






Cédric H. David

Born in Marseille, France – French National with H1B Visa in the USA.

 Jet Propulsion Laboratory,
4800 Oak Grove Drive, M/S 300-323,
Pasadena CA, 91109-8099
USA

 +1 (818) 354-4416

 cedric.david@jpl.nasa.gov

 <http://science.jpl.nasa.gov/people/CHDavid/>
 <http://orcid.org/0000-0002-0924-5907/>

 <http://rapid-hub.org/>

 <https://github.com/c-h-david/>

Scientist – NASA’s Jet Propulsion Laboratory

PROFESSIONAL EXPERIENCE

- 2015-current **NASA’s Jet Propulsion Laboratory (Pasadena, California):** Scientist in the Terrestrial Water Group, under Dr. James S. Famiglietti. Member of the JPL Water Initiative and of the Western States Water Mission.
- 2014-2015 **NASA’s Jet Propulsion Laboratory (Pasadena, California):** Scientist in the Water & Carbon Cycles Group, under Dr. Eni G. Njoku. Member of the JPL Water Initiative.
- 2012-2014 **University of California Center for Hydrologic Modeling (Irvine, California):** Project Scientist. Development of an integrated state-of-the-art model of California water resources; mentorship of Ph.D. students and Junior Specialists; under Dr. James S. Famiglietti.
- 2009-2012 **University of Texas at Austin (Austin, Texas):** Post-doctoral fellow in the Climate System Science group of the Department of Geological Sciences. Study of climate change impacts on water resources and river flow in the Texas Gulf Coast Hydrologic Region, and influence on ecosystems of Texas Bays; mentorship of Ph.D. students; under Dr. Zong-Liang Yang.
- 2007-2008 **Ecole des Mines de Paris (Fontainebleau, France):** Graduate Student Visitor at the Center for Geosciences (six months). Macroscale River Flow Modeling in collaboration with the French Weather Service (MétéoFrance); under Dr. Florence Habets.
- 2006-2009 **University of Texas at Austin (Austin, Texas):** Graduate Research Assistant at the Center for Research in Water Resources. Development of a river network routing model called RAPID; under the supervision of Dr. David R. Maidment and Dr. Zong-Liang Yang.
- 2006 **National Center for Atmospheric Research (Boulder, Colorado):** Graduate Student Visitor at the Research Advanced Laboratory (three months). Modeling of the flow of water across the land surface; under Dr. David Gochis.
- 2004-2006 **University of Texas at Austin (Austin, Texas):** Graduate Research Assistant at the Center for Research in Water Resources. Study of salinity in Texas bays; under Dr. Ben R. Hodges.
- 2004 **AmecSpie (Toulouse, France):** 3-month internship as an engineer. On-site management of sensor installation and testing for the Airbus 380 gas station.
- 2003 **SOGREAH (Echirolles, France):** 8-month internship as an engineer in the research department. Development of empirical relationships between incident waves and overtopping of breakwaters in ports.
- 2003 **SOGREAH (Echirolles, France):** 3-month internship as an assistant engineer. Research concerning breakwater overtopping in wave flumes and wave tanks.
- 2003-2004 **Redbull GmbH (Monaco, Principauté de Monaco):** Student Brand Manager, marketing (14 months).

EDUCATIONAL QUALIFICATIONS

- 2006-2009 **University of Texas at Austin (Austin, Texas):** Ph.D. in Civil Engineering (graduated in August 2009). Ph.D. Dissertation entitled “Towards river flow computation at the continental scale”. GPA: 3.879 (cumulative Master’s and Ph.D.).
- 2004-2006 **University of Texas at Austin (Austin, Texas):** Master of Science in Environmental and Water Resources Engineering (graduated in May 2006). Master’s Thesis entitled “Deploying a Microstructure Profiler in Corpus Christi Bay”. GPA: 3.860.

- 2001-2004 **Ecole Centrale de Lille (Lille, France):** Master of Science in General Engineering (graduated in September 2004). Specialization in Systems & Control, and Physical planning, Construction and Environment. Ecole Centrale de Lille is of France's top ten *Grandes Ecoles* of engineering.
- 1999-2001 **Lycée Jacques Decour (Paris, France):** Advanced undergraduate education in the so-called *Classes Préparatoires* for admission into the French *Grandes Ecoles*.

TEACHING EXPERIENCE

- 2016(invited) **Biosphere 2 (Oracle, Arizona):** CUAHSI Remote Sensing Hydrology Workshop, The Surface Water and Ocean Topography (SWOT) Mission (invited lecture). 28-31 March.
- 2015 **Jet Propulsion Laboratory (Pasadena, California):** Geoscience Paper of the Future Training Session: Learn Best Practices for Scholarly Publication, 28 Oct.
- 2015(invited) **National Center for Atmospheric Research (Boulder, Colorado):** Training Workshop: The Community WRF-Hydro Modeling System, RAPID Training (invited lecture). 05-07 May.
- 2014 **University of California, Irvine (Irvine, California):** Department of Earth System Science, upper-division undergraduate and graduate course ESS 132 / ESS 232 Terrestrial Hydrology, substitute lecturer for Evapotranspiration. 25 and 27 February.
- 2013 **University of California, Irvine (Irvine, California):** Department of Earth System Science, upper-division undergraduate and graduate course ESS 132 / ESS 232 Terrestrial Hydrology, substitute lecturer for Evapotranspiration. 19, 21 and 26 February.
- 2012 **University of Texas at Austin (Austin, Texas):** Department of Geological Sciences, upper-division undergraduate and graduate course GEO 377P / GEO 387P Physical Climatology, substitute lecturer for River Modeling and Influence of Climate Change on Terrestrial Water. 01 March.
- 2011(invited) **Chinese Academy of Sciences (Beijing, China):** Institute of Atmospheric Physics, RAPID Training Course (invited lecture). 24-26 May.
- 2011 **University of Texas at Austin (Austin, Texas):** Department of Geological Sciences, upper-division undergraduate and graduate course GEO 377P / GEO 387P Physical Climatology, substitute lecturer for Earth Energy Balance and Oceanic Circulation. 01 and 03 February, 24 March.
- 2010 **University of Texas at Austin (Austin, Texas):** Department of Geological Sciences, graduate course GEO 391 Land Atmosphere Interaction Dynamics, substitute lecturer for Surface Water Balance and Watershed Hydrology. 06 November.
- 2009(invited) **University of North Texas, (Denton, Texas):** Department of Geography, Overview of plate tectonics (invited lecture). 03 April.
- 2006-2007 **University of Texas at Austin (Austin, Texas):** Lyndon B. Johnson School of Public Affairs, coach for the GIS team of graduate course PA682A Assessing Community Needs, Fall 2006 and Spring 2007 semesters.
- 2005 **University of Texas at Austin, (Austin, Texas):** Civil, Architectural and Environmental Engineering Department, Teaching assistant for laboratories and grader for undergraduate course CE356 Elements of Hydraulic Engineering, Spring 2005 semester.
- 2002 **Prépamath (Sceaux, France):** Mathematics, Physics and Chemistry tutor during Spring Break (1 month).

HONORS AND AWARDS

- 2014 **Microsoft Research, Azure Research Grant** for a proposal entitled RAPID on Azure. \$45,000 (including \$5,000 extension).
- 2008-2009 **American Geophysical Union Horton (Hydrology) Research Grant** for proposal entitled A Prototype Study of Continental Water Dynamics Using the Guadalupe River Basin. \$10,000
- 2006 **University Corporation for Atmospheric Research:** Advanced Study Program grant for Graduate Student Visitors. \$4,500
- 2006 **University of Texas at Austin:** LBJ School of public affairs, RGK Center for Philanthropy and Community Service, George Foundation Fellow. \$1,000.

PEER REVIEWED PUBLICATIONS

- 201x Tavakoly, A. A., A. D. Snow, C. H. David, M. L. Follum, D. R. Maidment, Z. -L. Yang (201x), Continental Scale River Flow Modeling of the Mississippi River Basin Using High Resolution NHDPlus Dataset (Submitted to the Journal of the American Water Resources Association on 2016-01-27).
- 201x Pavelsky, T. M., C. H. David, J. D. Bales, M. M. Gierach, L. Giosan, M. P. Lamb, C. J. Legleiter, J. M. Melack, F. E. Muller-Karger, J. E. Richey, E. Rodriguez, M. Simard, and L. C. Smith (201x), From the

Mountains to the Sea: Interdisciplinary Science and Applications Driven by the Flow of Water, Sediment, and Carbon (submitted to the Decadal Survey for Earth Science and Applications from Space of the National Academies of Sciences, Engineering and Medicine on 2015-11-02)

- 2016 Snow, A. D., S. D. Christensen, N. R. Swain, J. Nelson, D. P. Ames, N. L. Jones, D. Ding, N. Noman, C. H. David, F. Pappenberger (201x), A High-Resolution National-Scale Hydrologic Forecast System from a Global Ensemble Land Surface Model, *Journal of the American Water Resources Association* (accepted on 2016-04-13).
- 2016 David, C. H., J. S. Famiglietti, Z. -L. Yang, F. Habets, and D. R. Maidment (2016), A Decade of RAPID – Reflections on the Development of an Open Source Geoscience Code, *Earth and Space Science*, 3, 1-19, DOI: 10.1002/2015EA000142.
- 2016 Solander, K., J. T. Reager, B. F. Thomas, C. H. David, and J. S. Famiglietti (2015), Simulating human water regulation: the development of an optimal complexity, climate-adaptive reservoir management model for an LSM, *Journal of Hydrometeorology*, 17:3, 725-743, DOI: 10.1111/1752-1688.12355.
- 2015 Lin, P., Z. -L. Yang, X. Cai, and C. H. David (2015), Development and evaluation of a physically-based lake level model for water resource management: A case study for Lake Buchanan, Texas, *Journal of Hydrology: Regional Studies*, 4(B), 661-674. DOI: 10.1016/j.ejrh.2015.08.005.
- 2015 Tavakoly, A. Ah, D. R. Maidment, T. Whiteaker, J. McClelland, Z. -L. Yang, C. H. David, and C. Griffin (2015), A GIS Framework for Regional Modeling of Riverine Nitrogen Transport: Case Study: San Antonio and Guadalupe Basins, *Journal of the American Water Resources Association*, 52(1), 1-15. DOI: 10.1111/1752-1688.12355.
- 2015 David, C. H., J. S. Famiglietti, Z. -L. Yang, and V. Eijkhout (2015), Enhanced fixed-size parallel speedup with the Muskingum method using a trans-boundary approach and a large sub-basins approximation, *Water Resources Research*, 51(9), 1-25, DOI: 10.1002/2014WR016650.
- 2015 Häfliger, V., E. Martin, A. Boone, F. Habets, C. H. David, P.A. Garambois, H. Roux, and S. Ricci, L. Berthon, A. Thévenin (2015), Evaluation of regional-scale water level simulations using various river routing schemes within a hydrometeorological modelling framework for the preparation of the SWOT mission, *Journal of Hydrometeorology*, 16(4), 1821–1842, DOI: 10.1175/JHM-D-14-0107.1.
- 2015 Bierkens, M. F. P., V. A. Bell, P. Burek, N. Chaney, L. E. 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. M. 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 modelling: what is next? *Hydrological Processes*, 29(2), 310-320, DOI: 10.1002/hyp.10391.
- 2014 Habets, F., E. Philippe, E. Martin, C. H. David, and F. Leseur (2014), Small farm dams: impact on river flows and sustainability in a context of climate change, *Hydrology and Earth System Sciences* (2014), 18, 4207-4222, DOI:10.5194/hess-18-4207-2014.
- 2014 Cai, X., Z. -L. Yang, C. H. David, G. -Y. Niu, and M. Rodell (2014), Hydrological evaluation of the Noah-MP land surface model for the Mississippi River Basin, *Journal of Geophysical Research – Atmospheres*, 119, 1-16, DOI: 10.1002/2013JD020792.
- 2013 David, C. H., Z. -L. Yang and J. S. Famiglietti (2013), Quantification of the upstream-to-downstream influence in the Muskingum method, and implications for speedup in parallel computations of river flow, *Water Resources Research*, 49(5), 1-18, DOI: 10.1002/wrcr.20250.
- 2013 Smith, V. B., C. H. David, M. B. Cardenas and Z. -L. Yang (2013), Climate, river network, and vegetation cover relationships across a climate gradient and their potential for predicting effects of decadal-scale climate change, *Journal of Hydrology*, 488, 101-109, DOI: 10.1016/j.jhydrol.2013.02.050.
- 2013 David, C. H., Z. -L. Yang and S. Hong (2013), Regional-scale river flow modeling using off-the-shelf runoff products, thousands of mapped rivers and hundreds of stream flow gauges, *Environmental Modelling & Software*, 42, 116-132. DOI: 10.1016/j.envsoft.2012.12.011.
- 2011 David, C. H., F. Habets, D. R. Maidment and Z. -L. Yang (2011), RAPID applied to the SIM-France model, *Hydrological Processes*, 25(22), 3412-3425, DOI: 10.1002/hyp.8070.
- 2011 David, C. H., D. R. Maidment, G.-Y. Niu, Z. -L. Yang, F. Habets and V. Eijkhout (2011), River network routing on the NHDPlus dataset, *Journal of Hydrometeorology*, 12(5), 913-934. DOI: 10.1175/2011JHM1345.1.
- 2009 David, C. H., D. J. Gochis, D. R. Maidment, W. Yu, D. N. Yates and Z. -L. Yang (2011). Using NHDPlus as the land base for the Noah-distributed model, *Transactions in GIS*, 13(4), 363-377, DOI: 10.1111/j.1467-9671.2009.01169.x.

SOFTWARE PUBLICATIONS

- 2013 David, C. H. (2013), RAPID v1.4.0, Zenodo, DOI: 10.5281/zenodo.24756

- 2013 David, C. H. (2013), RAPID v1.3.0, Zenodo, DOI: 10.5281/zenodo.27243
 2011 David, C. H. (2011), RAPID v1.2.0, Zenodo, DOI: 10.5281/zenodo.27242
 2011 David, C. H. (2011), RAPID v1.1.0, Zenodo, DOI: 10.5281/zenodo.27241
 2010 David, C. H. (2010), RAPID v1.0.0, Zenodo, DOI: 10.5281/zenodo.27239

DATA PUBLICATIONS

- 2011 David, C. H., F. Habets, D. R. Maidment and Z. -L. Yang (2011), RAPID input and output files corresponding to "RAPID Applied to the SIM-France Model", DOI: 10.5281/Zenodo.30228
 2011 David, C. H., D. R. Maidment, G.-Y. Niu, Z. -L. Yang, F. Habets and V. Eijkhout (2011), RAPID input and output files corresponding to "River Network Routing on the NHDPlus Dataset", DOI: 10.5281/Zenodo.16565

CONFERENCE PROCEEDINGS

- 2014 Zhao, T., B. S. Minsker, J. -S. Lee, F. R. Salas, D. R. Maidment, C. H. David, Real-time Water Decision Support Services for Droughts, Proceedings of the 11th International Conference on Hydroinformatics (HIC 2014), New York, NY, August 17 – 21, 2014.
 2012 Tavakoly, A. A., C. H. David, D. R. Maidment and Z. -L. Yang, An Upscaling Process for Large-scale Vector-based River Networks Using the NHDPlus Dataset, Proceedings of the American Water Resources Association Spring Specialty Conference on Geographic Information Systems and Water Resources, available at <http://www.awra.org/proceedings/Spring2012/oral.html>

MEDIA SCIENCE ADVISING

- 2015 Bernard, A., D. Lemieux, and P. Gagné, Notre eau est-elle à l'abri des changements climatiques (2015), Découvertes, Ici Radio Canada Télé, published online on 06 December 2015, TV broadcast on 06 December 2015.
 2015 Srivastava, C., La Californie à sec (2015), Les Années Lumière, Ici Radio Canada, published online on 01 May 2015, radio broadcast on 03 May 2015.
 2012 Giordani, A., Modeling the arteries of the land (2012), International Science Grid this Week. Published online on 24 October 2012.
 2012 Agresta, M., The "D" Word: Drought (2012), The Alcade, published online on 30 April 2012 and in paper in the May/June issue.
 2012 Mashhood, F., Water experts assess aftermath of drought during University of Texas forum (2012), The Austin American Statesman. Published online on 13 February 2012 and in paper in the 14 February 2012 issue.

PRESENTATIONS (PRESENTING AUTHOR)

- 2016(invited) David, C. H., Getting Ready for the Global Surface Water Observations of SWOT (invited presentation), CIESS Workshop on Global Water Cycles and World Water Resources: Past, Present and Future, University of Texas at Austin, Austin, Texas, 21-22 April.
 2015(invited) David, C. H. (invited participant), CUAHSI-NCAR First Synthesis Workshop On Improving Hydrologic Processes in Earth System Models, National Center for Atmospheric Research, Boulder, Colorado, 05-06 October.
 2015(invited) David, C. H., RAPID, Big Picture (invited remote presentation), National Flood Interoperability Experiment (NFIE) Spring 2015 Workshop, National Water Center, Tuscaloosa, Alabama, 17 March.
 2015(invited) David, C. H., Challenges in usage and sustainable development of RAPID (invited presentation), GeoSoft Advisory Committee, Information Sciences Institute, Marina del Rey, California, 11 March.
 2015 David, C. H., Inclusion of Surface Water Diversions in Modeling Rivers and Streams (presentation), Open Water Data Initiative Drought Visualization Meeting, Bureau of Reclamation, Boulder City, Nevada, 25 February.
 2015 David, C. H., Modeling Surface Water Bodies, Over Large Domains, on Big Computers (presentation), UCLA/JPL Workshop, Joint Institute for Regional Earth System Science and Engineering, Los Angeles, CA 02 February.
 2014(invited) David, C. H., J. S. Famiglietti, F. R. Salas, T. L. Whiteaker, D. R. Maidment, K. M. Tolle, River Modeling Beyond Discharge at Gauges (invited poster), American Geophysical Union Fall Meeting, San Francisco, CA, 15 December.

- 2014(invited) David, C. H. (invited researcher), Microsoft Research, Redmond, WA, 07-11 July.
- 2014 David, C. H. How RAPID works (presentation), Environmental Systems Research Institute, Redlands, CA, 11 June.
- 2014(invited) David, C. H. Modeling terrestrial hydrologic features across the scales of SWOT (invited presentation), NASA's Jet Propulsion Laboratory, Pasadena, CA, 13 May.
- 2014(invited) David, C. H. (invited participant), National Science Foundation EarthCube Assembly Synthesis Workshop, Tucson, AZ, 16-18 April.
- 2014(invited) David, C. H. (invited participant), National Science Foundation EarthCube End User/ Professional Societies Workshop, Washington, DC, 18-20 March.
- 2014 David, C. H., J. T. Reager, and J. S. Famiglietti, Hyper-resolution modeling of surface water – challenges and opportunities (presentation), Workshop on Hyper-resolution Global Hydrologic Modeling: The Next Steps, Utrecht, Netherlands, 13-14 February.
- 2013 David, C. H. and J. S. Famiglietti, Accounting for anthropogenic actions in modeling of stream flow at the regional scale (poster), American Geophysical Union Fall Meeting, San Francisco, CA, 09 December.
- 2013 David, C. H. and J. S. Famiglietti, Inclusion of a simple reservoir model in regional-scale surface water modeling (presentation), Texas Water Forum III, Austin, TX, 14-15 October.
- 2013(invited) David, C. H., Using CUAHSI HIS for Regional-scale River Flow Modeling – How Hydroinformatics can Support Computational Hydrology (invited presentation), CUAHSI Conference on Hydroinformatics and Modeling, Logan, UT, 17-19 July.
- 2013(invited) David, C. H., On the Use of Technology to Enable the Flow of Digital Rivers at Continental-Scale (invited presentation), National Science Foundation EarthCube Modeling Workshop for the Geosciences, Boulder, CO, 23 April.
- 2013(invited) David, C. H., Raising the Bar for Speedup in Parallel Computing of River Flow (invited seminar presentation), Center for Integrated Earth System Science, University of Texas at Austin, Austin, TX, 20 March.
- 2012 David, C. H. and Z. -L. Yang, Computing flow in mapped rivers of the United States using national datasets (poster), American Geophysical Union Fall Meeting, San Francisco, CA, 05 December.
- 2012(invited) David, C. H. (invited participant) National Science Foundation EarthCube Early Career Strategic Visioning Workshop, Carnegie Institution of Science, Washington, DC, 16-17 October.
- 2012(invited) David, C. H. (invited participant) National Science Foundation EarthCube Charrette, Rosslyn, VA on 12-14 June.
- 2012(invited) David, C. H., Z. -L. Yang, Estimation of Current and Future Water Resources Available in Texas from Continental-Scale Datasets (invited presentation), American Water Works Association Annual Conference & Exposition, Dallas, TX, 10-14 June.
- 2012(invited) David, C. H., About Our Current Knowledge of Water in River Systems at the Continental-Scale (invited seminar presentation), University of California at Irvine, Irvine, CA, 14 May.
- 2012 David, C. H., Z. -L. Yang, D. R. Maidment and F. Habets, Getting ready for SWOT: modeling of water flow and height in thousands of mapped rivers covering hundreds of thousands of square kilometers (poster), American Geophysical Union Chapman Conference on Remote Sensing of the Terrestrial Water Cycle, Kona, HI, 21 February.
- 2012 David, C. H., D. R. Maidment, Z. -L. Yang, River Modeling as Big as Texas (presentation), Texas Water Forum, Austin, TX, 13 February.
- 2012 David, C. H., Z. -L. Yang and S. Hong, Regional-scale river modeling using thousands of mapped rivers, off-the-shelf runoff products and hundreds of stream flow gages (poster), 92nd American Meteorological Society Annual Meeting, 26th Conference on Hydrology, New Orleans, LA, 23 January.
- 2011 Yang, Z. -L., C. H. David, Z. Xu, A. A. Tavakoly, X. Cai, L. C. Helper, D. R. Maidment, J. W. McClelland, C. G. Griffin, P. A. Montagna, E. L. Turner, H. Xie and W. Hao, An Integrated Earth System Science Approach for Predicting Nutrient Transports from the Land to the Ocean modeling (poster), NASA Carbon Cycle and Ecosystems Joint Science Workshop, Alexandria, VA, 03 October.
- 2011(invited) David, C. H., Fundamentals of next-generation river modeling (invited presentation), Regional Earth System Modeling and Analysis (RESMA) Symposium, Beijing, China, 20 May.
- 2011(invited) David, C. H. David, invited workshop participant, Community Hydrologic Modeling Project (CHyMP) Implementation Workshop, Irvine, CA, 15-17 March.
- 2011 Tavakoly, A., X. Cai, C. H. David, D. R. Maidment, and Z. -L. Yang, Land surface hydrology and river modeling for the Mississippi River Basin using NLDAS2 data (poster), Community Hydrologic Modeling Project (CHyMP) Implementation Workshop, Irvine, CA, 16 March.
- 2010(invited) David, C. H., Water, humans, energy and change (invited seminar presentation), Royal Institute of Technology (KTH), Stockholm, Sweden, 17 November.

- 2010 David, C. H., Fundamentals of next-generation continental-scale river modeling & future of Texas rivers (seminar presentation), Climate Brown Bag Seminar, Department of Geological Sciences, University of Texas at Austin, Austin, TX, 23 July.
- 2009 David, C. H., D. R. Maidment, S. Hong, G.-Y. Niu, Z. -L. Yang, River network routing in all rivers of the Texas Gulf (presentation), American Geophysical Union Fall meeting, San Francisco, CA, 17 December.
- 2009(invited) David, C. H., Perspective on global climate change (invited panelist), Projection of movie "Home", Cinéma Français Today film festival, Austin, TX, 12 October.
- 2009 David, C. H., Towards river flow computation at large scale (seminar presentation), National Center for Environmental Prediction, Environmental Modeling Center, Suitland, MD, 05 August.
- 2009(invited) David, C. H., Towards the calculation of river flow at regional and continental scales (invited seminar presentation), University of North Texas, Denton, TX, 03 April.
- 2009(invited) David, C. H., Towards the calculation of river flow at regional and continental scales (invited seminar presentation), Boise State University, Boise, ID, 17 March.
- 2009 David, C. H., A case-study of Continental Water dynamics in the Guadalupe and San Antonio River Basins (presentation), Renaissance Computing Institute, Chapel Hill, NC, 05 March.
- 2008 David, C. H., G.-Y. Niu, D. R. Maidment, Z. -L. Yang, Routing Application for Parallel computation of Discharge (poster), American Geophysical Union Fall meeting, San Francisco, CA, 19 December.
- 2008 David, C. H., G.-Y. Niu, D. R. Maidment and Z. -L. Yang, Simultaneous parallel computation of river flow in all river reaches of the Texas Gulf (poster), Severe Storm Prediction, Education and Evacuation from Disasters (SSPEED) conference, Houston, TX, 30 October.
- 2008 David, C. H., Continental Water Dynamics of the Guadalupe River Basin (presentation), GIS Hydro Pre-Conference Seminar, ESRI User Conference, San Diego, CA, 03 August
- 2008 David, C. H. and F. Habets, A macroscale river routing model used in MODCOU (seminar presentation), Météo France, Toulouse, France, 31 January.
- 2008 David, C. H., D. J. Gochis, D. R. Maidment, Z. -L. Yang and F. Habets, Continental water dynamics modeling (poster), Catchment-scale hydrologic Modeling and Data Assimilation (CAHMDA) workshop, Melbourne, Australia, 10 January
- 2007 David, C. H., Continental Water Dynamics Modeling (presentation), GIS Hydro Pre-Conference Seminar, ESRI User Conference, San Diego, CA, 17 June
- 2007 David, C. H., D. J. Gochis, D. R. Maidment and O. Wilhelmi, Linking hydrology and atmospheric science in continental water dynamics modeling (poster), Hydrological cycle in Mediterranean Experiment (HyMeX) workshop, Toulouse, France, 10 January.
- 2006 David, C. H., D. J. Gochis, D. R. Maidment and O. Wilhelmi, Linking hydrology and atmospheric science in continental water dynamics modeling (presentation), American Geophysical Union Fall meeting, San Francisco, CA, 11 December.
- 2006 Maidment, D. R., T. L. Whiteaker and C. H. David, Hydrologic modeling using netCDF data from Unidata (presentation), GIS Hydro Pre-Conference Seminar, ESRI User Conference, San Diego, CA, 06 August.

PRESENTATIONS (CONTRIBUTING AUTHOR)

- 2015 Famiglietti, James S., John T. Reager, Cédric H. David, Konstantinos M. Andreadis, Daniel J. Crichton, Stephanie L. Granger, Thomas G. Farr, Amy R. Trangsrud, Duane E. Waliser, Micheal M. Watkins, Michael R. Gunson, Ralph R. Basilio, The Western States Water Mission: a cyber-infrastructure capable of assimilating remotely sensed data for actionable estimates of the current state of terrestrial water resources in the Western U.S. States, 3rd CUAHSI Conference on HydroInformatics. Model and Data Interoperability: From Theory to Practice, Tuscaloosa, Alabama, 15-17 July.
- 2014 Häfliger, V., E. Martin, A. Boone, F. Habets, C. H. David, P. -A. Garambois, H. Roux, S. Ricci, A. Thévenin, L. Berthon, S. Biancamaria, Evaluation of regional-scale water level simulations using various river routing schemes within a hydrometeorological modelling framework for the preparation of the SWOT mission, American Geophysical Union Fall Meeting, San Francisco, CA, 18 December.
- 2014 Solander, K., J. S. Famiglietti, C. H. David, J. T. Reager, How well will the Surface Water and Ocean Topography (SWOT) mission observe global reservoirs? American Geophysical Union Fall Meeting, San Francisco, CA, 17 December.
- 2014 Famiglietti, J. S., B. Thomas, J. T. Reager, S. Castle, C. H. David, A. Thomas, K. Andreadis, D. Argus, A. Behrangi, T. Farr, J. Fisher, F. Landerer, M. -H. Lo, N. Molotch, T. Painter, M. Rodell, D. Schimel, S. Swenson, M. Watkins, Satellite Observations of the Epic California Drought, American Geophysical Union Fall Meeting, San Francisco, CA, 17 December.

- 2014 Zhao, T., B. S. Minsker, J. S. Lee, F. R. Salas, D. R. Maidment, C. H. David, Enabling Real-time Water Decision Support Services Using Model as a Service, American Geophysical Union Fall Meeting, San Francisco, CA, 15 December.
- 2014 Salas, F. R., D. R. Maidment, K. M. Tolle, C. Navarro, C. H. David, R. Corby, Building Cyberinfrastructure to Support a Real-time National Flood Model (poster), American Geophysical Union Fall Meeting, San Francisco, CA, 15 December.
- 2014 Habets, F., Philippe, E., E. Martin, C. H. David, and F. Leseur, Small farm dams: impact on river flows and sustainability in a context of climate change, 7th International Scientific Conference on the Global Energy and Water Cycle, The Hague, The Netherlands, 14-17 July.
- 2013 Liu, Z., C. H. David, and J. S. Famiglietti, Modeling of river flow, depth, and corresponding inundation extent over the Contiguous U.S. within a catchment-based Land Surface Modeling framework (poster), American Geophysical Union Fall meeting, San Francisco, CA, 13 December.
- 2013 Kim, B., B. F. Sanders, C. H. David, R. Druffel-Rodriguez, and J. S. Famiglietti, Modeling framework to link climate, hydrology and flood hazards: an application to Sacramento, California (poster), American Geophysical Union Fall meeting, San Francisco, CA, 10 December.
- 2013 Zhao, T., B. S. Minsker, J. -S. Lee, F. R. Salas, D. R. Maidment and C. H. David, Real-time Water Decision Support Services for Droughts (presentation), Texas Water Forum III, Austin, TX, 14-15 October.
- 2013 Lin, P., Z. -L. Yang, C. H. David, R. Anderson and X. Cai, Applying Coupled Noah-MP and RAPID in Reservoir Level Simulation: A Case Study in Lake Buchanan, Texas (presentation), Texas Water Forum III, Austin, TX, 14-15 October.
- 2013 Tavakoly, A. A., D. R. Maidment, Z. -L. Yang, T. L. Whiteaker, L. H. Meyer and C. H. David, GIS-based Modeling Approach to Estimate Nitrogen Loading and Load Reduction in Lakes/ Reservoirs with Application to the San Antonio and Guadalupe Basins (presentation), Texas Water Forum III, Austin, TX, 14-15 October.
- 2012 Tavakoly, A. A., T. L. Whiteaker; D. R. Maidment, Z. -L. Yang, L. H. Meyer and C. H. David; A GIS Tool for simulating Nitrogen transport along schematic Network (poster), American Geophysical Union Fall meeting, San Francisco, CA, 07 December.
- 2012 Solander, K. C., J. P. Edman, M. -H. Lo; J. T. Reager, C. H. David, B. F. Thomas, J. S. Famiglietti, R. S. Singh and N. L. Miller (poster), Simulating reservoir operations in California for use in a coupled land-surface and human impacts model (CLM-HUM), American Geophysical Union Fall meeting, San Francisco, CA, 06 December.
- 2012 Chandanpurkar, H. A., J. T. Reager, C. H. David, J. S. Famiglietti and T. H. Syed, Global runoff estimates derived from GRACE dataset and in situ observations (poster), American Geophysical Union Fall meeting, San Francisco, CA, 04 December.
- 2012 Lawrence, C., C. H. David, J. S. Famiglietti and J. T. Reager, Mountain glacier melt modeling across spatial scales (poster), American Geophysical Union Fall meeting, San Francisco, CA, 03 December.
- 2012 Lee, J. -S., T. Zhao, C. H. David and B. S. Minsker, Real-Time System for Water Modeling and Management (poster), American Geophysical Union Fall meeting, San Francisco, CA, 03 December.
- 2012 Tavakoly, A.A., C. H. David, D. R. Maidment, Z. -L. Yang, and X. Cai, An Upscaling Process of Large-Scale Vector Based River Network Using NHDPlus Data Set, AWWRA, American Water Resources Association 2012 Spring Specialty Conference, New Orleans, LA, 26-28 March.
- 2011 Cai, X., Z. -L. Yang, C. H. David and A. A. Tavakoly, Evaluation of a Newly Augmented Land Surface Model (Noah-MP) Over the Mississippi River Basin Using Available Observational Datasets (poster), American Geophysical Union Fall meeting, San Francisco, CA, 08 December.
- 2011 Tavakoly, A. A., C. H. David, X. Cai, Z. -L. Yang and D. R. Maidment, River Routing for the Mississippi River Basin using grid- and vector-based river networks (presentation), World Climate Research Program Open Science Conference: Climate Research in Service to Society, Denver, CO, 24-26 October.
- 2011 Yang, Z. -L., C. H. David, A. A. Tavakoly, X. Cai, L. C. Helper, Z. Xu, D. R. Maidment, J. W. McClelland, P. A. Montagna, H. Xie, and W. Hao, An Integrated Approach for Predicting Nutrient Transports from the Land to the Ocean (presentation), Land-Ocean Interactions in the Coastal Zone Open Science Conference, Yantai, Shandong, China, 12-16 September.
- 2011 Yang, Z.-L., S. Hong, L. Helper, D. R. Maidment, C. H. David, P. A. Montagna, H. -C. Kim, S. S. Arismendez, J. W. McClelland, R. Mooney, R. Mills, H. Xie, A. El Hassan, Modeling the synergistic impacts of atmospheric and land-based influences on water quality and quantity in linked upland and estuarine ecosystems (poster), AmeriFlux Science Meeting & North American Carbon Program All-Investigators Meeting, New Orleans, LA, 02 February.
- 2010 Smith, V. B., M. B. Cardenas, C. H. David, Using observed climate-landscape-vegetation patterns across a regional gradient to predict potential response to climate change (presentation), American Geophysical Union Fall meeting, San Francisco, CA, 15 December.

- 2009 Yang, Z.-L., Guo-Yue Niu, S. Hong, D. R. Maidment, C. H. David, P. A. Montagna, H. -C. Kim, S. S. Arismendez, J. W. McClelland, H. Xie and B. Yu, Using Satellite and Fully Coupled Regional Hydrologic, Ecological, and Atmospheric Models to Study Complex Coastal Environmental Processes (poster), NASA Ocean Color Research Team Meeting, New York City, NY, 04 May – 06 May.
- 2008 Yang, Z.-L., Guo-Yue Niu, Yongsheng Xu, D. R. Maidment, C. H. David, P. A. Montagna, H. -C. Kim, J. W. McClelland and H. Xie, Using Satellite Data and Fully Coupled Regional Hydrologic Ecological and Atmospheric Models to Study Complex Coastal Environmental Processes (poster), NASA Carbon Cycle & ecosystem joint science workshop, Adelphi, MD, 28 April – 02 May.

SERVICE

Editorial roles

- Guest editor for AGU's Earth & Space Science call for [Geoscience Papers of the Future](#) (2015-current).

Session convener

- American Geophysical Union Fall Meeting 2015, Session Convener for “H088: Regional to Global Surface water storage and Runoff: Remote Sensing, in situ Data and Modeling”.

Coordination

- Lead Coordinator for the JPL Water Initiative Workshop: Terrestrial Water Cycle Frontiers: Challenges in Observation, Modeling and Applications (16 Sep 2015)
- Coordinator for monthly meetings of the JPL's Water Initiative (Jan 2015 – Jan 2016)
- Coordinator of the Water Forum “Texas Drought 2012, are we prepared?” (<http://www.jsg.utexas.edu/ciess/events>), a 1-day event with 130 registered attendees from universities and water agencies across Texas.
- Coordinator for the annual meeting of the U.S. National Aeronautics and Space Administration Interdisciplinary Science Project NNX11AE42G (28 September 2011 in Austin, TX).
- Coordinator for the annual meeting of the U.S. National Aeronautics and Space Administration Interdisciplinary Science Project NNX07AL79G (21 October 2010 in Austin, TX).
- Coordinator for the weekly research meetings of the Land Environment Atmosphere Dynamics research group, Jackson School of Geosciences, University of Texas at Austin (2009-2012).
- Coordinator for the monthly Happy Hour of the Climate System Science Graduate Program, Jackson School of Geosciences, University of Texas at Austin (2009-2010).

Advisory committees

- Member of the advisory committee for the NSF EarthCube [OntoSoft](#) Project.
- Ambassador for the [Geoscience Paper of the Future](#).

Peer reviews for funding agencies

- Reviewer for a National Aeronautics and Space Administration Review Panel (Spring 2015).
- Reviewer for a National Science Foundation Review Panel (Fall 2014).
- Reviewer for a National Aeronautics and Space Administration Review Panel (Summer 2014).
- Reviewer for a National Science Foundation Review Panel (Spring 2014).
- Invited Panelist and Reviewer for a National Science Foundation Review Panel (Spring 2013).

Peer reviews for international scientific journals

- Reviewer for the Proceeding of the National Academy of Sciences of the United States of America (2 assignments).
- Reviewer for Geophysical Research Letters (4 assignments).
- Reviewer for Monthly Weather Review (1 assignment).
- Reviewer for Water Resources Research (5 assignments).
- Reviewer for Hydrology and Earth System Sciences (1 assignment).
- Reviewer for the Journal of Hydrometeorology (7 assignments).
- Reviewer for the Journal of Geophysical Research – Atmospheres (3 assignments).
- Reviewer for Hydrological Processes (2 assignments).
- Reviewer for the Journal of the American Water Resources Association (1 assignment).

Student supervision

- Science advisor for the NASA DEVELOP project “Monitoring Streamflow in Los Angeles County using NASA Sensor Data” (Jan 2015 – Mar 2015). Team members were Gwen Miller, Rosemarie Wrigley, Claudia Knudson and Montana Marshall.
- Contribution to the supervision of Ph.D. students at the University of California at Irvine: Collin Lawrence (Oct 2012 – Dec 2014), Huidong Liu (Oct 2012 – Aug 2013), Zhao Liu (Oct 2012 – Dec 2014), and Kurt Solander (Oct 2012 – Aug 2013).

- Contribution to the supervision of Junior Specialists at the University of California Center for Hydrologic Modeling: Rachel Druffel-Rodriguez (Mar 2013 – Jun 2013), Hyungtae Kim (May 2013 – Aug 2014).
- Contribution to the supervision of Ph.D. students at the University of Texas at Austin: Xitian Cai (Jan 2011 to Aug 2012) and Ahmad Tavakoly (Jan 2011 to Aug 2012).

ADDITIONAL SKILLS

Languages

- French: Native speaker.
- English: Very good writing and presentation skills.
- Spanish: Basics, 4 years of Spanish classes, several trips to Spain and Latin America (North, Central and South).

Computer skills

- Very good working knowledge of Mac OS, Microsoft Windows and Unix-like environments (workstations, supercomputers).
- Programming experience in Pascal, C++, Matlab, Excel, Visual Basic, Shell, Fortran, Python, and parallel computing.
- Unidata IDV and ESRI ArcGIS applied to Water Resources.

EXTRA CURRICULAR ACTIVITIES

Sports: Racquetball; water sports: swimming (12 years), surfing, water skiing, wake boarding; snow boarding.

Travels: France, Spain, Italy, Belgium, Netherlands, Greece, England, USA, Canada, Mexico, Jamaica, West Indies, Australia, Turkey, Hungary, Poland, Brazil, Germany, China, Bolivia, Peru, Colombia, Nicaragua, Costa Rica.

Interests: Cooking, drums and percussions, collecting vinyl records.