. Famiglietti, C. David, K. Andreadis, R. Basilio, A. Transgrund (**2016**) The Western States Water Mission: A high resolution hydrologic modeling and data integration platform. European Geophysical Union, Annual assembly, April 2016, Vienna.

Reager, J.T., P. Rao, M. Turmon (**2015**) Towards robust uncertainty quantification in GRACE-based groundwater flux estimates. Invited talk, American Geophysical Union, Fall Meeting, December 2015, San Francisco.

Reager, J.T., J. Famiglietti, A. Gardner, D. Wiese, M. Lo, and A. Eicker (**2015**) Land contributions to sea level rise. NASA Sea Level Change Team meeting, November 2015, Lake Arrowhead.

Reager, J.T., D. Wiese, J. Famiglietti, A. Gardner, M. Lo, and A. Eicker (**2015**) GRACE-based land mass trend estimation. NASA GRACE Science Team meeting, September 2015, Austin.

Reager, J.T., J. Famiglietti, C. David, R. Basilio, A. Trangsrund, D. Waliser, D. Crichton and M. Gunson (**2015**), The Western States Water Mission: NASA cyberinfrastructure for the support of water resources management. CUAHSI Hydroinformatics Meeting, July 2015, Tuscaloosa.

Reager, J.T. M.H. Lo and J.S. Famiglietti (**2014**), Effective global soil profile depth and water holding capacity inferred from GRACE time-variable gravity. American Geophysical Union, Fall Meeting, December 2014, San Francisco.

Reager, J.T. S.S. Castle, B.F. Thomas, M. Lo, A.J. Purdy, M. Rodell and J.S. Famiglietti (**2014**) Assessing the impacts of water management on evapotranspiration in the Colorado River Basin. American Geophysical Union, Fall Meeting, December 2014, San Francisco.

Reager, J.T., M.H. Lo, D.P. Chambers and J.S. Famiglietti (**2014**) Gravity observations show recent land contributions to sea level offset by hydrological cycle variability. American Geophysical Union, Ocean sciences meeting, February 2014, Honolulu.

Reager, J.T., C. de Linage; M. Lo; K. Voss; S.C. Swenson; D.P. Chambers; M. Rodell; J.S. Famiglietti (**2013**) Emerging Soil and Groundwater Storage Trends from GRACE with Contributions to Global Mean Sea Level Rise, invited talk, American Geophysical Union, Fall meeting, December 2013, San Francisco.

Reager, J.T., B.F. Thomas, E.A. Sproles and J.S. Famiglietti (**2013**) Gravity for floods: Applications of NASA's GRACE mission to detect, understand, and aid in prediction of large-scale flood events, American Geophysical Union, Fall meeting, December 2013, San Francisco.

Reager, J.T., R.S. Singh, N. Miller, and J.S. Famiglietti (**2013**) Assimilation of groundwater data into a 1-km version of the CLM using DART, American Geophysical Union, Fall meeting, December 2013, San Francisco.

Reager, J.T., B.F. Thomas, and J.S. Famiglietti (**2013**) Gravity for floods, invited talk, Joint GRACE/GEWEX meeting, NASA JPL, June 2013, Pasadena.

Reager, J.T., S.C. Swenson, and J.S. Famiglietti (**2012**) Predictive capability of a gravity-based flood potential, American Geophysical Union, fall meeting, December 2012, San Francisco.

Reager, J.T., M. Lo, J.S. Famiglietti and M. Rodell (**2012**) Effective global soil parameters from GRACE and impact on land-surface simulations (poster), AGU Chapman conference, February 2012, Kona, Hawaii.

Reager, J.T. and J.S. Famiglietti (**2011**) Characteristic basin water storage behavior using GRACE (poster), American Geophysical Union, Fall Meeting, December 2011, San Francisco.

Reager, J.T. and J.S. Famiglietti (**2010**) Global Terrestrial Water Storage Response and Controls using GRACE (poster), AGU Fall Meeting, December 2010, San Francisco.

Reager, J.T. and J.S. Famiglietti (**2010**) GRACE Science Team Meeting: Propagation of large-scale hydrologic variability in Fourier space (poster), November 2010, GFZ, Potsdam, Germany.

INVITED SEMINARS, WORKSHOPS AND TEACHING

Studying the Earth from space at NASA JPL, key note speaker, Earth Day event, Van Nuys Highschool, April, 2022.

Climate and Water in the West, key note speaker, USFS National Forest Health Monitoring Workshop, March 2022, Arizona (remote).

A chronology of Water in the West, lead speaker, NASA Earth2Sky workshop February 2022, Idaho (remote).

Climate Change, lead speaker NASA Earth2Sky workshop, November 2021, Palm Springs.

Land surface and Water Storage: Lecturer, NASA CCS Summer School, Pasadena (remote), August 2021.

Water Science at NASA: Measuring Earth's resources for life from outer space, Invited Lecture, World Water Day Rivers in Spring, GLOBE Italia, Mantova, Italy, March, 2021.

Hydrology Frontiers: A vision for the next 10-20 years, Invited Lecture, Resnick Institute on sustainability workshop on future research directions, Caltech, March, 2020.

Remote Sensing of the Terrestrial Water Cycle, Invited Department Lecture, Missouri University of S&T, Geophysics Department, Feburary, 2020.

Climate change solutions, Invited panel member, Climate Change and Peace Building Conference, University of California, Irvine, February 2020.

Climate Change Science, Invited Keynote Lecture, Orange County Climate Change Solutions Workshop, February, 2020.

NASA satellites monitor global freshwater resources, Invited keynote Lecture, 52nd annual meeting on Planetary Emergencies, Erice, Sicily, Italy, August 2019.

GRACE for groundwater monitoring, Invited UNESCO GRAPHIC training workshop, Iguaçu Falls, Brazil, June 2019.

The use of hydrology observations to constrain models, Invited Lecture for NASA Global Modeling and Assimilation Office (GMAO), April, 2019.

Using Satellites to measure water, Invited Lecture for Montana State University Earth Science Seminar Series, February 2019.

NASA hydrology: satellite observations of water using gravity, Instructor for 2018 JPL/Caltech CCS Summer School, Caltech, Pasadena, August, 2018.

GRACE gets used for hydrology, Invited Speaker for GRACE-FO launch event, Vandenburg AF Base, Lompoc, May, 2018.

NASA hydrology: satellite observations of water using gravity, Instructor for 2017 JPL/Caltech CCS Summer School, Caltech, Pasadena, August, 2017.

NASA Earth Science Partnerships workshop: groundwater monitoring strategies for Niger. Invited speaker, workshop on groundwater strategies. Niamey, Niger, July 2017.

NASA/CUAHSI remote sensing hydrology workshop: satellite observations of the terrestrial water cycle from GRACE, SMAP and SWOT, keynote speaker and lead organizer for CUAHSI workshop on tools and methods in satellite hydrology. Boston, Massachusetts, April, 2017.

Healing The World We Live In. Presenter for the 2017 Aspen Challenge, a program of the Aspen Institute, Philadelphia, January, 2017.

The Water Cycle from Space, and other seminars (training), Appointed speaker at the US Delegation of the United Nations COP-22, Marrakech Morocco, November 2016.

NASA hydrology: satellite observations of water using gravity, Speaker for 2016 JPL teacher training workshop, Jet Propulsion Lab, Pasadena, November, 2016.

NASA hydrology: satellite observations of the terrestrial water cycle, keynote speaker and lead organizer for CUAHSI workshop on tools and methods in satellite hydrology. Tucson, Arizona, March, 2016.

Applications of NASA's GRACE satellite mission for land surface hydrology, Invited lecture for UC Santa Barbara, Department of Geography seminar series. Santa Barbara, California, February, 2016.

NASA hydrology: satellite observations of droughts floods and water resources, Keynote speaker for 2016 Steamboat Weather Summit, Steamboat Springs, Colorado, January, 2016.

The gravity of water: "weighing in" on Earth's changing water resources, Invited lecturer for NASA Museum Alliance partners Earth science workshop. NASA Jet Propulsion Laboratory, August, 2015.

Using NASA observations to weigh Earth's changing water resources. Keynote presenter, 19th NASA GLOBE Annual Partners Meeting. Los Angeles, July 2015.

Closing the gap between the water we need and the water we use. Presenter for the 2015 Aspen Challenge, a program of the Aspen Institute, Cesar Chavez Learning Academies, January, 2015.

Using Gravity to understand water. Keynote speaker for "Our Instrumented Earth": Aquarium of the Pacific 2014 teacher training workshop, at NASA Jet Propulsion Laboratory, October 2014.

Surface and groundwater impacts of the current California drought, invited talk and panel at San Gabriel Valley Water Forum, Pomona, CA, October, 2014.

An introduction to NASA's GRACE mission. Primary speaker for "Our Instrumented Earth": Aquarium of the Pacific 2013 teacher training workshop, at NASA Jet Propulsion Laboratory, October 2013.

GRACE and our most precious resource, Invited lecturer for NASA Museum Alliance partners Earth science workshop. NASA Jet Propulsion Laboratory, April, 2013.

Precipitation Formation and *Streamflow Generation*. 2 Guest lectures, UC Irvine ESS 232, Terrestrial Hydrology, Winter, 2013.

California's changing water resources. Invited lecturer, UC Irvine ESS 60B, Local and regional environmental issues, Winter, 2013.

Southern CA Tribal Listening & Strategy Session on Environmental Issues. UC Irvine Environment Institute, Irvine, CA, October 2012.

A chronology of water in the Southwest: Past, present and future of a valuable resource. Keynote speaker for Drylands Design Conference. Arid Lands Institute, Burbank, CA, March 2012.

"Weighing in" on Earth's changing water resources. Invited lecturer for Osher Lifelong Learning Institute, OLLI classroom, Irvine, CA, December 2011.

GRACE: weighing Earth's water from space. Invited instructor for International Space University, 2011 Summer Space Studies Program. Infeldgasse Campus, Graz, Austria, July 2011.

Using GRACE for groundwater. Invited workshop leader for the UNESCO-IHP GRAPHIC training course on methods for the study of groundwater dynamics. Tozeur, Tunisa, November 2010.

Joint UCI-JPL Study of Satellite data for Water Resources. Invited lecturer for Osher Lifelong Learning Institute, OLLI classroom, Irvine, CA, September 2010.

Teaching Assistant, UC Irvine, Irvine, CA, USA

Oceanography: ESS 3 [fall, 2009]
GIS for Earth Sciences: ESS 134 [winter, 2008]
Data Analysis: ESS 116 [fall, 2008]

PROFESSIONAL SERVICE

- *Lead Author*: Community Assessment Report for NASA Designated Observable Study for future Mass Change, 2021/2022
- *Science Advisor:* Caltech Data to Discovery summer program (https://datavis.caltech.edu)
- *Chair and Primary convener*, Science utilization of GRACE/GRACE-FO in hydrology, oral and poster session, AGU Fall Meeting, 2018-2021.
- *Convener*, Global water cycle Observations and modeling, oral and poster session, AGU Fall Meeting, 2018-2021.
- *Hydrology applications team:* NASA Designated Observable Study for future Mass Change mission [2020]
- *Hydrology team lead:* NASA Designated Observable Study for future Surface Deformation and Change mission [2020]
- *Science Advisor:* NASA DEVELOP program project with the US DWR: Using satellite and in-situ approaches to monitor groundwater changes in Southern California, [2020];
- *Presenter/organizer*, GRACE for groundwater monitoring, UNESCO GRAPHIC training workshop, Iguaçu Falls, Brazil, June 2019.
- *Lead author*, Land contributions to sea level, chapter in WCRP report on global sea level rise, 2018.
- *Lead Organizer*, 2nd annual GRACE applications working group meeting, at GRACE science team meeting, Austin, October, 2017.
- *Lead organizer and presenter,* 2nd annual NASA Applied Sciences/CUAHSI workshop on 'Methods and tools in satellite hydrology'. CUAHSI HQ, Boston, April 2017.
- *Presenter,* IPCC Conference of the Parties (COP-22), NASA Earth Sciences, Marrakech, Morrocco, November 2016.
- *Lead organizer:* Workshop on hydrologic applications of GNSS-reflectometry, NASA Jet Propulsion Laboratory, June 2016.

- *Lead author,* National Academies Decadal Survey, RFI2: Water beneath the land surface. Submitted May 15, 2016.
- *Lead organizer and presenter,* CUAHSI workshop on 'Methods and tools in satellite hydrology'. Biosphere 2, Tuscon, March 2016.
- *Co-convener,* Observations of the mass contributions to sea level from glaciers, ice sheets and hydrology. Lead Convener: Isabella Velicogna. AGU Fall meeting, December 2015, San Francisco.
- Organizer, JPL Water cycle frontiers workshop, Jet Propulsion Laboratory, September 21-22, 2015, Pasadena.
- *Group leader,* Hyper-resolution land surface modeling collaborative, Working Group I: Test case creation. [2014-2017]
- *Science Advisor:*
  - NASA DEVELOP program project with the US Forest Service: Using GRACE-derived water and soil moisture products for fire severity forecasting in the Western United States, [2014-2015];
  - NASA DEVELOP program project with the National Weather Service: Using NASA Satellites to assess the state of the 2012-2016 California Drought and the effects of the 2015-2016 El Nino [2016].
- *Journal Reviewer:* Geophysical Research Letters, Water Resources Research, Journal of Hydrology, Journal of Geophysical Research, Surveys of Geophysics, Climate Dynamics, Remote Sensing.
- *Proposal reviewer:* NASA ROSES (panels for water and applied sciences programs), IAGS

MENTORING, STUDENT SUPERVISION AND GRADUATE COMMITTEE PARTICIPATION

- Andrew Mullen, Montana State Univ., masters student, summer intern, 2021.
- Anna Boser, UC Santa Barbara PhD student, summer intern, 2021.
- Dr. Juhi Huda, JPL Postdoc, for NASA GRACE-FO science team 2020/2021.
- Angela Enriquez, Cal State LA, masters degree committee member, advisor: JJ Li 2019/2020.
- Dr. Paul Levine, JPL Postdoc, for NASA GRACE science team and water/carbon interactions 2020/2021.
- Dr. Kyra Kim, NASA NPP Fellow, Combining InSAR, GRACE and groundwater modeling in California's Central Valley 2019/2021.
- Chelsy Salas, Cal State LA, masters degree committee member, advisor: H.C. Ye 2019/2020.
- John Salguero, Cal State LA, masters degree committee member, advisor: JJ Li 2019/2020.
- Jessica Kromer, Cal Sata LA, masters degree committee member, advisor: H.C. Ye 2019/2020.
- Dr. Madeliene Pascolini-Campbell, NASA NPP Fellow, for using satellites to measure human impacts on the water cycle 2019/2021.
- Dr. Hrishikesh Chadanpurkar, JPL postdoc, for NASA SLCT and OSTST, 2018-2021.
- Dr. Alka Singh, JPL/Caltech Postdoc, for the project GRACE for drought monitoring, 2017/2019.
- Robin Sehler, student at Cal State LA, NASA STEM program, JPL intern, 2017/2018.
- Dr. Victoria Meyer, JPL/Caltech Postdoc for GRACE and ecosystem drought resilience (2017-2019)
- Dr. Alireza Farhamand, JPL/Caltech Postdoc for the JPL Fire Danger Assesment System (2016-2020)
- Dr. Dimitrios Stampoulis, JPL/Caltech Postdoc for the JPL Water Initiative (2016-2017)
- Joseph Lucey, Cal State LA, NASA STEM program, JPL intern, 2016/2018.
- Armeen Taeb, California Institute of Technology, PhD Computer Science, expected 2018.
- Aaron Trefler, NASA STEM engagement program, JPL summer intern, 2016.
- Justin Lawrence, NASA DEVELOP program, JPL summer intern, 2016.
- Lauryn Gotkowski, NASA DEVELOP program, JPL summer intern, 2016.
- Heloisa Macedo, M.S. student, Northeastern University, M.S. Civil Engineering, 2016.
- Jinny Lee, Cal State LA, M.S., intern, Geology, 2016.
- Nick Rousseau, NASA DEVELOP program, JPL summer intern, 2015.
- Brittany Zajic, NASA DEVELOP program, JPL summer intern, 2015.
- Daniel Jensen, NASA DEVELOP program, JPL summer intern, 2015.
- Karen An, undergraduate intern, University of California, Irvine, B.S. Computer Science, 2013.

RESEARCH FEATURED IN THE MEDIA

BBC World News: *Western US drought interview*, June 2022.

CBS Evening News: *Drought in the Western US*, news program interview, May, 2022.

Spectrum Cable News, *NASA's perspective on Earth Day and the future of the planet*, event coverage, April, 2022

Interview on California Drought, Univision, August 2021.

CBS Sunday Morning: *What the megadrought means to the American West*, News program interview, July 2021. (https://www.youtube.com/watch?v=K9hUNufKIKw)

Interview on California Groundwater: Univision, 2019.

Interview on California Groundwater: KNBC LA, 2019.

Interviewed for: ***The River's End***, Documentary Feature film, release 2020.

NASA/JPL press release: using gravity to forecast fire occurrence, January, 2018.

News Story: Lumps, Bumps and Gravity, NASA Climate website, September 14, 2017. (https://climate.nasa.gov/news/2628/lumps-bumps-and-gravity-space-scales-weigh-planet-earth/)

News Story: *Heavy Weather: gravity –based flood prediction*, IEEE e-zine, July 1, 2016. (http://earthzine.org/2016/06/27/heavy-weather-jt-reager-and-gravity-based-flood-prediction/)

Summary of coverage for: *A Decade of Sea Level Rise Slowed by Climate Driven Hydrology*, 2016:

- Covered by 52 news outlets internationally,
- Top 5% of all research outputs scored by Altmetric (99th percentile of all research of the same age)
- More info at: https://www.altmetric.com/details/5377903/news)

News Story: *Satellites that measure changes in gravity can alert us to potential floods*, Gravity and groundwater, Current Cast Radio program, October 9, 2014. (http://www.currentcast.org/climate-change/gravity-and-groundwater)

Interviewed for JPL press release: *Parched West using up underground water*, by Carol Rasmussen, August, 2014. (http://www.jpl.nasa.gov/news/news.php?release=2014-242)

Interview for: *Marcy Markusa morning show*, CBC Winnipeg, July 15, 2014.

Interviewed for JPL press release: *NASA satellites give early clues to flood danger*, by Carol Rasmussen, July 10, 2014. (http://www.jpl.nasa.gov/news/news.php?release=2014-228)

Interviewed live on: *The morning show*, KCBS San Francisco, July 9, 2014.

Interviewed live on: *The Charles Adler Show*, KJOB Winnipeg, July 9, 2014.

Interviewed on ABC radio news: *NASA satellites used to predict floods*, PM with Mark Colvin, July, 2014. (http://www.abc.net.au/pm/content/2014/s4041069.htm)

LiveScience.com featured article: *Early flood prediction gets a boost from space*, by Becky Oskin, July, 2014. [picked up by 40 major news outlets] (http://www.livescience.com/46671-predicting-river-floods-gravity-satellite.html)

Science featured article: *Gravity measurements can predict river flooding*, by Eric Hand, Science Magazine, News, July, 2014. [picked up by 24 major news outlets] (http://news.sciencemag.org/climate/2014/07/gravity-measurements-can-predict-river-flooding)

Quoted in: *The Dry Life*, on water and climate change in the Southwest US, by Bradford McKee, editor, Landscape Architecture Magazine, October, 2012 issue.

Consultant: *Last Call at the Oasis*, Documentary Feature film, Participant Media, released May, 2012 (http://www.imdb.com/title/tt2043900/)

Feature article: *Groundwater, gravity and graphic design*, for Smithsonian.com, Design Decoded blog May, 2012 (http://blogs.smithsonianmag.com/design/2012/05/groundwater-gravity-and-graphic-design/)

Feature article: *A challenge to the Design community in California,* for The American Institute of Architects blog, March, 2012, (http://aiacc.org/2012/03/28/drylands-design-conference-a-challenge-to-the-design-community-in-ca/)

Feature article: *Generation H_2O gets down and dirty*, University of California web article, August, 2009 (http://www.universityofcalifornia.edu/news/article/21804)

Feature article: *Satellite flood prediction could save lives*, Discover.com blog, 2009.