August 2024

1. NAME: **ENRIQUE R. VIVONI**
   DATE OF BIRTH: 03/17/1975
   PLACE OF BIRTH: San Juan, Puerto Rico

2. PAST AND PRESENT POSITIONS:

Director, Center for Hydrologic Innovations, School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, AZ, 2022-present.
Fulton Professor of Hydrosystems Engineering, School of Sustainable Engineering and the Built Environment, Arizona State University, Tempe, AZ, 2022-present.
Professor, School of Sustainable Engineering and the Built Environment, School of Earth and Space Exploration, Arizona State University, Tempe, AZ, 2015-2022.
Associate Professor, School of Sustainable Engineering and the Built Environment, School of Earth and Space Exploration, Arizona State University, Tempe, AZ, 2009-2015.
Associate Professor with Tenure, Department of Earth and Environmental Sciences, New Mexico Institute of Mining and Technology, Socorro, NM, 2008-2009.
Assistant Professor, Department of Earth and Environmental Sciences, New Mexico Institute of Mining and Technology, Socorro, NM, 2003-2008.

3. DEGREES:

Ph.D., Hydrology, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA, 2003.
M.S., Environmental Fluid Mechanics, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA, 1998.
B.S., Environmental Engineering, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA, 1996.

4. OTHER RELATED EXPERIENCE:

Associate Dean, Graduate College, Arizona State University, Tempe, AZ, 2019-2021.
Associate Director, School of Earth and Space Exploration, Arizona State University, 2016-2019.
Hydrosystems Engineering Graduate Program Coordinator, Arizona State University, 2012-present.
Senior Global Futures Scientist, Global Futures Laboratory, Arizona State University, 2021-present.
Senior Sustainability Scientist, Global Institute of Sustainability, Arizona State University, 2011-2021.
Honors Faculty, Barrett, The Honors College, Arizona State University, 2014-present.
Faculty Affiliate, Swette Center for Sustainable Food Systems, Arizona State University, 2024-present.
Faculty Affiliate, School of Earth and Space Exploration, Arizona State University, 2022-present.
Faculty Affiliate, Urban Climate Research Center, Arizona State University, 2017-present.
Faculty Affiliate, Global Drylands Center, Arizona State University, 2017-present.
Faculty Affiliate, School of Geographical Sci. and Urban Planning, Arizona State University, 2021-present.
Faculty Affiliate, Program for Transborder Communities, Arizona State University, 2015-2020.
Faculty Council, Future H20 Initiative, Arizona State University, 2016-2018.
Director, US Mexico Border Water and Environmental Sustainability Program, 2012-2014.
Science Advisor, Planetary Skin Institute, 2011-2013.
Visiting Professor, School of Engineering, University of Cagliari, Italy, 2011.
Visiting Professor, Physics Department, Universidad de Sonora, Hermosillo, Mexico, 2009.
Research Hydrologist, Geophysical Research Center, New Mexico Tech, Socorro, NM. 2003-2008.
Professional Engineer (PE), Puerto Rico, 2003-present.
Graduate Research Assistant, Department of Civil and Environmental Engineering, MIT, 1996-2003.
Water Resources Engineer, Camp, Dresser and McKee, Inc., Cambridge, MA, 1998-1999.
Environmental Scientist, CSA Architects and Engineers, San Juan, PR, 1998.
Environmental Engineer, DuPont, Wilmington, DE and Houston, TX, 1994, 1995, 1996.

5. SCHOLARLY AND HIGHER EDUCATION AREAS:

Interdisciplinary interests in hydrologic science, engineering and sustainability:
- Interactions of water, climate, ecosystems and society
- Arid and semiarid regions in North and South America, Europe and Middle East
- Hydrologic, ecologic and climatic processes in natural and built environments
- Application of technologies for monitoring and prediction of hydrologic phenomena
- Integration of numerical models, remote sensing and environmental sensor networks
- Stakeholder engagement and decision-making support related to water resources

Advancing graduate education, postdoctoral scholars and international partnerships:
- Curriculum development and program building in hydrology
- Mobilizing research and knowledge through public engagement
- Building partnerships in Mexico and Latin America for collaborative efforts
- Community and cohort engagement for graduate students and postdoctoral scholars
- Internationalization and diversification of graduate enrollment
- Outreach to foundations, non-profit organizations and private sector

6. WEB RESOURCES AND DATABASES:

Website: http://hydrology.asu.edu/
Researcher ID: http://www.researcherid.com/rid/E-1202-2012
ORCID: http://orcid.org/0000-0002-2659-9459
Google Scholar: http://scholar.google.com/citations?user=3-IT9tcAAAAJ&hl=en
Research Gate: http://www.researchgate.net/profile/Enrique_Vivoni
ASU Search: http://search.asu.edu/profile/1346273
ASU Experts: http://asu.pure.elsevier.com/en/persons/enrique-vivoni
ASU Newsroom: http://newsroom.asu.edu/expert/enrique-vivoni
LinkedIn: http://www.linkedin.com/in/enrique-vivoni-ph-d-p-e-655696162
Wikipedia: https://en.wikipedia.org/wiki/Enrique_Vivoni

7. HONORS AND AWARDS:

American Meteorological Society Fellow, 2025.
Governor's Award for Arizona's Future, Arizona Forward, 2023.
ASU Sustainability Leader Award, SRP Forest Health Team, 2023.
Paul F. Boulos Excellence in Computational Hydrology Advisor, 2023.
Engineering for One Planet Faculty Fellow, 2023.
International Award, Mexican Carbon Program, 2022.
Curriculum Innovation Award, Lincoln Institute of Land Policy, 2022.
American Association for the Advancement of Science Fellow, 2021.
ASU Engineering Faculty Collaboration Award, 2021.
Quentin Mees Research Award, AZ Water Association, 2021.
ASU Global Futures Laboratory, Research Accelerator Program, 2020.
ASU Graduate College Outstanding Mentor nominee, 2017.
PLuS Alliance Fellow, 2016-present.
Fulton Faculty Exemplar, Arizona State University, 2016-2018.
US Fulbright Specialist Roster, 2016-present.
Planet Ambassador Program, 2017-present.
Editor's Choice Award, Water Resources Research, 2015.
US Fulbright Scholar, 2015-2016.
US Frontiers of Engineering Participant, National Academy of Engineering, 2015.
Visiting Sabbatical Researcher, Mexican Council of Science and Technology, 2015-2016.
Distinguished Visiting Professor, Mexican Academy of Sciences, 2015.
Leopold Leadership Fellow, Woods Institute for the Environment, Stanford University, 2015-2016.
Walter L. Huber Civil Engineering Research Prize, American Society of Civil Engineering, 2014.

White House, Presidential Early Career Award for Scientists and Engineers (PECASE), 2009-2014.
Kavli Fellow, Kavli Frontiers of Science Participant, National Academy of Sciences, 2010.
"Most Inspiration Faculty Member", ASU Athletics Department, 2010.
US Fulbright Scholar, 2008-2009.
Hispanic Engineer National Achievement Awards Most Promising Engineer, Advanced Degree, 2007.
Langmuir Award, co-Author on Awarded Paper, New Mexico Tech, 2006.
Visiting Scientist, National Center for Atmospheric Research, 2006, 2009.
Most Cited Article, Computers and Geoscience, 2005-2010.
Young Investigator Program, US Department of the Army, 2005-2008.
Promising Young Scientist Lecturer, University of Arizona, 2005.
University Research Program Recipient, Los Alamos National Laboratory, 2005-2006.
University Research Program Recipient, Sandia National Laboratory, 2004-2006.
CUAHSI Cyberpioneer Distinguished Lecture Series, 2003.
American Geophysical Union Outstanding Student Paper Award, 2002.
URISA Horwood Critique Student Prize, 2002.
Ford Foundation Dissertation Fellowship, National Research Council, 2002-2003.
Graduate Fellowship, National Science Foundation, 1997-2000.
Graduate Fellowship, Graduate Minority Education, 1996.
Minority Education Academic Achievement, 1996.
Russell Award in Environmental Engineering, 1996.
Civil Engineering Chi Epsilon Member, 1996.
Tau Beta Pi Engineering Honor Society, 1996.
National Hispanic Scholarship Fund Scholar, 1995.
PEEER Environmental Excellence Award, 1994.
White House, Presidential Scholar, 1993.
Eagle Scout, 1990.

8. PROFESSIONAL MEMBERSHIPS:

American Association for the Advancement of Science (AAAS)
American Geophysical Union (AGU)
American Meteorological Society (AMS)
American Society of Civil Engineers (ASCE)
Geological Society of America (GSA)
Ecological Society of America (ESA)
International Association of Hydrological Sciences (IAHS)
American Society of Limnology and Oceanography (ASLO)
Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)
Society of Hispanic Professional Engineers (SHPE)
Union Geofisica Mexicana (UGM)
European Geophysical Union (EGU)
American Association of Petroleum Geologists (AAPG)
Arizona Hydrological Society (AHS)
Western Association of Graduate Schools (WAGS)
Association of International Educators (NAFSA)
Arizona-Mexico Commission (AMC)

9. OTHER PROFESSIONAL ACTIVITIES:

Summary: *E.R.V. has served on numerous committees of university departments, international organizations, including serving as chair, as well as on the editorial board of several journals.*

Associate Editor, Journal of Arid Environments, 2009-2017.
Associate Editor, Water Resources Research, 2012-2013.
Associate Editor, Journal of Hydrology, 2006-2012.
Guest Editor, Ecological Applications, 2014.
Guest Editor, Journal of Hydrometeorology, 2012.

Guest Editor, Journal of Arid Environments, 2010.
Guest Editor, Geomorphology, 2009.
Guest Editor, Ecohydrology, 2008.
Editorial Board, Environmental Modelling and Software, 2006-2010.
Editorial Board, Revista Latinoamericana de Recursos Naturales, 2005-2008.
Director, NMT-UNISON Collaborative Agreement in the North American Monsoon, 2006-2008.
Director, NMT-H2CU Collaborative Agreement in the Hydrological Sciences, 2005-2008.
Director, US Mexico Border Water and Environmental Sustainability Program, 2012-2014.
Advisor, AAPG Student Chapter, 2016-2019.
Advisor, SESE Grad Council Student Association, 2016-2019.
Advisor, ASU Fulbright Student Association, 2016-present.
Advisor, ASU Global Water Brigades, 2014-2015.
Advisor, NMT Society of Hispanic Professional Engineers (SHPE), 2003-2008.
Advisor, B.S. and M.S. Program in Hydrology, New Mexico Tech, 2003-2008.
Associate Director for Graduate Programs, SESE, 2016-2018.
Chair, SSEBE Hydrosystems Engineering Program, 2012-present.
Chair, SSEBE Advisory Board, 2017-2018.
Chair, SSEBE Curriculum Committee, 2018.
Chair, AGU Ecohydrology Technical Committee, 2013-2014.
Chair, AGU Hydrology Section, Langbein Lecture Series Committee, 2023.
Chair, SSEBE Environmental Fluid Mechanics Faculty Search Committee, 2010-2011.
Chair, SESE Climate Faculty Search Committee, 2009-2010.
Chair, SESE Personnel and Tenure Committee, 2013-2014.
Chair, CLAS Southwest Borderlands Search Committee, 2014-2015.
Chair, SSEBE Hydrosystems Search Committee, 2013-2015.
Chair, SSEBE Hydrosystems Search Committee, 2018-2019.
Chair, American Meteorological Society Conference of Hydrology Program, 2014-2015.
Co-Chair, Hispanic Research Center, Director Search Committee, 2022.
Deputy Chair, AGU Ecohydrology Technical Committee, 2010-2012.
Member, Jornada Experimental Range Executive LTER Committee, 2011-present.
Member, AGU Large Scale Field Experiment Committee, 2013-present.
Member, AMS Hydrology Committee, 2009-2016.
Member, SESE Personnel and Tenure Committee, 2011-2013.
Member, SESE Awards Committee, 2014-2015.
Member, AGU Ecohydrology Technical Committee, 2008-2016.
Member, Dean of Engineering Personnel and Tenure Committee, 2013-2015.
Member, Dean of Natural Science Search Committee, 2013-2014.
Member, SHPE Graduate Institute Organizing Committee, 2012-2013.
Member, Fulbright Scholar Program Committee, 2010-2013.
Member, North American Monsoon Experiment Committee, 2005-2009.
Member, AGU Horton Student Research Award Committee, 2005-2008.
Member, New Mexico EPSCOR Program Committee, 2007-2008.
Member, New Mexico Alliance for Graduate Education Committee, 2004-2006.
Member, REDESClim Network of Hydrometeorological Disasters in Mexico, 2013-present.
Member, REMEXCU Network of Hydrographic Basins in Mexico, 2016-present.
Member, Arizona-Sonora Colloquium Panel on Cross-Border Research, 2015, 2017.
Member, Advisory Board, ASU Earth Observing Initiative, 2016-2018.
Member, Advisory Board, SSEBE, 2016-2018.
Member, SESE Geophysics Faculty Search Committee, 2016-2017.
Member, ASU Global Drylands Institute Executive Advisory Committee, 2017-present.
Member, SSEBE Awards Committee, 2017-2018, 2023-2025.
Member, ASU University Promotion and Tenure Committee, 2017-2019.
Member, PTC Grant Evaluation Committee, 2018.
Member, Arizona-Sonora Interuniversity Alliance, 2018-2021.
Member, Advisory Board, Strengthening Institutional Linkages, 2019-2021.
Member, LTER Network Diversity and Inclusion Committee, 2020-2021.

Member, ASU International Travel Advisory Committee, 2020.
Member, ASU Involvement, Engagement and Affiliation Committee, 2020-2021.
Member, SESE Justice-Equity-Diversity-Inclusion Task Force, 2020-2021.
Member, PLuS Alliance Doctoral Academy, 2020.
Member, ASU Presidential Postdoctoral Fellowship Committee, 2021.
Member, SSEBE Biogeotechnical Engineering Faculty Selection Committee, 2021.
Member, AGU Hydrology Section, Langbein Lecture Series Committee, 2021-2022.
Member, Arizona-Sonora Commission Panel on Higher Education, 2021.
Member, SESE Annual Evaluation Committee, 2021-2022.
Member, SSEBE, Personnel Committee, 2021-2023, 2024-2027.
Member, SSEBE Presidential Postdoctoral Review Committee, 2021-2024.
Member, Hispanic Research Center, Director Search Committee, 2021.
Member, GFL Justice, Equity, Diversity, Inclusion Committee, 2021-2022.
Member, GFL Task Force on Designing for Impacts and Outcomes, 2022.
Member, STS Personnel and Tenure Committee, 2022.
Member, Provost Task Force on Promotion and Tenure, 2022-2023.
Member, ASCE-EWRI Watershed Management Technical Committee, 2022-present.
Member, Central Arizona Project Water Award, 2022.
Member, Chicano/Latino Faculty and Staff Association Executive Board, Faculty Liaison, 2022-2023.
Member, Advisory Board, Collaborative Center for Landslides and Ground Failure Geohazards, 2022-pres.
Member, Scientific Advisory Panel, Singapore Ministry of Sustainability and Environment, 2022-2025.
Member, ASU Water Strategy Team, 2022-present.
Member, Arizona Hydrological Society Corporate Board, 2022-present.
Member, Arizona Hydrological Society Academic Scholarships, 2023.
Member, Hispanic Conservation Leadership Council, 2023-present.
Member, Middle East Institute Climate and Hydrologic Monitoring Panel, 2023.
Presenter, ASU Knowledge Enterprise Space Cohort, 2020.
Institutional Representative, Consortium Universities for Advancement Hydrologic Science, 2009-2016.
Outreach, Arizona Science Center Forces of Nature Exhibit, 2008-present.
Outreach, Local Elementary Schools, Community Colleges and ASU, 2012-present.
Outreach, M.Eng in Water Resources Curriculum, Universidad de La Salle, Mexico, 2015.
Outreach, Ph.D. in Hydrosystems Engineering Curriculum, Instituto Tecnologico de Sonora, 2015-2016.
Outreach, Sundial Freshman Program, Arizona State University, 2017-2018.
Outreach, Panel Member, Latinxs and the Environment, Rivers that Connect, 2017.
Outreach, Panel Organizer, Society of Hispanic Professional Engineers National Confernece, 2019.
Outreach, Mexico Chamber of Construction Industry, Sonora, 2020.
Outreach, Panel Member, Insight Diversity and Inclusion Committee, Tempe, Arizona, 2020.
Outreach, Panel Member, Hispanic Heritage Month, Tempe, Arizona, 2020.
Outreach, Panel Member, Con Ciencias in the Americas, Stanford University, 2020.
Outreach, Panel Moderator, Fulbright International Student Association, 2020.
Outreach, Panel Moderator, COMEXUS Fulbright Garcia Robles Commission, 2020.
Outreach, Panel Moderator, ASU-Audacia Jovenes de Excelencia, 2020.
Outreach, Panel Member, Chihuahua Futura Discussion on Sustainable Future Cities, 2021.
Outreach, Presenter, Resilient Agriculture Exploratory Scenario workshop, 2023.
Outreach, Presenter, Water Forum in Mexicali, Mexico, 2023.
Mentor, SSEBE Hydrosystems Engineering Faculty, 2012-present.
Mentor, ASU Fulbright Application Program, 2017-present.
Mentor, Camp SESE, 2014, 2016-2017.
Mentor, Engineering E2 Camp, 2022-present.
Organizer, ASU-CICESE Collaboration First and Second Meeting, 2016-2017.
Organizer, ASU Field trip to Arizona, Sonora, Baja California, 2018.
Organizer, ASU Graduate College trip to Mexico City, 2019.
Organizer, PLuS Alliance Symposium Session on Knowledge Mobilization, 2019.
Organizer, ASU Field trip to Puerto Penasco, Sonora, 2021.
Knowledge Mobilization, ASU Convergence Lab in Mexico City and Radio Spot, 2019.
Knowledge Mobilization, Sustainability Day at Tec de Monterrey, 2019.

Knowledge Mobilization, ADN40 Bilingual TV Interview, Mexico City, 2019.
Knowledge Mobilization, Sustainability Day at Tec de Monterrey, 2020.
Participant, Fundraising for Deans Online Bootcamp, 2020.
Participant, Collaborative Online International Learning, 2020.
Participant, Complex Landscapes at Scale Workshop, 2021.

10. REVIEW ACTIVITIES:
Summary: *E.R.V. has reviewed manuscripts in national and international journals and proposals for national and international funding agencies.*

Journals: Water Resources Research, Journal of Hydrometeorology, Hydrological Processes, Geophysical Research Letters, Journal of Geophysical Research – Earth Surface, Mathematical and Computational Sciences, Advances in Water Resources, International Journal of Climatology, Remote Sensing of Environment, Environmental Modelling and Software, Journal of Hydrologic Engineering, Journal of Hydrology, Hydrology Research, Journal of Geophysical Research – Atmospheres, Soil Science Society of America Journal, Climate Dynamics, Journal of Arid Environments, Journal of Climate, Ecohydrology, Hydrology and Earth System Sciences, Reviews of Geophysics, Ecosphere, Journal of Geophysical Research – Biogeosciences, Journal of Selected Topics in Applied Earth Observations and Remote Sensing, Journal of the American Water Resources Association, Science of the Total Environment, GeoResJ, Annals of the American Association of Geographers, Geofisica Internacional, Ecological Indicators, Forest Ecology and Management, Remote Sensing Letters, Vadose Zone Journal, Hydrological Sciences Journal, Earth Systems Dynamics, WIREs Water, Environmental Research Communications, Agricultural and Forest Meteorology, Scientific Data, Advances in Environmental and Engineering Research.

Agencies: National Science Foundation, NSF EPSCoR Program, US Army Research Office, NASA Earth-Sun System Science, Delta Science Program, NOAA Climate Change Program, NASA Postdoctoral Fellowship Program, NASA Earth and Space Science Fellowship, Netherlands Organization for Scientific Research, Israel Science Foundation, Swiss National Science Foundation, US-Israel Agricultural Research and Development Fund, United Arab Emirates University, New Mexico Water Resources Institute, Department of Energy Office of Biological & Environmental Research, Italian Ministry of University and Research, Israel Science Foundation.

Universities: Duke University, Indiana University at Bloomington, Oregon State University, National Center for Atmospheric Research, The Hashemite University, Texas A&M University, United Arab Emirates University, Sultan Qaboos University, Wake Forest University.

Panel Member: NOAA Climate Program Office; National Science Foundation, Hydrologic Sciences; National Science Foundation, IRES Program; AGU Horton Grant Committee, Fulbright Discipline Review Committee, AGU Langbein Lecture Award Committee, Fulbright-Garcia Robles Commission, NSF EPSCOR Program, Central Arizona Project Water Award, Arizona Hydrological Society Academic Scholarships.

Publishing Houses: Flood Forecasting: A Global Perspective, Elsevier Books.

11. TEACHING:
Summary: *E.R.V. has taught undergraduate and graduate courses at MIT, NMT and ASU in the areas of hydrology, hydrometeorology, ecohydrology, modeling and geographical information systems in geological sciences and civil engineering departments.*

Lecturer, Software Tools for Environmental Field Study, MIT, 2001.
Faculty, Surface Water Hydrology, NMT, 2004, 2005, 2006, 2007.
Faculty, Distributed Hydrological Modeling, CNR-MIT Summer Course, 2004, 2007.
Faculty, Hydrometeorology, NMT, 2004.
Faculty, Introduction to Hydrology, NMT, 2005.
Faculty, Advanced Geographical Information Systems, NMT, 2006.
Faculty, Hydrological Theory and Field Methods, NMT, 2007-2008.

Faculty, Atmospheric Dynamics and Rainfall Processes, NMT, 2008.
Faculty, Runoff and Flood Processes, NMT, 2008.
Faculty, Ecohydrology, NMT, 2008.
Faculty, CEE 440/GLG 471/CEE 545/GLG 598 Hydrology, ASU, 2009-2014, 2016-2024.
Faculty, GLG 549/CEE 549 Ecohydrology of Semiarid Landscapes, ASU, 2010, 2012, 2015, 2018, 2024.
Faculty, GLG 546/CEE 546 Advanced Watershed Hydrology, ASU, 2011, 2013, 2017, 2018, 2019.
Faculty, Hydrology and Hydraulics, Fundamentals of Engineering Exam Review, ASU, 2011, 2012.
Faculty, GLG 108 Water Planet, ASU, 2013.
Faculty, US Mexico Border Water and Environmental Sustainability Training Program, ASU, 2012-2014.
Faculty, GRD 598, US-Mexico Training in Environment, Agriculture and Management, 2021.
Faculty, GLG 591, Faculty Research Seminar, ASU, 2017.
Faculty, SES 502, Exploring SESE Research, ASU, 2018.
Faculty, CEE 591, Hydrosystems Engineering Seminar, ASU, 2017-2024.
Faculty, CEE 590, Reading and Conference, ASU, 2018, 2019.
Faculty, CEC credits, Association of State Floodplain Managers, 2019.
Faculty, CEE 499, Independent Study, 2023.
Guest Lecturer, GLG 301, Earth Science in Arizona and the Southwest US, ASU, 2021.

12. PUBLICATIONS IN REFEREED JOURNALS:

Summary: *E.R.V. has 190 published papers since 1996, with 3 papers in press, and 6 papers in review. E.R.V. is first author on 29 papers and single author on two. H factor: 52; Number of citations: 8621 (Scopus, August 2024).*

1. Prager, E.J., Southard, J.B., and Vivoni, E.R. 1996. Experiments on the entrainment threshold of well sorted and poorly sorted carbonate sands. Sedimentology. 43: 33-40.
2. Nepf, H.M., and Vivoni, E.R. 2000. Flow Structure in Depth-Limited, Vegetated Flow. Journal of Geophysical Research, Oceans. 105(C12): 28,547-28,558.
3. Vivoni, E.R., and Camilli, R. 2003. Real-time Streaming of Environmental Field Data. Computers & Geosciences. 29(4): 457-468.
4. Grassotti, C., Hoffman, R.N., Vivoni, E.R., and Entekhabi, D. 2003. Multiple Timescale Intercomparison of Two Radar Products and Rain Gauge Observations over the Arkansas-Red River Basin. Weather and Forecasting. 18 (6): 1207-1229.
5. Vivoni, E.R., Ivanov, V.Y., Bras, R.L., and Entekhabi, D. 2004. Generation of Triangular Irregular Networks based on Hydrological Similarity. Journal of Hydrological Engineering. 9(4): 288-302.
6. Ivanov, V.Y., Vivoni E.R., Bras, R.L., and Entekhabi, D. 2004. Preserving high-resolution surface and rainfall data in operational-scale basin hydrology: A fully-distributed, physically-based approach. Journal of Hydrology. 298(1-4): 80-111.
7. Reed, S., Koren, V., Smith, M., Zhang, Z., Moreda, F., Seo, D.J., and DMIP Participants. 2004. Overall distributed model intercomparison project results. Journal of Hydrology. 298(1-4): 27-60.
8. Ivanov, V.Y., Vivoni, E.R., Bras, R.L., and Entekhabi, D. 2004. Catchment Hydrologic Response with a Fully-Distributed Triangulated Irregular Network Model. Water Resources Research. 40(11): W11102, 10.1029/2004WR003218.
9. Vivoni, E.R., Grimaldi, S., Nardi, F., Ivanov, V.Y., Castelli, F., Bras, R.L., and Ubertini, L. 2004. Assessing Hydrological Extreme Events with Geospatial Data and Models. EOS Transactions, American Geophysical Union. 85(39): 371, 375.
10. Vivoni, E.R., Ivanov, V.Y., Bras, R.L., and Entekhabi, D. 2005. On the Effect of Triangulated Terrain Resolution on Distributed Hydrologic Modeling. Hydrological Processes. 19(11):2101-2122.
11. Vivoni, E.R., Teles, V., Ivanov, V.Y., Bras, R.L., and Entekhabi, D. 2005. Embedding Landscape Processes into Triangulated Terrain Models. International Journal of Geographical Information Science. 19(4): 429-457.

12. Falorni, G., Teles, V., Vivoni, E.R., Bras, R.L., and Amaratunga, K.S. 2005. Analysis and characterization of the vertical accuracy of digital elevation models from the Shuttle Radar Topography Mission. Journal of Geophysical Research - Earth Surface. 110(F2): F02005. doi:10.1029/2003JF000113.

13. Vivoni, E.R., and Richards, K.T. 2005. Integrated use of GIS-based field sampling and modeling for hydrologic and water quality studies. Journal of Hydroinformatics. 7(4): 235-250.

14. Xie, H., Zhou X., Vivoni, E.R., Hendrickx, J.M.H., and Small, E.E. 2005. GIS-based NEXRAD Stage III precipitation database: Automated approaches for data processing and visualization. Computers and Geosciences. 31(1): 65-76.

15. Xie, H., Zhou, X., Hendrickx, J.M.H., Vivoni, E.R., Guan, H., Tian, Y.Q., and Small, E.E. 2006. Comparison of NEXRAD Stage III and gauge precipitation estimates over a semiarid region. Journal of the American Water Resources Association. 42(1): 237-256.

16. Guan, H., Vivoni, E.R., and Wilson, J.L. 2005. Effects of atmospheric teleconnections on seasonal precipitation in mountainous regions of the southwestern U.S.: A case study in northern New Mexico. Geophysical Research Letters. 32 (23), L23701, doi: 10.1029/2005GL023759.

17. Vivoni, E.R., Bowman, R.S., Wyckoff, R.L., Jakubowski, R.T., and Richards, K.E. 2006. Analysis of a Monsoon Flood Event in an Ephemeral Tributary and Its Downstream Hydrologic Effects. Water Resources Research. 42 (3), W03404, doi: 10.1029/2005WR004036.

18. Vivoni, E.R., Entekhabi, D., Bras, R.L., Ivanov, V.Y., Van Horne, M.P., Grassotti, C., and Hoffman, R.N., 2006. Extending the Predictability of Hydrometeorological Flood Events using Radar Rainfall Nowcasting. Journal of Hydrometeorology. 7(4): 660-677.

19. Newman, B.D., Wilcox, B.P., Archer, S., Breshears, D. D., Dahm, C.N., Duffy, C.J., McDowell, N.G., Phillips, F.M., Scanlon, B.R. and Vivoni, E.R. 2006. The Ecohydrology of Arid and Semiarid Environments: A Scientific Vision. Water Resources Research. 42, W06302, doi:10.1029/ 2005WR004141.

20. Van Horne, M.P., Vivoni, E.R., Entekhabi, D., Hoffman, R.N., and Grassotti, C. 2006. Evaluating the effects of image filtering in short-term radar rainfall forecasting for hydrological applications. Meteorological Applications. 13(3): 289-303.

21. Nardi, F., Vivoni, E.R., and Grimaldi, S. 2006. Investigating a Floodplain Scaling Relation using a Hydrogeomorphic Delineation Method. Water Resources Research. 42(9): W09409. doi: 10.1029/2005WR004155.

22. Gutiérrez-Jurado, H.A., Vivoni, E.R., Harrison, J.B.J., and Guan, H. 2006. Ecohydrology of Root Zone Water Fluxes and Soil Development in Complex Semiarid Rangelands. Hydrological Processes. 20: 3289-3316.

23. Newman, B.D., Vivoni, E.R., and Groffman, A.R. 2006. Surface Water-Groundwater Interactions in Semiarid Drainages of the American Southwest. Hydrological Processes. 20: 3371-3394.

24. Gebremichael, M., Vivoni, E.R., Watts, C.J., and Rodríguez, J.C. 2007. Sub-mesoscale Spatiotemporal Variability of North American Monsoon Rainfall over Complex Terrain. Journal of Climate. 20(9): 1751-1773.

25. Vivoni, E.R., Gutiérrez-Jurado, H.A., Aragón, C.A., Méndez-Barroso, L.A., Rinehart, A.J., Wyckoff, R.L., Rodríguez, J.C., Watts, C.J., Bolten, J.D., Lakshmi, V., and Jackson, T.J. 2007. Variation of Hydrometeorological Conditions along a Topographic Transect in northern Mexico during the North American Monsoon. Journal of Climate. 20(9): 1792-1809.

26. Vivoni, E.R., Entekhabi, D., and Hoffman, R.N. 2007. Error Propagation of Radar Rainfall Nowcasting Fields through a Fully-Distributed Flood Forecasting Model. Journal of Applied Meteorology and Climatology. 46(6): 932-940.

27. Vivoni, E.R., Entekhabi, D., Bras, R.L., and Ivanov, V.Y. 2007. Controls on Runoff Generation and Scale-dependence in a Distributed Hydrologic Model. Hydrology and Earth System Sciences. 11(5): 1683-1701.

28. Gutiérrez-Jurado, H.A., Vivoni, E.R., Istanbulluoglu, E., and Bras, R.L. 2007. Ecohydrological response to a geomorphically significant flood event in a semiarid catchment with contrasting ecosystems. Geophysical Research Letters. 34, L24S25, doi:10.1029/2007GL030994.

29. Gebremichael, M., and Vivoni, E.R. 2008. Spatial sampling uncertainty in SMEX04 Soil Moisture Fields: A Data-based Resampling Experiment. Remote Sensing of Environment. 112(2): 326-336.

30. Bindlish, R., Jackson, T.J., Gasiewski, A.J., Stankov, B., Cosh, M.H., Mladenova, I., Vivoni, E.R., Watts, C.J., and Keefer, T. 2008. Aircraft-based Soil Moisture Retrievals in Mixed Vegetation and Topographic Conditions. Remote Sensing of Environment. 112(2): 375-390.

31. Vivoni, E.R., Gebremichael, M., Watts, C.J., Bindlish, R., and Jackson, T.J. 2008. Comparison of Ground-based and Remotely-sensed Surface Soil Moisture Estimates over Complex Terrain during SMEX04. Remote Sensing of Environment. 112(2): 314-325.

32. Noto, L.V., Ivanov, V.Y., Bras, R.L., and Vivoni, E.R. 2008. Effects of Initialization on Response of a Fully-Distributed Hydrologic Model. Journal of Hydrology. 352(1-2): 107-125.

33. Ivanov, V.Y., Bras, R.L., and Vivoni, E.R. 2008. Vegetation-Hydrology Dynamics in Complex Terrain of Semiarid Areas. I A Mechanistic Approach to Modeling Dynamic Feedbacks. Water Resources Research. 44, W03429, doi:10.1029/2006WR005588.

34. Ivanov V.Y., Bras, R.L., and Vivoni, E.R. 2008. Vegetation-Hydrology Dynamics over Complex Terrain, II Energy-Water Controls of Vegetation Spatiotemporal Dynamics and Topographic Niches of Favorability. Water Resources Research. 44, W03430, doi:10.1029/2006WR005595.

35. Méndez-Barroso, L.A., Garatuza-Payán, J., and Vivoni, E.R. 2008. Quantifying Water Stress on Wheat using Remote Sensing in the Yaqui Valley, Sonora, Mexico. Agricultural Water Management. 95(6): 725-736.

36. Istanbulluoglu, E., Yetemen, O., Vivoni, E.R., Gutiérrez-Jurado, H.A., and Bras, R.L. 2008. Eco-geomorphic Implications of Hillslope Aspect: Inferences from Analysis of Landscape Morphology in central New Mexico. Geophysical Research Letters. 35, L14403, doi:10.1029/2008GL034477.

37. Mascaro, G, Deidda, R., and Vivoni, E.R. 2008. A New Verification Method to Ensure Consistent Ensemble Forecasts through Calibrated Precipitation Downscaling Models. Monthly Weather Review. 136(9): 3374-3391.

38. Vivoni, E.R., Rinehart, A.J., Méndez-Barroso, L.A., Aragón, C.A., Bisht, G., Cardenas, M.B., Engle, E. Forman, B.A., Frisbee, M.D., Gutiérrez-Jurado, H.A., Hong, S., Mahmood, T.H., Tai, K., and Wyckoff, R.L. 2008. Vegetation Controls on Soil Moisture Distribution in the Valles Caldera, New Mexico, during the North American Monsoon. Ecohydrology. 1(3): 225-238.

39. Mahmood, T.H., and Vivoni, E.R. 2008. Evaluation of Distributed Soil Moisture Simulations through Field Observations during the North American Monsoon in the Redondo Creek, New Mexico. Ecohydrology. 1(3): 271-287.

40. Rinehart, A.J., Vivoni, E.R., and Brooks, P.D. 2008. Effects of Vegetation, Albedo and Solar Radiation Sheltering on the Distribution of Snow in the Valles Caldera, New Mexico. Ecohydrology. 1(3): 253-270.

41. Brooks, P.D., and Vivoni, E.R. 2008. Mountain Ecohydrology: Quantifying the Role of Vegetation in the Water Balance of Montane Catchments. Ecohydrology. 1(3): 187-192.

42. Dominguez, F., Kumar P. and Vivoni, E.R. 2008. Precipitation Recycling Variability and Ecoclimatological Stability – A study using NARR data. Part II: North American Monsoon Region. Journal of Climate. 21(20): 5187-5203.

43. Vivoni, E.R., Moreno, H.A., Mascaro, G., Rodriguez, J.C., Watts, C.J., Garatuza-Payan, J., and Scott, R.L. 2008. Observed Relation between Evapotranspiration and Soil Moisture in the North

American Monsoon Region. Geophysical Research Letters. 35: L22403, doi:10.1029/2008GL036001.

44. Forman, B.A., Vivoni, E.R., and Margulis, S.A. 2008. Evaluation of Ensemble-based Distributed Hydrologic Model Response with Disaggregated Precipitation Products. Water Resources Research. 44: W12409. doi:10.1029/2008WR006983.

45. Vivoni, E.R., Di Benedetto, F., Grimaldi, S., and Eltahir, E.A.B. 2008. Hypsometric Control on Surface and Subsurface Runoff. Water Resources Research. 44: W12502, doi:10.1029/2008WR006931.

46. Kleissl, J., Watts, C.J., Rodriguez, J.C., Naif, S., and Vivoni, E.R. 2009. Scintillometer Intercomparison Study – Continued. Boundary Layer Meteorology. 130: 437-443.

47. Vivoni, E.R., Tai, K., and Gochis, D.J. 2009. Effects of Initial Soil Moisture on Rainfall Generation and Subsequent Hydrologic Response during the North American Monsoon. Journal of Hydrometeorology. 10(3): 644-664.

48. Martinet, M.C., Vivoni, E.R., Cleverly, J.R., Thibault, J.R., Schuetz, J.F., and Dahm, C.N. 2009. On Groundwater Fluctuations, Evapotranspiration and Understory Removal in Riparian Corridors. Water Resources Research, 45, W05425, doi:10.1029/2008WR007152.

49. Vivoni, E.R., Aragón, C.A., Malczynski, L. and Tidwell, V.C. 2009. Semiarid Watershed Response in central New Mexico and its sensitivity to climate variability and change. Hydrology and Earth System Sciences, 13, 715-733.

50. Méndez-Barroso, L.A., Vivoni, E.R., Watts, C.J., and Rodríguez, J.C. 2009. Seasonal and Interannual Relation between Precipitation, Surface Soil Moisture and Vegetation Dynamics in the North American Monsoon Region. Journal of Hydrology. 377: 59-70.

51. Forzieri, G., Guarnirei, L., Vivoni, E.R., Castelli, F., and Preti, F. 2009. Multiple Attribute Decision Making for Individual Tree Detection using High-resolution Laser Scanning. Forest Ecology and Management. 258: 2501-2510.

52. Tarolli, P., Arrowsmith, J.R., and Vivoni, E.R. 2009. Understanding Earth Surface Processes from Remotely-Sensed Digital Terrain Models. Geomorphology. 113: 1-3.

53. Liuzzo, L., Noto, L.V., Vivoni, E.R., and La Loggia, G. 2010. Basin-scale Water Resources Assessment in Oklahoma under Synthetic Climate Change Scenarios using a Fully-Distributed Hydrologic Model. Journal of Hydrologic Engineering. 15(2): 107-122.

54. Vivoni, E.R., Rodriguez, J.C., and Watts, C.J. 2010. On the Spatiotemporal Variability of Soil Moisture and Evapotranspiration in a Mountainous Basin within the North American Monsoon Region. Water Resources Research. 46: W02509, doi:/10.1029/2009WR008240.

55. Vivoni, E.R., Watts, C.J., and Gochis, D.J. 2010. Land Surface Ecohydrology of North American Monsoon System. Journal of Arid Environments. 74(5): 529-530.

56. Mascaro, G., and Vivoni, E.R. 2010. Statistical and Scaling Properties of Remotely-sensed Soil Moisture in Two Contrasting Domains in the North American Monsoon Region. Journal of Arid Environments. 74(5): 572-578.

57. Vivoni, E.R., Watts, C.J., Rodríguez, J.C., Garatuza-Payan, J., Méndez-Barroso, L.A., and Saiz-Hernández, J.A. 2010. Improved Land-Atmosphere Relations through Distributed Footprint Measurements in a Subtropical Scrubland during the North American Monsoon. Journal of Arid Environments. 74(5): 579-584.

58. Méndez-Barroso, L.A., and Vivoni, E.R. 2010. Observed Shifts in Land Surface Conditions during the North American Monsoon: Implications for a Vegetation-Rainfall Feedback Mechanism. Journal of Arid Environments. 74(5): 549-555.

59. Brito-Castillo, L., Vivoni, E.R., Gochis, D.J., Filonov, A., Tereschenko, I., and Monzon, C. 2010. An Anomaly in the Occurrence of the Month of Maximum Precipitation Distribution in Northwest Mexico. Journal of Arid Environments. 74(5): 531-539.

60. Gochis, D.J., Vivoni, E.R., and Watts, C.J. 2010. The Impact of Soil Depth on Land Surface Energy and Water Fluxes in the North American Monsoon Region. Journal of Arid Environments. 74(5): 564-571.

61. Yetemen, O., Istanbulluoglu, E., and Vivoni, E.R. 2010. The Implications of Geology, Soils, and Vegetation on Landscape Morphology: Inferences from Semiarid Basins with Complex Vegetation Patterns in central New Mexico, USA. Geomorphology. 116: 246-263.

62. Mascaro, G., Vivoni, E.R., and Deidda, R. 2010. Implications of Ensemble Quantitative Precipitation Forecast Errors on Distributed Streamflow Response. Journal of Hydrometeorology. 11(1): 69-86.

63. Forzieri, G., Castelli, F., and Vivoni, E.R. 2010. A Predictive Multidimensional Model for Vegetation Anomalies Derived from Remote-Sensing Observations. IEEE Transactions on Geoscience and Remote Sensing. 48(4): 1729-1741.

64. Mascaro, G., Vivoni, E.R., and Deidda, R. 2010. Physical Controls on the Scale-Dependence of Ensemble Streamflow Forecast Dispersion. Natural Hazards and Earth System Sciences. 10: 1605-1610.

65. Mascaro, G., Vivoni, E.R., and Deidda, R. 2010. Downscaling Soil Moisture in the Southern Great Plains through a Calibrated Multifractal Model for Land Surface Modeling Applications. Water Resources Research. 46, W08546, doi:10.1029/2009WR008855.

66. Forzieri, G., Moser, G., Vivoni, E.R., Castelli, F., and Canovaro, F. 2010. Riparian Vegetation Mapping for Hydraulic Roughness Estimation using Very High Resolution Remote Sensing Data Fusion. Journal of Hydraulic Engineering. 136(11): 855-867.

67. Forzieri, G., Castelli, F., and Vivoni, E.R. 2011. Vegetation Dynamics within the North American Monsoon Region. Journal of Climate. 24(6): 1763-1783.

68. Nikolopoulos, E.I., Anagnostou, E.N., Borga, M., Vivoni, E.R., and Papadopoulos, A. 2011. Sensitivity of a Mountain Basin Flash Flood to Initial Wetness Condition and Rainfall Variability. Journal of Hydrology. 402: 165-178.

69. Mahmood, T.H., and Vivoni, E.R. 2011. A Climate-Induced Threshold in Hydrologic Response in a Semiarid Ponderosa Pine Hillslope. Water Resources Research. 47: W09529, doi: 10.1029/2011WR010384.

70. Vivoni, E.R., Mascaro, G. Mniszewski, S., Fasel, P., Springer, E.P., Ivanov, V.Y., and Bras, R.L. 2011. Real-world Hydrologic Assessment of a Fully-Distributed Hydrological Model in a Parallel Computing Environment. Journal of Hydrology. 409: 483-496.

71. Forzieri, G., Guarnieri, L, Vivoni, E.R., Castelli, F., and Preti, F. 2011. Spectral-ALS data fusion for different roughness parameterizations of forested floodplains. River Research and Applications. 27(7): 826-840.

72. Mahmood, T.H., and Vivoni, E.R. 2011. Breakdown of Hydrologic Patterns upon Model Coarsening at Hillslope Scales and Implications for Experimental Design. Journal of Hydrology. 411(3-4): 309-321.

73. Mascaro, G., Vivoni, E.R., and Deidda, R. 2011. Soil Moisture Downscaling Across Climate Regimes and Its Emergent Properties. Journal of Geophysical Research. 116, D22114, doi:10.1029/2011JD016231.

74. Tang, Q., Vivoni, E.R., Munoz-Arriola, F., and Lettenmaier, D.P. 2012. Predictability of Evapotranspiration Patterns using Remotely-sensed Vegetation Dynamics during the North American Monsoon. Journal of Hydrometeorology. 13, 103-121.

75. Mascaro, G. and Vivoni, E.R. 2012. Comparison of Statistical and Multifractal Properties of Soil Moisture and Brightness Temperature from ESTAR and PSR during SGP99. IEEE Geoscience and Remote Sensing Letters. 9(3): 373-377.

76. Moreno, H.A., Vivoni, E.R., and Gochis, D.J. 2012. Utility of Quantitative Precipitation Estimates for High Resolution Hydrologic Forecasts in Mountain Watersheds of the Colorado Front Range. Journal of Hydrology. 438-439: 66-83.

77. Mascaro, G., and Vivoni, E.R. 2012. Utility of Coarse and Downscaled Soil Moisture Products at L-band for Hydrologic Modeling at the Catchment Scale. Geophysical Research Letters. 39: L10403, doi: 10.1029/2012GL051809.

78. Vivoni, E.R. 2012. Spatial Patterns, Processes and Predictions in Ecohydrology: Integrating Technologies to Meet the Challenge. Ecohydrology. 5(3): 235-241.

79. Robles-Morua, A., Vivoni, E.R., and Mayer, A.S. 2012. Distributed Hydrologic Modeling in Northwest Mexico Reveals the Links between Runoff Mechanisms and Evapotranspiration. Journal of Hydrometeorology. 13: 785-807.

80. Robles-Morua, A., Mayer, A.S., Auer, M.T. and Vivoni, E.R. 2012. Modeling Riverine Pathogen Fate and Transport in Mexican Rural Communities and its Associated Public Health Implications. Journal of Environmental Management. 113: 61-70.

81. Vivoni, E.R. 2012. Diagnosing Seasonal Vegetation Impacts on Evapotranspiration and its Partitioning at the Catchment Scale during SMEX04-NAME. Journal of Hydrometeorology. 13: 1631-1638.

82. Gutiérrez-Jurado, H.A., and Vivoni, E.R. 2013. Ecogeomorphic Expressions of Aspect-controlled Semiarid Basins: I. Topographic Analyses with High Resolution Data Sets. Ecohydrology. 6(1): 8-23

83. Gutiérrez-Jurado, H.A., and Vivoni, E.R. 2013. Ecogeomorphic Expressions of Aspect-controlled Semiarid Basins: II. Topographic and Vegetation Controls on Solar Irradiance. Ecohydrology. 6(1): 24-37.

84. Zhou, X., Istanbulluoglu, E.I. and Vivoni, E.R. 2013. Modeling the Ecohydrological Role of Aspect-controlled Radiation on Tree-Grass-Shrub Coexistence in a Semiarid Climate. Water Resources Research. 49(5): 2872–2895.

85. Vargas, R., Yépez, E.A., Andrade, J.L., Angeles, G., Arredondo, T., Castellanos, A.E., Delgado, J., Garatuza-Payan, J., González del Castillo, E., Oechel, W., Sánchez-Azofeifa, A., Velasco, E., Vivoni, E.R., and Watts, C.J. 2013. Progress and Opportunities for Water and Greenhouse Gases Flux Measurements in Mexican Ecosystems: The MexFlux network. Atmósfera. 26(3): 325-336.

86. Moreno, H.A., Vivoni, E.R., and Gochis, D.J. 2013. Limits to Flood Forecasting in the Colorado Front Range for Two Summer Convection Periods using Radar Nowcasting and a Distributed Hydrologic Model. Journal of Hydrometeorology. 14(4): 1075-1097.

87. Mascaro, G., Piras, M., Deidda, R., and Vivoni, E.R. 2013. Distributed Hydrologic Modeling of a Sparsely-monitored Basin in Sardinia, Italy, through Hydrometeorological Downscaling. Hydrology and Earth System Sciences. 17(10): 4143-4158.

88. Forzieri, G., Vivoni, E.R., and Feyen, L. 2013. Ecosystem Biophysical Memory in the Southwestern North America Climate System. Environmental Research Letters. 8(4): 044016, doi:10.1088/1748-9326/8/4/044016.

89. Gutiérrez-Jurado, H.A., Vivoni, E.R., Cikoski, C., Harrison, J.B.J., Bras, R.L., and Istanbulluoglu, E. 2013. On the Observed Ecohydrologic Dynamics of a Semiarid Basin with Aspect-Delimited Ecosystems. Water Resources Research. 49(12): 8263-8284, doi:10.1002/2013WR014364.

90. Cruz-Bautista, F., Rodriguez, J.C., Watts, C.J., Vivoni, E.R., Yepez, E.A., Robles-Morua, A., Garatuza-Payan, J., Tarin, T., and Schreiner-McGraw, A.P. 2013. In situ Calibration of COSMOS Sensor to Determine the Soil Moisture at Intermediate Scale (~1 km). Terra Latinoamericana 31(4): 315-324. (In Spanish).

91. Moreno, H.A, Vivoni, E.R., and Gochis, D. J. 2014. Addressing Uncertainty in Reflectivity-Rainfall Relations in Mountain Watersheds during Summer Convection. Hydrological Processes. 28(3): 688-704.

92. Robles-Morua, A., Halvorsen, K., Mayer, A.S., and Vivoni, E.R. 2014. Exploring the Application of Participatory Modeling Approaches in the Sonora River Basin, Mexico. Environmental Modelling and Software. 52: 273-282.

93. Templeton, R.C., Vivoni, E.R., Méndez-Barroso, L.A., Pierini, N.A., Anderson, C.A., Rango, A., Laliberte, A.S., and Scott, R.L. 2014. High-Resolution Characterization of a Semiarid Watershed: Implications on Evapotranspiration Estimates. Journal of Hydrology. 509: 306-319.

94. Flores-Cervantes, J.H., Istanbulluoglu, E., Vivoni, E.R., Holifield Collins, C.D., and Bras, R.L. 2014. A Geomorphic Perspective on Terrain-modulated Organization of Vegetation Productivity: Analysis in Two Semiarid Grassland Ecosystems in Southwestern United States. Ecohydrology. 7(2): 242-257.

95. Mascaro, G., Vivoni, E.R., Gochis, D.J., Watts, C.J., and Rodriguez, J.C. 2014. Temporal Downscaling and Statistical Analysis of Rainfall Across a Topographic Transect in Northwest Mexico. Journal of Applied Meteorology and Climatology. 53(4): 810-927.

96. Méndez-Barroso, L.A., Vivoni, E.R., Robles-Morua, A., Mascaro, G., Yépez, E.A., Rodríguez, J.C., Watts, C.J., Garatuza-Payán, J., and Saiz-Hernandez, J. 2014. A Modeling Approach Reveals Differences in Evapotranspiration and its Partitioning in Two Semiarid Ecosystems in Northwest Mexico. Water Resources Research. 50(4): 3229-3252.

97. Xiang, T., Vivoni, E.R. and Gochis, D.J. 2014. Seasonal Evolution of Ecohydrological Controls on Land Surface Temperature over Complex Terrain. Water Resources Research. 50(5): 3852-3874.

98. Mahmood, T.H. and Vivoni, E.R. 2014. Forest Ecohydrological Response to Bimodal Precipitation during Contrasting Winter to Summer Transitions. Ecohydrology. 7(3): 998-1013.

99. Tarin, T., Yépez, E.A., Garatuza-Payan, J., Watts, C.J., Rodríguez, J.C., Vivoni, E.R., and Méndez-Barroso, L.A. 2014. Evapotranspiration Partitioning with Stable Isotopes in Ecohydrological Studies. Tecnologia y Ciencias del Agua. 5(3): 97-114.

100. Volo, T.J., Vivoni, E.R., Martin, C.A, Earl, S., and Ruddell, B.L. 2014. Modeling Soil Moisture, Water Partitioning and Plant Stress under Irrigated Conditions in Desert Urban Areas. Ecohydrology. 7(5): 1297-1313.

101. Vivoni, E.R., Rango, A., Anderson, C.A., Pierini, N.A., Schreiner-McGraw, A., Saripalli, S., and Laliberte, A.S. 2014. Ecohydrology with Unmanned Aerial Vehicles. Ecosphere. 5(10): art130.

102. Pierini, N.A., Vivoni, E.R., Robles-Morua, A., Scott, R.L, and Nearing, M.A. 2014. Using Observations and a Distributed Hydrologic Model to Explore Runoff Threshold Processes Linked with Mesquite Encroachment in the Sonoran Desert. Water Resources Research. 50(10): 8191-8215.

103. Forzieri, G., Feyen, L., Cescatti, A., and Vivoni, E.R. 2014. Spatial and Temporal Variations in Ecosystem Response to Monsoon Precipitation Variability in Southwestern North America. Journal of Geophysical Research - Biogeosciences. 119(10): 1999-2017.

104. Chow, W.T.L., Volo, T., Vivoni, E.R., Jenerette, G.D., and Ruddell, B.L. 2014. Seasonal Dynamics of a Suburban Energy Balance in Phoenix, Arizona. International Journal of Climatology. 34(15): 3863-3880.

105. Piras, M., Mascaro, G., Deidda, R., and Vivoni, E.R. 2014. Quantification of Hydrologic Impacts of Climate Change in a Mediterranean Basin in Sardinia, Italy, through High-resolution Simulations. Hydrology and Earth System Sciences. 18(12): 5201-5217.

106. Volo, T.J., Vivoni, E.R., and Ruddell, B.L. 2015. An Ecohydrological Approach to Conserving Urban Water through Optimized Landscape Irrigation Schedules. Landscape and Urban Planning. 133: 127-132.

107. Robles-Morua, A., Che, D., Mayer, A.S., and Vivoni, E.R. 2015. Hydrologic Assessment of Proposed Reservoirs in the Sonora River Basin under Historical and Future Climate Scenarios. Hydrological Sciences Journal. 60(1): 50-66.

108. Browning, D.M., Rango, A., Karl, J.W., Laney, C.M., Vivoni, E.R., and Tweedie, C.E. 2015. Emerging Technological and Cultural Shifts Advancing Dryland Research and Management. Frontiers in Ecology and the Environment. 13(1): 52-60.

109. Okin, G.S., Moreno-de las Heras, M., Saco, P.M., Throop, H.L., Vivoni, E.R., Parsons, A.J., Wainwright, J., and Peters, D.P.C. 2015. Connectivity in Dryland Landscapes: Shifting Concepts of Spatial Interactions. Frontiers in Ecology and the Environment. 13(1): 20-27.

110. Monger, C., Sala, O., Duniway, M., Goldfus, H., Meir, I., Poch, R., Throop, H.L., and Vivoni, E.R. 2015. Legacy Effects in Linked Ecological-Soil-Geomorphic Systems of Drylands. Frontiers in Ecology and the Environment. 13(1): 13-19.

111. Hawkins, G.A., Vivoni, E.R., Robles-Morua, A., Mascaro, G., Rivera, E., and Dominguez, F. 2015. A Climate Change Projection for Summer Hydrologic Conditions in a Semiarid Watershed of Central Arizona. Journal of Arid Environments. 118: 9-20.

112. Yetemen, O., Istanbulluoglu, E.I., Flores-Cervantes, J.H., Vivoni, E.R., and Bras, R.L. 2015. Ecohydrologic Role of Solar Radiation on Landscape Evolution. Water Resources Research. 51(2): 1127-1157.

113. Mascaro, G., Vivoni, E.R., and Méndez-Barroso, L.A. 2015. Hyperresolution Hydrologic Modeling in a Regional Watershed and its Interpretation using Empirical Orthogonal Functions. Advances in Water Resources. 83: 190-206.

114. Verduzco, V.S., Garatuza-Payan, J., Yépez, E.A., Watts, C.J., Rodriguez, J.C., Robles-Morua, A., and Vivoni, E.R. 2015. Variations of Net Ecosystem Production due to Seasonal Precipitation Differences in a Tropical Dry Forest of Northwest Mexico. Journal of Geophysical Research - Biogeosciences. 120(10): 2081-2094.

115. Piras, M., Mascaro, G., Deidda, R., and Vivoni, E.R. 2016. Impacts of Climate Change on Precipitation and Discharge Extremes through the Use of Statistical Downscaling Approaches in a Mediterranean Basin. Science of the Total Environment. 543: 952-964.

116. Schreiner-McGraw, A.P., Vivoni, E.R., Mascaro, G., and Franz, T.E. 2016. Closing the Water Balance with Cosmic-ray Soil Moisture Measurements and Assessing Their Relation to Evapotranspiration in Two Semiarid Watersheds. Hydrology and Earth System Sciences. 20: 329-345.

117. Rossi, M.W., Whipple, K.X., and Vivoni, E.R. 2016. Precipitation and Evapotranspiration Controls on Event-scale Runoff Variability in the Contiguous United States and Puerto Rico. Journal of Geophysical Research – Earth Surface. 121(1): 128-145.

118. Bohn, T.J., and Vivoni, E.R. 2016. Process-Based Characterization of Evapotranspiration Sources over the North American Monsoon Region. Water Resources Research. 52(1): 358-384.

119. Villareal, S., Vargas, R., Yepez, E., Acosta, J.S., Castro, A., Escoto-Rodriguez, M., Lopez, E., Martinez-Osuan, J., Rodriguez, J.C., Smith, S., Vivoni, E.R., and Watts C.J. 2016. Contrasting Precipitation Patterns Influence Complexity in Evapotranspiration Dynamics in Water-limited Shrublands. Journal of Geophysical Research - Biogeosciences. 121(2): 494-508.

120. Fatichi, S., Vivoni, E.R., Ogden, F., Ivanov, V.Y., Mirus, B., Gochis, D.J., Downer, C.W., Camporese, M., Davidson, J., Ebel, B., Jones, N., Kim, J., Mascaro, G., Niswonger, R., Restrepo, P., Rigon, R., Shen, C., Sulis, M., and Tarboton, D. 2016. An Overview of Current Applications, Challenges and Future Trends in Distributed Process-based Models in Hydrology. Journal of Hydrology. 537: 45-60.

121. Benson-Lira, V., Georgescu, M., Kaplan, S. and Vivoni, E.R. 2016. Loss of a Lake System in a Megacity: The Impact of Urban Expansion on Seasonal Meteorology in Mexico City. Journal of Geophysical Research – Atmospheres. 121(7): 3079-3099.

122. Ko, A., Mascaro, G., and Vivoni, E.R. 2016. Irrigation Impacts on Scaling Properties of Soil Moisture and the Calibration of a Multifractal Downscaling Algorithm. IEEE Transactions on Geoscience and Remote Sensing. 54(6): 3128-3142.

123. Anderson, C.A., and Vivoni, E.R. 2016. Impact of Land Surface States within the Flux Footprint on Daytime Land-Atmosphere Coupling in Two Semiarid Ecosystems of the Southwestern U.S. Water Resources Research. 52(6): 4785-4800.

124. Mascaro, G. and Vivoni, E.R. 2016. On the Observed Hysteresis in Field-Scale Soil Moisture Variability and its Physical Controls. Environmental Research Letters. 11(8): 084008.

125. Méndez-Barroso, L.A., Vivoni, E.R., and Mascaro, G. 2016. Impact of Spatially-variable Soil Thickness and Texture on Simulated Hydrologic Conditions in a Semiarid Watershed in Northwest Mexico. Revista Mexicana de Ciencias Geologicas. 33(3): 365-377.

126. Eakin, H., Bojórquez-Tapia, L.A., Janssen, M., Georgescu, M., Manuel-Navarrete, D., Vivoni, E.R., Escalante, A.E., Baeza-Castro, A., Mazari-Hiriart, M., and Lerner, A.M. 2017. Urban Resilience Efforts Must Consider Social and Political Forces. Proceedings of the National Academy of Sciences of the United States of America. 114(2): 186-189.

127. Cazares-Rodriguez, J., Vivoni, E.R., and Mascaro, G. 2017. Comparison of Two Watershed Models for Addressing Stakeholder Flood Mitigation Strategies: Case Study of Hurricane Alex in Monterrey, México. Journal of Hydrologic Engineering. 22(9): 05017018.

128. Xiang, T.T., Vivoni, E.R., Gochis, D.J., and Mascaro, G. 2017. On the Diurnal Cycle of Surface Energy Fluxes in the North American Monsoon Region using the WRF-Hydro Modeling System. Journal of Geophysical Research - Atmospheres. 122(17): 9024-9049.

129. Whitney, K.M., Vivoni, E.R., Duniway, M., Bradford, J., Reed, S.C., and Belnap, J. 2017. Ecohydrological Role of Biological Soil Crusts Across a Gradient in Levels of Development. Ecohydrology. 10(7): e1875, http://doi.org/10.1002/eco.1875.

130. Mayer, A.S., Vivoni, E.R., Kossak, D., Halvorsen, K.E., and Robles-Morua, A. 2017. Participatory Modeling Workshops in a Water-stressed Basin Result in Gains in Modeling Capacity but Reveal Disparity in Water Resources Management Priorities. Water Resources Management. 31(15): 4731-4744.

131. Kropp, H., Ogle, K., Vivoni, E.R., and Hultine, K. 2017. The Sensitivity of Evapotranspiration to Inter-Specific Plant Neighbor Interactions: Implications for Models. Ecosystems. 20(7): 1311-1323.

132. Schreiner-McGraw, A.P., and Vivoni, E.R. 2017. Percolation Observations in an Arid Piedmont Watershed and Linkages to Historical Conditions in the Chihuahuan Desert. Ecosphere. 8(11): e02000, http://dx.doi.org/10.1002/ecs2.2000.

133. Xiang, T.T., Vivoni, E.R., and Gochis, D.J. 2018. Influence of Initial Soil Moisture and Vegetation Conditions on Monsoon Precipitation Events in Northwest Mexico. Atmósfera. 31(1): 25-45.

134. Biederman, J.A., Scott, R.L., Arnone, J., Jasoni, R.L., Litvak, M.E., Moreo, M.T., Papuga, S.A., Ponce-Campos, G.E., Schreiner-McGraw, A.P., and Vivoni, E.R. 2018. Shrubland Carbon Sink Depends upon Winter Water Availability in the Warm Deserts of North America. Agricultural and Forest Meteorology. 249: 407-419.

135. Bennett, K.E., Bohn, T.J., Solander, K., McDowell, N.G., Xu, C., Vivoni, E.R., and Middleton, R. 2018. Climate-driven Disturbances in the San Juan River sub-basin of the Colorado River. Hydrology and Earth Systems Sciences. 22: 709-725.

136. Bohn, T.J. and Vivoni, E.R. 2018. Comments on "Regional impacts of irrigation in Mexico and southwestern U.S. on hydrometeorological fields in the North American Monsoon region". Journal of Hydrometeorology. 19(2): 477-481.

137. Templeton, N.P., Vivoni, E.R., Wang, Z-H., and Schreiner-McGraw, A.P. 2018. Quantifying Water and Energy Fluxes over Different Urban Land Covers in Phoenix, Arizona. Journal of Geophysical Research - Atmospheres. 123(4): 2111-2128.

138. Verduzco, V.S., Vivoni, E.R., Yépez, E.A., Rodríguez, J.C., Watts, C.J., Tarín, T.T., Garatuza-Payan, J., Robles-Morua, A. and Ivanov, V.Y. 2018. Climate Change Impacts on Net Ecosystem

Productivity in a Subtropical Shrubland of Northwestern México. Journal of Geophysical Research - Biogeosciences. 123(2): 688-711.

139. Rossi, M.J., Ares, J.O., Jobbagy, E.G., Vivoni, E.R., Vervoot, R.W., Schreiner-McGraw, A.P., and Saco, P.M. 2018. Vegetation and Terrain Drivers of Infiltration Depth Along a Semiarid Hillslope. Science of the Total Environment. 644: 1399-1408.

140. Perra, E., Piras, M., Deidda, R., Paniconi, C., Mascaro, G., Vivoni, E.R., Cau, P., Marras, P.A., Ludwig, R., and Meyer, S. 2018. Multimodel Assessment of Climate Change-Induced Hydrologic Impacts for a Mediterranean Catchment. Hydrology and Earth System Sciences. 22: 4121-4123.

141. Schreiner-McGraw, A.P., and Vivoni, E.R. 2018. On the Sensitivity of Hillslope Runoff and Channel Transmission Losses in Arid Piedmont Slopes. Water Resources Research. 54(7): 4498-4518.

142. Montecelos-Zamora, Y., Cavazos, T., Kretzschmar, T., Vivoni, E.R., Molina-Navarro, E., and Corzo, G. 2018. Hydrological Modeling of Climate Change Impacts in a Tropical River Basin: A Case Study of the Cauto River, Cuba. Water. 10(9): 1135.

143. Okin, G.S., Sala, O.E., Vivoni, E.R., Zhang, J., and Bhattachan, A. 2018. The Interactive Role of Wind and Water in Dryland Function: What Does the Future Hold? Bioscience. 68(9): 670-677.

144. Peters, D.P.C., Burruss, N.D., Rodriguez, L.L., McVey, D.S., Elias, E.H., Pelzel-McCluskey, A.M., Derner, J.D., Schrader, T.S., Yao, J., Pauszek, S.J., Lombard, J., Archer, A.R., Bestlemeyer, B., Browning, D.M., Brungaard, C.W., Hatfield, J.L., Hannan, N.P., Herrick, J.E., Okin, G.S., Sala, O.E., Savoy, H., and Vivoni, E.R. 2018. An Integrated View of Complex Landscapes: A Big Data-Model Integration Approach to Transdisciplinary Science. Bioscience. 68(9): 653-669.

145. Bohn, T.J., Vivoni, E.R., Mascaro, G., and White, D.D. 2018. Land and Water Use Changes in the US-Mexico Border Region, 1992 to 2011. Environmental Research Letters. 13: 114005, https://doi.org/10.1088/1748-9326/aae53e.

146. Navarro-Estupiñán, J., Robles-Morua, A., Vivoni, E.R., Espíndola-Zepeda, J., Montoya, J.A., and Verduzco, V.S. 2018. Observed Trends and Future Projections of Extreme Heat Events in Sonora, Mexico. International Journal of Climatology. 38(14): 5158-5181.

147. Del Toro-Guerrero, F.J., Vivoni, E.R., Kretzschmar, T.G., Vazquez-Gonzalez, R., and Bullock, S.H. 2018. Variations in Soil Water Content, Infiltration and Potential Recharge at Three Sites in a Mediterranean Mountainous Region of Baja California, México. Water. 10(12): 1844.

148. Vivoni, E.R., and Bohn, T.J. 2018. ¿Ha impactado el TLCAN los recursos de agua y uso del suelo en la frontera de México y EE.UU.? GEOS: Boletín informativo de la Unión Geofísica Mexicana. 38(2): 1-3.

149. Nardi, F., Annis, A., Di Baldassarre, G., Vivoni, E.R., and Grimaldi, S. 2019. GFPLAIN250m: A Global High-resolution Dataset of Earth's Floodplains. Scientific Data. 6: 180309.

150. Bohn, T.J., Whitney, K.M., Mascaro, G., and Vivoni, E.R. 2019. A Deterministic Approach for Approximating the Diurnal Cycle of Precipitation for Use in Large-scale Hydrological Modeling. Journal of Hydrometeorology. 20(2): 297-317.

151. Ko, A., Mascaro, G., and Vivoni, E.R. 2019. Strategies to Improve and Evaluate Physics-Based Hyperresolution Hydrologic Simulations at Regional Basin Scales. Water Resources Research. 55(2): 1129-1152.

152. White, D.D., Lawless, K.L., Vivoni, E.R., Mascaro, G., Pahle, R., Kumar, I., Coli, P., Castillo, R.M., Moreda, F., and Asfora, M. 2019. Co-producing Interdisciplinary Knowledge and Action for Sustainable Water Governance: Lessons from the Development of a Water Resources Decision Support System in Pernambuco, Brazil. Global Challenges. 3(4), 1800012.

153. Shirzaei, M., Ojha, C., Werth, S., Carlson, G., and Vivoni, E.R. 2019. Comments on "Short-lived pause in Central California subsidence after heavy winter precipitation of 2017" by K.D. Murray and R.B. Lohmann. Science Advances. 5(6): eaav8038.

154. Schreiner-McGraw, A.P., Ajami, H., and Vivoni, E.R. 2019. Extreme Weather Events and Transmission Losses in Arid Streams. Environmental Research Letters. 14(8): 084002.

155. Bohn, T.J., and Vivoni, E.R. 2019. MOD-LSP, MODIS-Based Parameters for Hydrologic Modeling of North American Land Cover Change. Scientific Data. 6: 144.

156. Mascaro, G., Ko, A., and Vivoni, E.R. 2019. Closing the Loop of Satellite Soil Moisture Estimation via Scale Invariance of Hydrologic Simulations. Scientific Reports. 9: 16123.

157. Navarro-Estupiñán, J., Robles-Morua, A., Diaz-Caravantes, R., and Vivoni, E.R. 2020. Heat Risk Mapping through Spatial Analysis of Remotely-Sensed Data and Socioeconomic Vulnerability in Hermosillo, Mexico. Urban Climate. 31: 100576.

158. Meili, N., Manoli, G., Burlando, P., Bou-Zeid, El., Chow, W.T.L., Coutts, A.M., Daly, E., Nice, K.A., Roth, M., Tapper, N.J., Velasco, E., Vivoni, E.R., and Fatichi, S. 2020. An urban ecohydrological model to quantify the effect of vegetation on urban climate and hydrology (UT&C v1.0). Geoscientific Model Development. 13: 335-362.

159. Perez-Ruiz, E.R., Vivoni, E.R., and Templeton, N.P. 2020. Urban Land Cover Type Determines the Sensitivity of Carbon Dioxide Fluxes to Precipitation in Phoenix, Arizona. PLOS One. 15(2): e0228537.

160. Vivoni, E.R. 2020. Advancing U.S.-México Science through the Education Network Effect. Atmosfera. https://doi.org/10.20937/ATM.52802. 9 pp.

161. Schreiner-McGraw, A.P., Vivoni, E.R., Ajami, H., Sala, O.E., Throop, H.L., and Peters, D.P.C. 2020. Woody Plant Encroachment is Expected to Have a Larger Impact than Climate Change on Dryland Water Budgets. Scientific Reports. 10: 8112. https://doi.org/10.1038/s41598-020-65094-x

162. Vargas-Terminel, M.L., Yepez, E.A., Tarin-Terrazas, T., Robles-Zazueta, C.A., Garatuza-Payan, J., Rodriguez, J.C., Watts, C.J., and Vivoni, E.R. 2020. Understory Contribution to Water Vapor and CO_2 Fluxes from a Subtropical Shrubland in northwestern Mexico. Tecnologia y Ciencias del Agua. 11(5): 98-135.

163. Tarin, T., Yepez, E.A., Garatuza-Payan, J., Rodriguez, J.C., Mendez-Barroso, L.A., Watts, C.J. and Vivoni, E.R. 2020. Evapotranspiration Flux Partitioning at a Multi-Species Shrubland with Stable Isotopes of Soil, Plant and Atmospheric Water Pools. Atmosfera. 33(4): 319-335.

164. Vivoni, E.R., Kindler, M., Wang, Z., and Perez-Ruiz, E.R. 2020. Abiotic Mechanisms Drive Enhanced Evaporative Losses under Urban Oasis Conditions. Geophysical Research Letters. 47: e2020GL090123, http://doi.org/10.1029/2020GL090123.

165. Meili, N., Manoli, G., Burlando, P., Carmeliet, J., Chow, W.T.L., Coutts, A.M., Roth, M., Velasco, E., Vivoni, E.R., and Fatichi, S. 2021. Tree Effects on Urban Local Temperatures: Diurnal, Seasonal, and Climatic Differences Explained by Separating Radiation, Evapotranspiration, and Roughness Effects. Urban Forestry & Urban Greenery. 51: 126970, http://doi.org/10.1016/J.UFUG.2020.126970.

166. Vivoni, E.R., Perez-Ruiz, E.R., Keller, Z.T., Escoto, E.A., Templeton, R.C., Templeton, N.P., Anderson, C.A., Schreiner-McGraw, A.P., Mendez-Barroso, L.A., Robles-Morua, A., Scott, R.L., Archer, S.R., and Peters, D.P.C. 2021. Long-term Research Catchments to Investigate Shrub Encroachment in the Sonoran and Chihuahuan Deserts: Santa Rita and Jornada Experimental Ranges. Hydrological Processes. 35: e14031, http://doi.org/10.1002/hyp.14031.

167. Iwaniec, D., Gooseff, M., Suding, K., Johnson, D., Reed, D., Peters, D.P.C., Adams, B., Barrett, J., Bestelmeyer, B., Castorani, M.; Cook, E., Davidson, M., Groffman, P., Hanan, N., Huenneke, L., Johnson, P., McKnight, D., Miller, R., Okin, G., Preston, D., Rassweiller, A., Ray, C., Sala, O., Schooley, R., Seastedt, T., Spasojevic, M., and Vivoni, E.R. 2021. Connectivity: Insights from the U.S. Long Term Ecological Research Network. Ecosphere. 12(5): e03432, http://doi.org/10.1002/ecs2.3432.

168. Perez-Ruiz, E.R., Vivoni, E.R., Yepez, E.A., Rodriguez, J.C., Gochis, D.J., Robles-Morua, A., Delgado-Balbuena, J., and Adams, D.K. 2021. Landscape Controls on Water-Energy-Carbon

Fluxes Across Different Ecosystems during the North American Monsoon. Journal of Geophysical Research – Biogeosciences. 126(5): e2020JG005809. http://doi.org/10.1029/2020JG005809.

169. Diaz de Leon-Guerrero, S., Mendez-Alonzo, R., Bullock, S.H., and Vivoni, E.R. 2021. Hydrological and Topographic Determinants of Biomass and Species Richness in a Mediterranean-climate Shrubland. PLOS ONE. 16(5): e0252154. http://doi.org/10.1371/journal.pone.0252154.

170. Sordo-Ward, A., Gabriel-Martin, I., Bianucci, P., Mascaro, G., Vivoni, E.R., and Garrote, L. 2021. Stochastic Hybrid Event Based and Continuous Approach to Derive Flood Frequency Curve. Water. 13: 1391, https://doi.org/10.3390/w13141931.

171. Peters, D.P.C., Savoy, H.M., Stillman, S., Huang, H., Hudson, A.R., Sala, O.E., and Vivoni, E.R. 2021. Plant Species Richness in Multiyear Wet and Dry Periods in the Chihuahuan Desert. Climate. 9(8): 130. http://doi.org/10.3390/cli9080130.

172. Ivanov, V.Y., Dwelle, M.C., Xu, D., Sargsyan, K., Wright, D., Katopodes, N., Kim, J., Tran, V.N., Warnock, A., Fatichi, S., Burlando, P., Caporali, E., Restrepo, P., Sanders, B., Chaney, M., Nunes, A.M.B., Nardi, F., Vivoni, E.R., Istanbulluoglu, E., Bisht, G., and Bras, R.L. 2021. Breaking Down the Computational Barriers to Real-Time Urban Flood Forecasting. Geophysical Research Letters. 48(20): http://doi.org/10.1029/2021GL093585.

173. Wang, Z., Vivoni, E.R., Bohn, T.J., and Wang, Z.-H. 2021. A Multiyear Assessment of Irrigation Cooling Capacity in Agricultural and Urban Settings of Central Arizona. Journal of the American Water Resources Association. 57(5): 771-788. https://doi.org/10.1111/1752-1688.12920

174. Vivoni, E.R., Perez-Ruiz, E.R., Scott, R.L., Naito, A.T., Archer, S.R., Biederman, J.A., and Templeton, N.P. 2022. A Micrometeorological Flux Perspective on Brush Management in a Shrub-encroached Sonoran Desert Grassland. Agricultural and Forest Meteorology. 313: 108763. https://doi.org/10.1016/j.agrformet.2021.108763.

175. Salazar-Martinez, D., Holwerda, F., Holmes, T.R.H., Yepez, E.A., Hain, C.R., Alvarado-Barrientos, S., Angeles-Perez, G., Arredondo-Moreno, T., Delgado-Balbuena, J., Figueroa-Espinoza, B., Garatuza-Payan, J., Gonzalez del Castillo, E., Rodriguez, J.C., Rojas-Robles, N.E., Uuh-Sonda, J.M., and Vivoni, E.R. 2022. Evaluation of Remote Sensing-based Evapotranspiration Products at Low-Latitude Eddy Covariance Sites. Journal of Hydrology. 610: 127786, https://doi.org/10.1016/j.jhydrol.2022.127786.

176. Kindler, M., Vivoni, E.R., Perez-Ruiz, E.R., and Wang, Z. 2022. Water Conservation Potential of Modified Turf Grass Irrigation in Urban Parks of Phoenix, Arizona. Ecohydrology. 15(3): eco.2399. https://doi.org/10.1002/eco.2399.

177. Perez-Ruiz, E.R., Vivoni, E.R. and Sala, O.E. 2022. Seasonal Carryover of Water and Effects on Carbon Dynamics in a Dryland Ecosystem. Ecosphere. 13(7): e4189. http://doi.org/10.1002/ecs2.4189

178. Wang, Z., and Vivoni, E.R. 2022. Individualized and Combined Effects of Future Urban Growth and Climate Change on Irrigation Water Use in Central Arizona. Journal of the American Water Resources Association. 58(3): 370-387. http://doi.org/10.1111/1752-1688.13005

179. Wang, Z. and Vivoni, E.R. 2022. Detecting Streamflow in Dryland Rivers using CubeSats. Geophysical Research Letters. 49(15): e2022GL098729. https://doi.org/10.1029/2022GL098729

180. Wang, Z., and Vivoni, E.R. 2022. Mapping Flash Flood Hazards in Arid Regions using CubeSats. Remote Sensing. 14(17): 4218. https://doi.org/10.3390/rs14174218

181. Xiao, M., Mascaro, G., Wang, Z., Whitney, K.M., and Vivoni, E.R. 2022. On the Value of Satellite Remote Sensing to Reduce Uncertainties in Regional Simulations of the Colorado River. Hydrology and Earth System Sciences. 26(21): 5627-5646. https://doi.org/10.5194/hess-26-5627-2022

182. Whitney, K.M., Vivoni, E.R., Bohn, T.J., Mascaro, G., Wang, Z., Xiao, M., Mahmoud, M.I., Cullom, C., and White, D.D. 2023. Spatial Attribution of Declining Colorado River Streamflow under

Future Warming. Journal of Hydrology. 617(C): 129125. https://doi.org/10.1016/j.jhydrol.2023.129125

183. Archer, S.R., Naito, A.T., Heilman, P., Vivoni, E.R., and Scott, R.L. 2023. *Prosopis velutina* Response to Aerial Herbicide Application. Rangeland Ecology and Management. 88: 129-134. https://doi.org/10.1016/j.rama.2023.02.014

184. Whitney, K.M., Vivoni, E.R., Wang, Z., White, D.D., Quay, R., Mahmoud, M.I., and Templeton, N.P. 2023. A Stakeholder Engaged Approach to Anticipating Forest Disturbance Impacts in the Colorado River Basin under Climate Change. Journal of Water Resources Planning and Management. 149(7): 04023020. https://doi.org/10.1061/JWRMD5.WRENG-5905

185. Whitney, K.M., Vivoni, E.R., and White, D.D. 2023. Enhancing the Accessibility and Interactions of Regional Hydrologic Projections for Water Managers. Environmental Modeling and Software. 167: 105763. https://doi.org/10.1016/j.envsoft.2023.105763

186. Tang, X., Tang, D., Wang, Z., Cederstrom, C.J., and Vivoni, E.R. 2023. Impacts of Snow Surface Aerodynamic Resistance on Snow Water Equivalent Simulations in Forested Regions. Hydrological Processes. 37(9): e14985. https://doi.org/10.1002/hyp.14985

187. Keller, Z.T., Vivoni, E.R., Kimsal, C.R., Robles-Morua, A., and Perez-Ruiz, E.R. 2023. Hillslope to Channel Hydrologic Connectivity in a Dryland Ecosystem. Ecosphere. 14(11): e4707. https://doi.org/10.1002/ecs2.4707

188. Wang, Z., Vivoni, E.R., Whitney, K.M., Xiao, M., and Mascaro, G. 2024. On the Sensitivity of Future Hydrology in the Colorado River to the Precipitation Partition Method. Water Resources Research. 60(6): e2023WR035801. https://doi.org/10.1029/2023WR035801.

189. Cederstrom, C.J., Vivoni, E.R., Mascaro, G., and Svoma, B. 2024. Forest Thinning Effects on Watershed Responses under Warming. Water Resources Research. 60(6): e2023WR035627. https://doi.org/10.1029/2023WR035627

190. Peñaranda-Velez, V.M., Quintanar, A.I., Ochoa, C.A., and Vivoni, E.R. 2024. An Approach for Modelling the Orographic-Forcing Effect via Random Cascades and the Long-Term Statistics of Mexico City's Daily Precipitation. Journal of Geophysical Research – Atmospheres. 129(12): e2023JD040023. https://doi.org/10.1029/2023JD040023

191. De la Fraga, P., Del Toro-Guerrero, F.J., Vivoni, E.R., Cavazos, T., and Kretzschmar, T. 2024. Evaluation of Gridded Precipitation Datasets in Mountainous Terrains of Northwestern Mexico. Journal of Hydrology: Regional Studies. (In Press).

192. Nelson, J.A., Walther, S., Gans, F., Kraft, B., and co-authors (including Vivoni, E.R.). 2024. X-BASE: The First Terrestrial Carbon and Water Flux Products from an Extended Data-driven Scaling Framework, FLUXCOM-X. Biogeosciences. (In Press).

193. Raming, L.W., Vivoni, E.R., Mascaro, G., Cederstrom, C.J., Ko, A., Schreiner-McGraw, A.P., and Lizarraga-Celaya, C. 2024. tRIBS v5.2: A multi-resolution, parallel platform for tributary hydrology in forest applications. Journal of Open Source Software. (In Press).

194. Glass, N., Asbjornsen, H., Feldman, A.F., Green, J.K., Kannenberg, S.A., Knapp, A.K., Konings, A.G., Litvak, M.E., Smith, M.D., Reed. S., Vivoni, E.R., and Sala, O.E. 2024. The Need to Resolve the Importance of Atmospheric Versus Control on Terrestrial Ecosystem Functioning. New Phytologist. (In Review).

195. Reed, D.E., Chu, H., Peter, B.G., Chen, J., and co-authors (including Vivoni, E.R.). 2024. Network of Networks: Time-Series Clustering of AmeriFlux Sites. Journal of Geophysical Research - Biogeosciences. (In Review).

196. Kimsal, C.R., Vivoni, E.R., Sala, O.E., Monger, H.C., and McKenna, O.P. 2024. Hydrologic Dynamics of Ephemerally Flooded Playas in a Dryland Environment. Water Resources Research. (In Review).

197. Del Toro-Guerrero, F.J., Daessle, L.W., Vivoni, E.R., Ramirez-Hernandez, J., Kretzschmar, T., and Rodriguez-Burgueño, J.E. 2024. Spatial Multi-Criteria Decision Analysis for Groundwater Recharge in the Guadalupe Valley Basin, Mexico. Journal of Hydrology: Regional Studies. (In Review).

198. Yue, H., Mascaro, G., Wang, Z., and Vivoni, E.R. 2024. Hydrometeorological Forecast Skill of the North American Multi-Model Ensemble in the Upper Colorado River Basin. Journal of Hydrometeorology. (In Review).

199. Mondal, S., and Vivoni, E.R. 2024. The Hot Drought of Summer 2023 in Southwestern North America. Geophysical Research Letters. (In Review).

200. Hurtado, R.Y., Vivoni, E.R., Perez-Ruiz, E.R., and Franz, T.E. 2024. Water Budgets of an Upland Watershed and a Downstream Playa in a Dryland Environment. Ecosphere. (In Preparation).

201. Wang, Z., Vivoni, E.R., and Kimsal, C. 2024. Inundation Frequency and Bathymetry Determine Vegetation Dynamics in Dryland Playas and Livestock Tanks. Remote Sensing of Environment. (In Preparation).

202. Wang, Z., Baskar, J. V. J., and Vivoni, E.R. 2024. Detection of Intermittent Snow Cover Dynamics using CubeSats and Computer Vision. Geophysical Research Letters. (In Preparation).

203. Dominguez-Eusebio, C.A., Alvardo-Barrientos, S., Arredondo, T., Bullock, S., Cervantes-Jimenez, M., Cueva, A., Delgado-Balbuena, J., Flores-Renteria, D., Garatuza-Payan, J., Gonzalez-Sosa, E., Sanchez-Mejia, Z.M., Oechel, W., Vivoni, E.R., and Yepez, E.A. 2024. Evaluating Light Use Efficient Models for Gross Primary Productivity Estimation in Low-Latitude Ecosystems of North and Central America. (In Preparation).

204. Menchu-Maldonado, M.E., Hamilton, K.A., Vivoni, E.R., and Muenich, R.L. 2024. *Escherichia coli* Drivers in Surface Waters of Arid and Semiarid Regions: A Case Study of Arizona. Ecological Indicators. (In Preparation).

205. Vivoni, E.R, Garcia, M., White, D.D., Porter, S., Famiglietti, J.S., Koebele, E.A., and Lawless, K.L. 2024. Transforming the Colorado River Basin through Scientific and Policy Cooperation. Water Security. (In Preparation).

13. PUBLICATIONS IN BOOK CHAPTERS, PROCEEDINGS AND NEWSPAPERS:

1. Vivoni, E.R., Camilli, R., Rodríguez, M.A., Sheehan, D.D. and Entekhabi, D. 2002. Development of mobile computing applications for hydraulics and water quality field studies. In: *Hydraulic Information Management*. Blain, W.R. and Brebbia, C.A. (ed). WIT Press. Southampton. 275-284.

2. Falorni, G., Vivoni, E.R., Teles, V. and Bras, R.L. 2002. Analysis of a SRTM-derived DEM of the Little Washita watershed. *Proceedings of the 1st CNR-Princeton Workshop*. Princeton, NJ.

3. Vivoni, E.R., Grimaldi, S., Nardi, F., Ivanov, V.Y., Castelli, F., Bras, R.L. and Ubertini, L. 2004. Assessing Hydrological Extreme Events with Geospatial Data and Models. *EOS Transactions, American Geophysical Union*. 85 (39): 371, 375.

4. Vivoni, E.R., Mendez-Barroso, L.A., Rodriguez, J.C. and Watts, C.J. 2008. On the spatiotemporal organization of soil moisture in the North American Monsoon region. *Catchment-scale Hydrological Modelling & Data Assimilation International Workshop*. Melbourne, Australia.

5. Vivoni, E.R., Watts, C.J., Rodríguez, J.C., Garatuza-Payan, J., Mendez-Barroso, L.A., Yepez, E.A., Saiz-Hernandez, J. and Gochis, D.J. 2008. Relation between Surface Flux Measurements and Hydrologic Conditions in a Subtropical Scrubland during the North American Monsoon. *CLIVAR Exchanges Newsletter*. 13(2): 21-23.

6. Vivoni, E.R. 2010. Progress on Understanding Land-Atmosphere Interactions and Surface Hydrology during the North American Monsoon. *VAMOS! Newsletter of the Variability of the American Monsoon Systems Panel*. 6, 20-22.

7. Vivoni, E.R., Caylor, K.K., D'Odorico, P. 2010. Towards a fully transient and spatially explicit ecohydrology in natural and human-dominated landscapes. *AGU Hydrology Section Newsletter*.

8. Mniszewski, S., Fasel, P., Springer, E., Vivoni, E. and White, A. 2010. Subbasin-based Parallel Hydrological Models for Semi-Arid Regions. *2010 Science Highlights. TSC Directorate: Theory, Simulation and Computation*. Los Alamos National Laboratory. 92-93.

9. Peters, D.P.C., B.T. Bestelmeyer, K.M. Havstad, A. Rango, S.A. Archer, A.C. Comrie, H.R. Gimblett, L. López-Hoffman, O.E. Sala, E.R. Vivoni, M.L. Brooks, J.R. Brown, H.C. Monger, J.H. Goldstein, G.S. Okin, C.E. Tweedie, 2013. Desertification of rangelands. Pages 239-258. In T.R. Seastedt and K.N. Suding, eds. Ecosystem Functions and Services: Volume 5 in R.A. Pielke, Sr. Editor-in-Chief. *Climate Vulnerability: Understanding and Addressing Threats to Essential Resources*. Elsevier. ISBN: 978-0-12-384703-4, 1570 pp.

10. Whitten, G., Hann, M., Robles-Morua, A., Mayer, A.S. and Vivoni, E.R. 2014. Enhancing the Link between Surface and Groundwater Models for Climate Change Assessment of Water Supply and Demand in Northwest Mexico. *7th Intl. Congress on Environmental Modelling and Software*, D.P. Ames, N.W.T. Quinn and A.E. Rizzoli (Eds.), San Diego, CA.

11. Rango, A., Vivoni, E.R., Anderson, C.A., Pierini, N.A., Schreiner-McGraw, A., Saripalli, S., Slaughter, A. and Laliberte, A. 2014. Application of High Resolution Images from Unmanned Aircraft Systems for Watershed and Rangeland Science. In: *Remote Sensing of the Terrestrial Water Cycle*. (eds V. Lakshmi, D. Alsdorf, M. Anderson, S. Biancamaria, M. Cosh, J. Entin, G. Huffman, W. Kustas, P. van Oevelen, T. Painter, J. Parajka, M. Rodell and C. Rüdiger), John Wiley & Sons, Inc, Hoboken, NJ. doi: 10.1002/9781118872086.ch28.

12. Verduzco, V.S., Vivoni, E.R., Yepez, E.A., Tarin, T., Garatuza-Payan, J. and Ivanov, V.Y. 2017. Impactos de cambio climatico en la productividad neta de ecosistemas en la region del monzon norteamericano. In: *Estado Actual del Conocimiento del Ciclo del Carbono y sus Interacciones en Mexico: Sintesis a 2017*. (eds Paz, F. and Torres, R.). Serie Síntesis Nacionales. Programa Mexicano del Carbono en colaboración con el Centro de Investigación Científica y de Educación Superior de Ensenada y la Universidad Autónoma de Baja California. Texcoco, Estado de México, México. ISBN: 978-607-96490-5-0. pp. 455-461.

13. Perez-Ruiz, E.R., Vivoni, E.R. and Templeton, N.P. 2017. Evaluation of urban net ecosystem exchange across different landscapes in Phoenix, AZ. In: *Estado Actual del Conocimiento del Ciclo del Carbono y sus Interacciones en Mexico: Sintesis a 2017*. (eds Paz, F. and Torres, R.). Serie Síntesis Nacionales. Programa Mexicano del Carbono en colaboración con el Centro de Investigación Científica y de Educación Superior de Ensenada y la Universidad Autónoma de Baja California. Texcoco, Estado de México, México. ISBN: 978-607-96490-5-0. pp. 507-511.

14. Delgado-Balbuena, J., Yepez, E.A., Paz-Pellat, F., Angeles-Perez, G., Aguirre-Gutierrez, C., Alvarado-Barrientos, M.S., Arredondo, T., Ayala-Nino, F., Bullock, S.H., Castellanos, A.E., Cueva, A., Figueroa-Espinoza, B., Garatuza-Payan, J., Gonzalez-del Castillo, E., Gonzalez-Sosa, E., Guevara-Escobar, A., Hinojo-Hinojo, C., Kyaw Tha, P.U., Lizarraga-Celaya, C., Maya-Delgado, Y., Oechel, W., Perez-Ruiz, E.R., Quesada-Avendano, M., Robles-Zazueta, C.A., Rodriguez, J.C., Rojas-Robles, N.E., Tarin-Terraza, T., Troyo-Dieguez, E., Uuh-Sonda, J., Vargas-Terminel, M.L., Vargas, R., Vega-Puga, M.G., Verduzco, V.S., Vivoni, E.R., and Watts, C.J. 2018. Database of Vertical Carbon Dioxide Fluxes at Terrestrial and Coastal Ecosystems of Mexico. *Elementos Para Politica Publica*. 2(2): 93-108.

15. Vivoni, E.R., and Artiles, A.J. 2019. *Educacion: Catalizador de la Relacion entre Mexico y Estados Unidos*. El Universal. August 30, 2019.

16. Perez-Ruiz, E.R., Martinez-Hernandez, D., Alvarado-Soto, S., and Vivoni, E.R. 2023. Variabilidad Temporal de la Tasa de Infiltracion del Suelo en Una Cuenca Semiarida del Desierto Chihuahuense. *47 Congreso Nacional de la Ciencia del Suelos*. Ciudad de Mexico, 6 pp.

14. THESIS SUPERVISION AND ADVISING:

Summary: *E.R.V. has advised 2 Honors College undergraduate theses, 17 Master of Science theses, 7 Master of Science applied projects and 15 Doctor of Philosophy dissertations. Currently, E.R.V. is advising or co-advising 4 postdoctoral scholars, 5 Ph.D. students, and 6 M.S. students with thesis.*

1. Wyckoff, R.L. 2007. *Sensitivity to Arroyo Development Scenarios: Insights from a Distributed Hydrological Model*. Masters of Science in Hydrology, New Mexico Institute of Mining and Technology, 193 pp.
2. Aragon, C.A. 2008. *Development and Testing of a Semi-Distributed Watershed Model: Case Studies Exploring the Impact of Climate Variability and Change in the Rio Salado*. Masters of Science in Hydrology, New Mexico Institute of Mining and Technology, 140 pp.
3. Tai, K. 2008. *Effects of Initial Soil Moisture on Rainfall Generation and Subsequent Hydrologic Response during the North American Monsoon*, Masters of Science in Hydrology, New Mexico Institute of Mining and Technology, 98 pp.
4. Rinehart, A.J. 2008. *Effects of Radiation Sheltering and Scattering from Distant Landscapes on the Accumulation and Ablation of Snow in La Jara Catchment in the Valles Caldera*. Masters of Science in Hydrology, New Mexico Institute of Mining and Technology, 142 pp.
5. Mascaro, G. 2008. *Assessing Uncertainty Propagation of Precipitation Input in Hydrometeorological Ensemble Forecasting Systems*. PhD in Civil and Water Resources Engineering. University of Cagliari, 249 pp. (co-advised externally).
6. Mendez-Barroso, L. A. 2009. *Changes in Hydrological Conditions and Surface Fluxes Due to Seasonal Vegetation Greening in the North American Monsoon Region*. Masters of Science in Hydrology, New Mexico Institute of Mining and Technology, 158 pp.
7. Robles-Morua, A. 2011. *Integrated Water and Sanitation Risk Assessment and Modeling in the Upper Sonora River Basin (Northwest, Mexico).* PhD in Environmental Engineering, Michigan Technological University, 212 pp. (co-advised externally).
8. Templeton, R. 2011. *Insights on Seasonal Fluxes in a Desert Shrubland Watershed from a Distributed Sensor Network*. Masters of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 171 pp.
9. Gutierrez-Jurado, H.A. 2011. *A Holistic Explanation of Ecogydrologic and Geomorphic Properties for a Semiarid Basin with Contrasting Ecosystems*. PhD in Hydrology, New Mexico Institute of Mining and Technology, 243 pp.
10. Mahmood, T.H. 2012. *Hillslope Scale Hydrologic Spatial Patterns in a Patchy Ponderosa Pine Landscape: Insights from Distributed Hydrologic Modeling*. PhD in Geological Sciences, Arizona State University, 179 pp.
11. Moreno, H.A. 2012. *Improvements in Flood Forecasting in Mountain Basins through a Physically-based Distributed Model.* PhD in Civil, Environmental and Sustainable Engineering, Arizona State University, 219 pp.
12. Hawkins, G. 2012. *Assessing the Effects of Climate Change in a Semi-Arid Basin Utilizing a Fully Distributed Hydrologic Model: A Case Study of the Beaver Creek Arizona*. Masters of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 121 pp.
13. Pierini, N.A. 2013. *Exploring the Ecohydrological Impacts of Woody Plant Encroachment in Paired Watersheds of the Sonoran Desert, Arizona*. Masters of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 160 pp.
14. Volo, T.J. 2013. *Modeling Soil Moisture Dynamics of Landscape Irrigation in Desert Cities*. Masters of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 112 pp.
15. Anderson, C.A. 2013. *Assessing Land-Atmosphere Interactions through Distributed Footprint Sampling at Two Eddy Covariance Towers in Semiarid Ecosystems of the Southwestern U.S.*

Masters of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 243 pp.

16. Mendez-Barroso, L.A. 2014. *Integration of Remote Sensing, Field Observations and Modelling for Ecohydrological Studies in Sonora, Mexico*. PhD in Geological Sciences, Arizona State University, 196 pp.
17. Whitney, K.M. 2015. *Using an Ecohydrology Model to Explore the Role of Biological Soil Crusts on Soil Hydrologic Conditions at the Canyonlands Research Station, Utah*. Master of Science in Geological Sciences, Arizona State University, 235 pp.
18. Cazares-Rodriguez, J.E. 2016. *Evaluation of Flood Mitigation Strategies for the Santa Catarina Watershed using a Multi-model Approach*. Master of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 151 pp.
19. Brancati, O. 2016. *Spatial Distribution of Extreme Rainfall Associated with the Monsoon Season in 2014 in the Phoenix Metropolitan Area*. Barrett Honors College Undergraduate Thesis, Arizona State University, 76 pp.
20. Xiang, T. 2016. *Improvement in Convective Precipitation and Land Surface Prediction over Complex Terrain*. PhD in Civil, Environmental and Sustainable Engineering, Arizona State University, 218 pp.
21. Verduzco, V.S. 2016. *Climate Variability Impacts on Net Ecosystem Production in Northwest Mexico*. PhD in Biotechnology, Instituto Technologico de Sonora, 169 pp.
22. Templeton, N.P. 2017. *Evaluating the Impact of Land Cover Composition on Water, Energy and Carbon Fluxes in Urban and Rangeland Ecosystems of the Southwestern United States*. PhD in Civil, Environmental and Sustainable Engineering, Arizona State University, 240 pp.
23. Schreiner-McGraw, A.P. 2017. *Deep Percolation in Arid Piedmont Watersheds and Its Sensitivity to Ecosystem Change*. PhD in Geological Sciences, Arizona State University, 282 pp.
24. Lopez-Castrillo, I. 2017. *Hydrological Modeling of South Mountain under an Extreme Event and Implications for Downstream Urban Growth and Ecological Design Alternatives*. MS in Civil, Environmental and Sustainable Engineering. Arizona State University, applied project.
25. Ramineni, M. 2018. *Assessment of Rainfall-Runoff Relations at the South Mountain Fan Watershed*. MS in Civil, Environmental and Sustainable Engineering. Arizona State University, applied project.
26. Ko, A. 2018. *On the Statistical and Scaling Properties of Observed and Simulated Soil Moisture*. PhD in Civil, Environmental and Sustainable Engineering, Arizona State University, 186 pp.
27. Rockwell, E. 2018. *Modeling a Small Watershed with KINEROS2 and K2OPUS2*. MS in Civil, Environmental and Sustainable Engineering. Arizona State University, applied project.
28. Navarro Estupiñán, J. 2019. *Extreme Heat Event Analysis and its Relation to Social Vulnerability in Hermosillo, Mexico*. PhD in Biotechnology, Instituto Technologico de Sonora, 107 pp.
29. Kindler, M. 2021. *Water Conservation Potential of Modified Irrigated Turf Management in Urban Parks in Phoenix*. Master of Science in Civil, Environmental and Sustainable Engineering. Arizona State University, 191 pp.
30. McDaniel, B. 2021. *Urban Climate Effects of Oasis Settings in the Phoenix Metropolitan Area*. MS in Civil, Environmental and Sustainable Engineering. Arizona State University, applied project.
31. Keller, Z.T. 2021. *Runoff Connectivity, Controls, and Evolution During the North American Monsoon*. Master of Science in Geological Sciences. Arizona State University, 176 pp.
32. Perez-Ruiz, E.R. 2021. *Land Surface Fluxes in Natural and Urban Landscapes in Arid and Semiarid Regions*. PhD in Geological Sciences, Arizona State University, 234 pp.

33. Cederstrom, C.J. 2021. *Warming and Forest Thinning Impacts on the Hydrologic Response of the Beaver Creek*. Master of Science in Civil, Environmental and Sustainable Engineering, Arizona State University, 161 pp.

34. Orci Fernandez, L. 2022. *Modeling the Effects of Stand-Replacing Wildfire on Water Budgets and Evapotranspiration Partitioning at two Eddy Covariance Towers*. MNS in Geological Sciences. Arizona State University, applied project.

35. Whitney, K.M. 2022. *Colorado Basin Hydrology under Future Climate and Land Cover Change*. PhD in Geological Sciences, Arizona State University, 442 pp.

36. Grace, E. 2022. *Method for Evaluating Variable Roughness Gutters*. MS in Civil, Environmental and Sustainable Engineering. Arizona State University, applied project.

37. Wang, Z. 2023. *Innovations in Detecting and Modeling Dryland Hydrologic Changes*. PhD in Civil, Environmental and Sustainable Engineering. Arizona State University, 174 pp.

38. Pascavis, K.S. 2023. *Decreasing Water Usage and Increasing Income for Vietnamese Small Farmers: Insights into the Introduction of Smart Agriculture*. Barrett Honors College Undergraduate Thesis, Arizona State University, 32 pp.

39. Kimsal, C. 2023. *Hydrologic Dynamics of Dryland Playas and their Catchments in the Chihuahuan Desert*. Master of Science in Geological Sciences. Arizona State University, 187 pp.

40. Chemello, T.N. 2024. *Inundation Analysis of Livestock Tanks in a Semiarid Climate*. MS in Civil, Environmental and Sustainable Engineering. Arizona State University, applied project.

41. Hurtado, R.Y. 2024. *Landscape Position Impacts the Water Balance in the Chihuahuan Desert: Insights from Cosmic-Ray Neutron Sensing at Upland Watershed and Downstream Playa Sites*. Master of Science in Geological Sciences. Arizona State University, 135 pp.

Current B.S. students: None.

Current M.S. students: Jose Becerra, Swastik Ghimire, Mary Ferguson, Shraddha Sharma, Laura Gallegos, Nour Kandalaft, Jonna Urban.

Current Ph.D. students: Akram Hossain, Xinyu Chen, Mohammed Alshehri, Johnny Arriola Reyes, Khayrun Nahar Mitu.

Current Postdoctoral researchers: Wren Raming, Zhaocheng Wang, Somnath Mondal, Razieh Barzin.

Current Applied MS project students: None.

Current committee membership: Pasquinel de la Fraga Chavez, Shivangi Jain, Randall Debes, Chuncheng Yao.

Previous visiting students: Fernando Nardi, Giuseppe Mascaro, Francesco Di Benedetto, Lorena Liuzzo, Luca Martini, Giovanni Forzieri, Alvaro Sordo, Violeta Mendoza, Daniel Che, Tonantzin Tarin, Stephanie Schweitzer, Waly Gudino, Federica Borio, Jiyun Song, Edna de la Llata, Natana De Castro, Javier Navarro, Vivian Verduzco, Ivan Gabriel Martin, Xiaoyang Tang.

Previous undergraduate students: Benjamin Brooks, Alexis Martinez, Colin Cikoski, Jaron Andrews, Alexandra Vargas, Frederic Tapaha, Sabrina Canalda, Eva Osmer, Phillip Turner, Sarah Gonzales, Whitney DeFoor, James Craft, Kim Bandy, Tom Dotson, Rhonda Trujillo, Christie Hernandez, Laila El-Ashmawy, Tom Volo, Mario Mendez, Julian Gutierrez, Andrea Hendrix, Maria Baez, Rud Moe, Dustin Pearce, Jaleila Brumand, Mariela Castaneda, Jiachuan Yang, Sarah Cronk, Huntington Keith, Seth Morales, Antonio Miranda, Myrtle Line, Derek Sanchez, Brittany Farine, Brianna Duong, Stephanie Bone, Michael Bierwagen, Matthew Thompson, Alyssa McAllister, Seth Morales, Amanda Orozco, Olivia Brancati, Eric Liu, Brianna Young, Natasha Reeves, Courtney Anderson, Drew Eppehimer, Nick Gauthier, Jorge Olivas, Katherine Boot, Tisha Lance, Gina Rivera, Natalie Melkonoff, Ivan Lopez-Castrillo, Stephanie Bone, Olivia Brancati, Sarah Khalid, Lindsay De Leon, Leslie Bautista, Sheridan Davis, Brandon Bohan, Jacob Murray, Katie Pascavis, Nicolas Garnand.

Previous graduate students: Robert Wyckoff, Alex Rinehart, Kinwai Tai, Carlos Aragon, Giuseppe Mascaro, Agustin Robles-Morua, Hugo Gutierrez-Jurado, Taufique Mahmood, Hernan Moreno, Cody Anderson, Ryan Templeton, Gretchen Hawkins, Thomas Volo, Alexander Baish, Kelsii Dana, Luis Mendez-Barroso, Nicholas Stafford, Beth Tellman, Lei Fang, Jorge Cazares-Rodriguez, Vivianna Gamez Molina, Tiantian Xiang, Megan Wheeler, Nicole Templeton, Adam Schreiner-McGraw, Ivan Lopez-Castrillo, Manikanteswar Ramineni, Yonatan Ratner, Elizabeth Rockwell, Zebadiah Teichert, Alex Albretch, Danielle Smilovsky, Mercedes Kinder, Danielle Smilovsky, Brett McDaniel, Zachary Keller, Josh Cederstrom, Eli Perez-Ruiz, Eric Escoto, Luisa Orci Fernandez, Kristen Whitney, Evan Grace, Nicholas Reichman, Zhaocheng Wang, Charles Kimsal, Maria Menchu Maldonado, Ruby Hurtado.

Previous postdoctoral researchers: Mekonnen Gebremichael, Ricardo Mantilla, Soni Yatheendradas, Agustin Robles-Morua, Hernan Moreno, Giuseppe Mascaro, Tiantian Xiang, Vivian Verduzco, Theodore Bohn, Mu Xiao, Kristen Whitney, Xiangmin Sun, Haowen Yue.

Previous committee membership: Chris Haley, Renee Sandvig, Huade Guan, Geoffrey Marshall, Setsuko Shindo, Sung-ho Hong, Heather Lacey, Nicole Alkov, Jesus Gomez, Elizabeth Bastien, Ashish Sharma, Carlos Ramirez, Maceo Martinet, Alejandro Flores, Giuseppe Mascaro, Gautam Bisht, Agustin Robles-Morua, Rebecca Hale, Alejandro Riano, Jacelyn Rice, Scott Robinson, Nikki Wearth, Adriana Ruiz, Cassandra Johnson, Matthew Hann, George Whitten, Nicholas Stafford, Joshua Steele, Matthew Rossi, Christina Wong, Matt Jungers, Shannon Hutchings, Valeria Benson-Lira, Todd Livermore, Seth Morales, Yucong Ling, Barrett Salisbury, Yizhou Li, Heather Kropp, Faisal Alfaisal, Lei Fang, Jianhu Liu, Jiyun Song, Carlos Ramirez, Ruby Upreti, Jorge Ramos, Olivia Brancati, Amelia Ochsenbein, Amoryn Smith, Brock Wilson, Ara Ko, Chris Nytch, Mayra Gaxiola Morales, Yalina Montecelos, Francisco Del Toro, Nari Miller, Pengfei Zhang, Javier Navarro, Melissa Wagner, Abdinur Hussein, Gustavo Gonzalez-Moraga, Peiyuan Li, Xin Guan, Jon Hagstrom, Julia Zimmerman, Behshad Mohajer, Sahar Koohbor, Katie Pascavis, Fransiska Kangombe, Mariam Fonseca Hernandez, Madeline Buhman.

15. STAFF SUPERVISION:

Summary: *E.R.V. has supervised staff members within various offices at ASU.*

ASU Graduate College (2019-2021): RoniSue Lee (Specialist), Peggy Reid (Administrative Assistant), Heather Fauland (Program Manager), Wiley Larsen (Program Manager)

Center for Hydrologic Innovations: Vivian Hobbins (Senior Program Manager, 2023-present), Alexa Bolla (Administrative Assistant, 2023-present), Jason Jedinak (Laboratory Manager, 2024), Callahan Stormer (Research Software Engineer, 2024-present), Nidia Rojas-Robles (Assistant Research Professor, 2024-present), Efrain Vizuete-Jaramillo (Laboratory Manager, 2024-present).

16. INVITED PRESENTATIONS:

1. Vivoni, E.R. 2001. New Technologies for Environmental Engineering and Water Resources. Presentation at CSA Group, Inc. San Juan, Puerto Rico.
2. Vivoni, E.R. 2001. Environmental Engineering and GIS. Masters of Engineering Course Seminar: Invited Lecture. Massachusetts Institute of Technology. Cambridge, MA
3. Bras, R.L., Vivoni, E.R. and Ivanov, V.Y. 2001. Thirty Years of Flood Forecasting with John Schaake: Latest Advances in Distributed Modeling. AGU Fall Meeting. San Francisco.
4. Ivanov, V., Vivoni, E.R., Bras, R.L. and Entekhabi, D. 2001. Development of a Distributed Hydrologic Model using Triangulated Irregular Networks for Continuous, Real-Time Flood Forecasting. AGU Spring Meeting. Boston, MA.
5. Vivoni, E.R. 2002. Real-time field data streaming: Development, testing and application in the Williams River watershed, Australia. Microsoft Corporation. Redmond, WA.

6. Bras, R.L., Ivanov, V.Y., Vivoni, E.R. and Entekhabi, D. 2002. Simulating the Spatial Distribution of Hydrologic Processes with a TIN-based Model. AGU Spring Conference. Washington, DC.
7. Vivoni, E.R. 2002. Incorporating Advanced Sensing and Modeling Tools into Environmental and Water Resources Research. Georgia Tech. Civil and Environmental Engineering, Atlanta, GA.
8. Vivoni, E.R. 2002. Emergency Response to Water-borne Disasters: A New Technology for Field Data Streaming. ATEEC Fellows Institute, University of Northern Iowa, IA.
9. Vivoni, E.R. 2003. Incorporating the spatial variability in topography, rainfall and hydrology within a watershed model. Rice University. Dept. Civil and Environmental Engineering. Houston, TX.
10. Vivoni, E.R. 2003. High-resolution, multi-scale modeling of watershed hydrology: An opportunity to integrate remote sensing observations, field data collection and distributed modeling in a hydrologic observatory. CUAHSI Cyberseminar Distinguished Invited Lecture.
11. Bras, R.L., Vivoni, E.R., Ivanov, V.Y. and Entekhabi, D. 2003. Coupled surface-subsurface response to rainfall: Runoff nonlinearity and scale-dependence in a topographically complex catchment. AGU Fall Conference, San Francisco, CA.
12. Vivoni, E.R. 2003. High-resolution, multi-scale modeling of watershed hydrology. Geophysical Fluid Dynamics Institute. Florida State University. Tallahassee, FL.
13. Vivoni, E.R., Teles, V., Ivanov, V.Y., Bras, R.L. and Entekhabi, D. 2003. Embedding landscape processes into triangulated irregular networks for distributed hydrogeomorphic modeling. EGS XXV General Assembly. Nice, France.
14. Vivoni, E.R., Ivanov, V.Y., Bras, R.L., Nardi, F. and Grimaldi, S. 2004. CNR-MIT Summer Course on Distributed Hydrologic Modeling with Geospatial Data and Tools. University of Rome "La Sapienza".
15. Vivoni, E.R. 2004. Watershed Hydrology Impacts of Vegetation Change: Data Collection, Distributed Modeling and Data Assimilation. SAHRA 4th Annual Conference, Albuquerque, NM.
16. Vivoni, E.R. 2004. Integrative, fine-resolution modeling in the Río Grande: Physical Realism, Model Coupling and Data Integration. SAHRA 4th Annual Conference, Albuquerque, NM.
17. Vivoni, E.R. 2004. Climate Variability, Vegetation Change and Hydrology in the Southwestern United States. SACNAS National Conference. Austin, TX.
18. Vivoni, E.R. 2005. Analysis of a Monsoon Flood Event in a Regional Semiarid Watershed. Hydrology and Water Resources Department, University of Arizona, Tucson, AZ.
19. Vivoni, E.R., Bowman, R.S., Wyckoff, R.L., Jakubowski, R. T. and Richards, K. 2005. A Monsoon Flood Event in the Rio Puerco and its Downstream Effects on Surface and Groundwater Interactions in the Rio Grande. New Mexico Tech, Socorro, NM.
20. Vivoni, E.R., Gutiérrez, H.A., Aragón, C.A., Rinehart, A., Wyckoff, R., Watts, C.J., Rodríguez, J.C. and Jackson, T.J. 2005. Hydrologic and Meteorological Characteristics of the North American Monsoon over Complex Terrain in Northern Sonora, Mexico. New Mexico Tech, Socorro, NM.
21. Vivoni, E.R. 2005. A Monsoon Flood Event in the Rio Puerco and its Downstream Effects on Surface and Groundwater Interactions in the Rio Grande. Department of Earth and Planetary Science. University of New Mexico, Albuquerque, NM.
22. Vivoni, E.R. 2005. Hydrology of Semiarid Regions with Monsoon Climates: Observations, Processes and Models. Department of Civil and Environmental Engineering. University of Illinois at Urbana-Champaign. Champaign, IL.
23. Istanbulluoglu, E., Vivoni, E.R, Ivanov, V.Y. and Bras, R.L. 2005. Comprehensive Representation of Hydrologic and Geomorphic Process Coupling in Numerical Models: Internal Dynamics and Basin Evolution. American Geophysical Union, Fall Conference, San Francisco, CA.

24. Bras, R.L., Ivanov, V.Y. and Vivoni, E.R. 2005. Topographic Influence on Vegetation Distribution: A Distributed Hydrologic Model with Vegetation Dynamics. American Geophysical Union, Fall Conference, San Francisco, CA.
25. Vivoni, E.R. 2006. Ecohydrology of seasonally-green desert landscape. CNR-MIT Summer School on Landscape form and processes: Models and applications in watershed analysis. Viterbo, Italy
26. Vivoni, E.R. and Gebremichael, M. 2006. Improved Understanding of North American Monsoon Hydrometeorology through Integration of Field Campaigns, Remote Sensing and Numerical Modeling. American Geophysical Union, Spring Conference, Baltimore, MD.
27. Vivoni, E.R. 2007. Landscape Organization and its Control on Runoff Processes. UCLA Department of Civil and Environmental Engineering. Los Angeles, CA.
28. Vivoni, E.R. 2007. Anticipated Modifications to Hydrological Processes due to Climate Change. EPSCOR Planning Meeting II. Las Cruces, NM.
29. Vivoni, E.R. 2007. Ecohydrology of Seasonally-Green Desert Landscapes. Princeton University, Princeton, NJ.
30. Vivoni, E.R. 2007. Ecohydrology of Seasonally-Green Desert Landscapes. Massachusetts Institute of Technology, Cambridge, MA.
31. Vivoni, E.R., Yatheendradas, S., Mendez-Barroso, L. A., Mantilla, R., Saiz-Hernandez, J., Garatuza-Payan, J., Rodriguez, J.C., Watts, C.J. and Gochis, D.J. 2007. An Incremental and Interactive Process for Watershed Characterization and Modeling: A Case Study in Southwestern North America. American Geophysical Union, Fall Conference, San Francisco, CA.
32. Vivoni, E.R. 2007. Ecohydrology of Seasonally-Green Desert Landscapes. Universita degli Studi di Cagliari, Cagliari, Sardinia, Italy.
33. Vivoni, E.R. 2007. Ecohydrology of Seasonally-Green Desert Landscapes. Arizona State University, Tempe, AZ.
34. Vivoni, E.R. 2007. Landscape Organization and its Control on Runoff Processes. H2CU-NMT Short Course on GIS Terrain Analysis. Columbia University, New York, NY.
35. Vivoni, E.R. 2007. Ecohydrology of Seasonally-Green Desert Landscapes. University of Connecticut, Storrs, CT.
36. Vivoni, E.R. 2007. Ecohydrology of Seasonally-Green Desert Landscapes. University of Texas at Austin, Austin, TX.
37. Wilson, J.L, Phillips, F. M., Bowman, R.S., Hendrickx, J.M.H., and Vivoni, E.R. 2007. Evolution of Hydrological Science: The New Mexico Tech Example. Geological Society of America Annual Meeting, Denver, CO.
38. Vivoni, E.R. 2008. Ecohydrology of Seasonally-Green Desert Landscapes. Stanford University, Stanford, CA.
39. Vivoni, E.R. 2008. Ecohydrology of Seasonally-Green Desert Landscapes. University of Washington, Seattle, WA.
40. Vivoni, E.R. 2008. Ecohydrological Studies and Watershed Modeling. Jornada Experimental Range, Las Cruces, NM.
41. Vivoni, E.R. 2008. Ecohydrology of Seasonally-Green Desert Landscapes. University of Nevada-Reno, Reno, NV.
42. Vivoni, E.R. 2008. Ecohydrology of Seasonally-Green Desert Landscapes. Texas A&M, College Station, TX.
43. Vivoni, E.R. 2009. Ecohydrology of Seasonally-Green Systems of Southwestern North America. University of Arizona, Tucson, AZ.

44. Vivoni, E.R. 2009. Estudios Ecohidrológicos en Cuencas de la Región del Monzón Mexicano: Integración de observaciones de campo con modelos distribuidos de ecohidrologia. Universidad de Guadalajara, Guadalajara, Jalisco, Mexico.

45. Vivoni, E.R. 2009. Insights on the Ecohydrology of the North American Monsoon region. Central Arizona-Phoenix, Long Term Ecological Research. Tempe, AZ.

46. Vivoni, E.R. 2009. Exploring the Hydrosphere: Using High Performance Computing and Distributed Data Sources for Hydrologic Forecasting. CISCO Planetary Skin Meeting. Tempe, AZ.

47. Vivoni, E.R. 2009. Exploring the Effects of Initial Soil Moisture on Rainfall Generation and Hydrologic Response through Physically-based Models. ASU Center for Environmental Fluid Mechanics. Tempe, AZ.

48. Vivoni, E.R. 2009. Climate Impacts on Tributary Flows: Using System Dynamics for River Basin Planning and Management in Participatory Environments. ASU Water Sim Meeting. Tempe, AZ.

49. Vivoni, E.R. 2009. Aspect Controls on Ecogeomorphology and Radiation Fluxes of a Semiarid Basin. University of Arizona, Tucson, AZ.

50. Vivoni, E.R. 2009. Integrated Water Resources Management at the Watershed Scale. ASU-Tec de Monterrey Water Innovation Consortium Meeting. Tempe, AZ.

51. Vivoni, E.R. 2010. Ecohydrology of the North American Monsoon Region. ASU School of Sustainable Engineering and the Built Environment, Tempe, AZ.

52. Vivoni, E.R. 2010. The Challenge of Fully-Predictive Hydrologic Models Supported by Observations: Recent Experiences and Prospects in Semiarid Systems. American Geophysical Union Fall Meeting, San Francisco, CA.

53. Vivoni, E.R. 2010. Ecohydrology of the North American Monsoon Region. ASU School of Geographical Sciences and Urban Planning, Tempe, AZ.

54. Vivoni, E.R. and Mascaro, G. 2011. Soil Moisture Downscaling Across Climate Regions and its Emergent Properties. Jet Propulsion Laboratory, Pasadena, CA.

55. Vivoni, E.R., Hawkins, G.A. and Baish, A.S. 2011. Hydrologic Modeling as a Decision Support and Engagement Tool. Decision Center for a Desert City. Tempe, AZ.

56. Vivoni, E.R. 2011. The Challenge of Fully-Predictive Hydrologic Models Supported by Observations: Recent Experiences and Prospects in Semiarid Systems. U. Notre Dame, South Bend, IN.

57. Vivoni, E.R. and Mahmood, T.H. 2011. Hydrologic Transitions in Forested Landscapes: Insights from Hillslope Modeling. University of Arizona Critical Zone Observatory Meeting, Tucson, AZ.

58. Vivoni, E.R. 2011. Retos de la modelacion distribuida apoyada por datos de campo en cuencas semiaridas. Jornadas de presentacion del proyecto Modelacion hidrologica en zonas semiaridas. Murcia, Spain.

59. Vivoni, E.R. 2012. Integrating Spatial Techniques for Rangeland Ecohydrology in the Desert Southwest. U.S. Arid Land Agricultural Research Center, Maricopa, AZ.

60. Vivoni, E.R. 2012. A Distributed Hydrological Model in a Parallel Computing Environment for the Southwest. JE Fuller Hydrology & Geomorphology, Tempe, AZ.

61. Vivoni, E.R. 2012. The Challenge of Distributed Hydrologic Models Supported by Observations. CUAHSI 3rd Biennial Colloquium on Hydrologic Science and Engineering. Boulder, CO.

62. Mahmood, T.H. and Vivoni, E.R. 2012. Hydrologic Spatial Patterns in a Semiarid Ponderosa Pine Hillslope. National Hydrologic Research Centre, Saskatoon, SK, Canada.

63. Vivoni, E.R. and Hawkins, G. 2012. Hydrologic Modeling as a Decision Support and Engagement Tool. Decision Center for a Desert City, Tempe, AZ.

64. Vivoni, E.R. and collaborators. 2012. Cloud Computing-based Delivery of Drought Information at Multiple Scales. NASA Applied Sciences Program Water Resources, Mountain View, CA.

65. Pierini, N.P. and Vivoni, E.R. 2013. Watershed Dynamics and the Role of Vegetation Management on the Santa Rita Experimental Range. Santa Rita Discovery Saturday, Green Valley, AZ.

66. Vivoni, E.R., Volo, T.J. 2013. Can We Improve Urban Irrigation: Results from Modeling at the NDV Landscape Experiment. CAP-LTER Community Meeting, Tempe, AZ.

67. Vivoni, E.R., Pierini, N.A., Schreiner-McGraw, A., Anderson, C.A., Saripalli, S., and Rango, A. 2013. Fusing Unmanned Aerial Vehicle Imagery with High Resolution Hydrologic Modeling. AGU Fall Meeting, San Francisco, CA.

68. Vivoni, E.R. 2013. Ecohydrology: Basic Concepts and Some Applications in Desert Systems. Arizona Hydrological Society Phoenix Chapter, Tempe, AZ.

69. Vivoni, E.R. 2013. Advancing Hydrologic Science and Engineering to Address Water Resources Sustainability in the Southwest US and Northwest Mexico. Adapting to a Water-Stressed West, AAAS Southwest and Rocky Mountain Division, Tempe, AZ.

70. Pierini, N.P. and Vivoni, E.R. 2014. Using Observations and a Distributed Hydrologic Model to Explore Runoff Thresholds Linked with Mesquite Encroachment in the Sonoran Desert. USDA ARS Southwest Hydrology Research Lab, Tucson, AZ.

71. Vivoni, E.R. 2014. Ecohydrology with Unmanned Aerial Vehicles. Jornada Symposium and Ecology Short Course, Las Cruces, NM.

72. Vivoni, E.R. 2014. Terrain-Vegetation-Atmosphere Interactions during the North American Monsoon. American Geophysical Union Fall Meeting, San Francisco, CA.

73. Vivoni, E.R. 2014. Towards Fully Integrated Natural and Virtual Hydrologic Laboratories. American Geophysical Union Fall Meeting, San Francisco, CA.

74. Vivoni, E.R. 2014. Terrain-Vegetation-Atmosphere Interactions during the North American Monsoon. University of Arizona Atmospheric Sciences Department, Tucson, AZ.

75. Vivoni, E.R. 2015. Successes, Failures and Challenges of Land Surface Modeling in the North American Monsoon Region. 3rd Annual Regional Climate and Meteorology Meeting of the Northwest Mexico and the Southwest U.S., Mexico City, Mexico.

76. Vivoni, E.R. 2015. Linking a Dynamically-Downscaled Climate Change Projection with a Distributed Hydrologic Model to Determine Changes in Summer Hydrologic Conditions in a Semiarid Watershed of Central Arizona. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Mexico.

77. Vivoni, E.R. and Bohn, T.J. 2015. Fuentes Terrestres de Evapotranspiracion en el Noroeste de Mexico. Centro de Investigaciones Cientificas y Educacion Superior de Ensenada, Ensenada, Mexico.

78. Vivoni, E.R. 2015. Watershed Ecohydrology and Land-Atmosphere Interactions at Jornada LTER. NSF Site Review at Jornada LTER, Las Cruces, NM.

79. Vivoni, E.R. 2015. Hyperresolution Hydrologic Modeling Supported by Sensing Platforms. Hydrologic Research Center, San Diego, CA.

80. Vivoni, E.R. and Bohn, T.J. 2015. Fuentes Terrestres de Evapotranspiracion en el Noroeste de Mexico. Universidad Autonoma de Baja California, Mexicali, Mexico.

81. Vivoni, E.R. and Bohn, T.J. 2016. Terrestrial Sources of Evaporation in the Southwest U.S. and Northwest Mexico. University of California at Irvine, Irvine, CA.

82. Vivoni, E.R. and Bohn, T.J. 2016. Terrestrial Sources of Evaporation in the Southwest U.S. and Northwest Mexico. University of Michigan, Ann Arbor, MI.

83. Vivoni, E.R., Pierini, N.A., Schreiner-McGraw, A.P., Anderson, C.A., Rivera, G., Saripalli, S., Mendez-Barroso, L.A., de la Llata, E., Laliberte, A.S. and Rango, A. 2016. Ecohydrology with Unmanned Aerial Vehicles. AAAS Annual Meeting. Washington, DC.

84. Bohn, T.J. and Vivoni, E.R. 2016. Enhancing the Variable Infiltration Capacity Model to Account for Natural and Anthropogenic Impacts on Evapotranspiration in the North American Monsoon Region. NLDAS Monthly Teleconference, Silver Springs, MD.

85. Bohn, T.J., Mascaro, G., Vivoni, E.R. and White, D. 2016. Recent Changes in Land Cover, Land Use and Hydrology Along the US-Mexico Border: Implications of NAFTA. Symposium in Honor of Professor Eric F. Wood: Observations and Modeling Across Scales. Princeton, NJ.

86. Vivoni, E.R. 2016. Modelación Hidrológica de Cuencas de Alta Resolución: Aplicaciones en Mexico. Centro de Investigaciones Cientificas y Educacion Superior de Ensenada, Ensenada, Mexico.

87. Vivoni, E.R. and Bohn, T.J. 2016. Terrestrial Sources of Evaporation in the Southwest U.S. and Northwest Mexico. Scripps Institution of Oceanography, San Diego, CA.

88. Vivoni, E.R. 2016. El Impacto del Cambio de Uso de Suelo sobre las Fuentes Terrestres de Evapotranspiración y sus Implicaciones Transfronterizas. Colegio de la Frontera Norte, Tijuana, Mexico.

89. Vivoni, E.R. 2016. Hydrometeorological Networks in North American Monsoon Region. UC-Mexus Hydromet Meeting, San Diego, CA.

90. Vivoni, E.R. and Bohn, T.J. 2016. Impacts of Land Cover Change on Water Cycle of Southwest US and Northwest Mexico. UC-Mexus Hydromet Meeting, San Diego, CA.

91. Vivoni, E.R. 2016. Determining the Flux Footprint of Eddy Covariance Measurements and their Characterization using High-Resolution Data. Centro de Investigaciones Cientificas y Educacion Superior de Ensenada, Ensenada, Mexico.

92. Vivoni, E.R. 2016. Using Unmanned Aerial Vehicles for Deriving Landscape Characteristics at High-Resolution in Numerical Modeling Applications. Soil Science Society of America Annual Meeting, Phoenix, AZ.

93. Vivoni, E.R. 2016. Measuring Distributed Land Surface States within the Flux Footprint Improves Land-Atmosphere Relations in Two Semiarid Ecosystems. AGU Fall Meeting, San Francisco, CA.

94. Robles-Morua, A., Diaz-Caravantes, R., Navarro, J., Vivoni, E.R., Whitney, K. and Montoya-Laos, J. 2016. Spatial and Temporal Vulnerability to Urban Heat in Hermosillo, Sonora. School of Transborder Studies, Arizona State University, Tempe, AZ.

95. Vivoni, E.R. 2017. Terrestrial Sources of Evapotranspiration and the Effects of Land Cover Change on the US-Mexico Border Region. University of California, Riverside, CA.

96. Schreiner-McGraw, A.P., Vivoni, E.R., Anderson, C.A. and Templeton, R.C. 2017. Measurements of Evapotranspiration and its Relation to Land Surface States in a Semiarid Shrubland in New Mexico. New Mexico State University. Las Cruces, NM.

97. Vivoni, E.R. 2017. Environmental Science with Unmanned Aerial Vehicles. ASU Sundial Project, Tempe, AZ.

98. Vivoni, E.R. and Cazares-Rodriguez, J. 2017. Comparison of Watershed Modeling Approaches for Stakeholder-Driven Flood Mitigation Strategies. Hydrosystems Engineering Seminar, Tempe, AZ.

99. Vivoni, E.R. 2018. Channel Transmission Losses and Streamflow Yield in Arid Piedmont Slopes. Department of Geological Sciences, University of Texas at El Paso, El Paso, TX.

100. Vivoni, E.R. 2018. Channel Transmission Losses and Streamflow Yield in Arid Piedmont Slopes. Arizona Hydrological Society Phoenix Chapter Meeting, Tempe, AZ.

101. Vivoni, E.R. 2018. Channel Transmission Losses and Streamflow Yield in Arid Piedmont Slopes. Ben Gurion University Special Seminar, Beersheba, Israel.

102. Vivoni, E.R. 2018. Perspectivas sobre las Herramientas para el Estudio del Impacto del Cambio Climatico sobre los Recursos Hidricos del Rio Sonora. 8vo Congreso Nacional de Investigacion en Cambio Climatico. Universidad de Sonora, Hermosillo, Sonora, Mexico.

103. Vivoni, E.R. 2019. La Problematica del Agua en la Region Trasfronteriza. Tec de Monterrey, Campus Sonora Norte, Hermosillo, Sonora, Mexico.

104. Vivoni, E.R. 2019. ¿Ha impactado el TLCAN los recursos de agua y uso del suelo en la frontera de México y Estados Unidos.? Webinario Union Geofisica Mexicana.

105. Vivoni, E.R. 2019. Proyectos de Sustentabilidad y Agua como Eje Transversal. Universidad Autonoma de Chihuahua, Chihuahua, Chihuahua, Mexico.

106. Vivoni, E.R. 2019. What can distributed hydrologic models offer to environmental agencies? Arizona Department of Environmental Quality, Phoenix, AZ.

107. Vivoni, E.R. 2019. Modeling Climate Change and Forest Management of the Salt-Verde River Systems. Salt River Project, Tempe, AZ.

108. Vivoni, E.R. 2019. Distributed Hydrologic Modeling for Watershed-Scale Flood Forecasting and Impact Assessments. National Weather Service and Salt River Project, Tempe, AZ.

109. Vivoni, E.R., Mahmoud, M., White, D.D., Mascaro, G., Quay, R., Whitney, K.M, Bohn, T.J., Wang, Z., and Cullom C. 2020. Long Range Scenario Modeling of the Colorado River Basin. California Water & Environmental Modeling Forum Annual Meeting, Folsom, CA.

110. Vivoni, E.R. 2020. Urban Parks as Oases during Heat Waves. Directors Lecture Series, SSEBE, Tempe, AZ.

111. Vivoni, E.R. 2020. Los Oasis Urbanos en el Desierto de Sonora - Soluciones y sustentabilidad. Tec de Monterrey, Campus Sonora Norte, Hermosillo, Sonora, Mexico.

112. Vivoni, E.R. 2021. The Urban Oasis Effect in Phoenix. Hydrosystems Engineering Seminar Series. Tempe, AZ.

113. Vivoni, E.R. 2021. Evidence of the Urban Oasis Effect and its Implications on the Carbon Budget. School of Geographical Sciences and Urban Planning, Arizona State University, Tempe, AZ.

114. Vivoni, E.R. 2021. Water, Carbon and Energy Fluxes in an Urban Park in Phoenix. CAP-LTER, Arizona State University, Tempe, AZ.

115. Vivoni, E.R. 2021. Moving Distributed Hydrologic Modeling Towards Watershed Management Application. USGS Arizona Water Science Center, Tucson, AZ.

116. Vivoni, E.R. 2021. Mobilizing Knowledge: Overview, In Action and How You Can Do It! Graduate and Professional Student Association Research Meeting, Tempe, AZ.

117. Vivoni, E.R. 2021. Hydrology of Arid Piedmonts in the Southwest US, GLG 301 Earth Science in AZ and the Southwest US, Tempe, AZ.

118. Vivoni, E.R. 2022. Remote Sensing for Characterization of Water in Arid Floodplains. Keynote Address to Arizona Floodplain Managers Association, Tempe, AZ.

119. Vivoni, E.R. 2022. Water Resources Sustainability along the US-Mexico Border Region. Department of Geography Seminar, University of California, Los Angeles, Los Angeles, CA.

120. Vivoni, E.R. 2022. Streamflow Presence and Flood Hazard Detection in Arid Rivers. Pima County Regional Flood Control District, Tucson, AZ.

121. Templeton, N.P., and Vivoni, E.R. 2022. Long-Range Scenario Modeling of the Colorado River Basin. Central Arizona Project Board Presentation, Phoenix, AZ.

122. Vivoni, E.R. 2022. Long-Range Scenario Modeling of the Colorado River Basin. Southwest Water Resiliency Conference, Phoenix, AZ.

123. Vivoni, E.R. 2022. Water, Heat and Other Considerations for Urbanism. RSP, Tempe, AZ.

124. Vivoni, E.R. 2022. Long-term Water-Carbon Measurements in Two Watershed Sites along the US-Mexico Border. XIII Simposio Internacional del Carbono en Mexico, Xalapa, Mexico (Virtual).

125. Vivoni, E.R. 2023. El Uso de Una Constelacion de Satelites para Estudiar la Hidrologia en Zonas Aridas. Universidad Autonoma de Chihuahua. Chihuahua, Chihuahua (Virtual).

126. Vivoni, E.R. 2023. An Introduction to the Center for Hydrologic Innovations. Arizona State University ASCE Luncheon. Tempe, AZ.

127. Vivoni, E.R. 2023. El Uso de Una Constelacion de Satelites para Estudiar la Hidrologia en Zonas Aridas. Universidad Autonoma de Baja California Sur. La Paz, BC Sur (Virtual).

128. Vivoni, E.R. 2023. Scenarios of Future Colorado River Basin Water Supplies. Resilient Agriculture Exploratory Scenario Workshop. Grand Junction, CO.

129. Vivoni, E.R. 2023. Tracing Architecture Podcast on Arizona Water. Tempe, AZ.

130. Vivoni, E.R. 2023. Pulso y Pendulo Podcast on Arizona Water. Miami, FL (Virtual),

131. Vivoni, E.R. 2023. Engaging Water Managers in the Future of the Colorado River Basin. Northern Arizona University School of Earth and Sustainability Seminar, Flagstaff, AZ.

132. Vivoni, E.R. 2023. Managing the Colorado River as an Infrastructure Asset. Colorado River Hydrology and Climate Working Group. Salt Lake City, UT.

133. Wang, Z. and Vivoni, E.R. 2023. Improved Snow-Rainfall Partitioning Method in VIC. Colorado River Hydrology and Climate Working Group. Salt Lake City, UT.

134. Vivoni, E.R. 2024. Ten Across Conversations / Climate Now Podcast. Tempe, AZ (Virtual).

135. Vivoni, E.R. 2024. Dinámicas de Agua y Carbono en Dos Cuencas Experimentales de la Frontera Estados Unidos y México. Seminario en el Instituto de Ecología. Universidad Nacional Autónoma de México, Ciudad México, México.

136. Vivoni, E.R. 2024. Un Verano Sin Ti: Sequia y Calor en México. Coloquio en el Instituto de Ecología. Universidad Nacional Autónoma de México, Ciudad México, México.

137. Vivoni, E.R. 2024. Hydrologic Innovations For Public Benefits. Coloquio en el Tecnologico de Monterrey, Monterrey, México.

138. Vivoni, E.R. 2024. Mathematical Modeling of Forested Watersheds under Disturbances. Quantitative Research in the Life and Social Sciences Program. Tempe, AZ.

139. Vivoni, E.R. 2024. Monitoring Water Supplies and Demands in Desert Cities. Planetology Webinar, Planet Labs. San Francisco, CA (Virtual).

17. CONFERENCE PRESENTATIONS:

1. Vivoni, E.R. 1997. A drag and diffusivity model for emergent vegetation. US/Japan Seminar on the Environment. Crested Butte, CO.

2. Nepf, H.M. and Vivoni, E.R. 1998. Drag and Diffusivity in Emergent Vegetation. ASCE Wetlands Engineering and River Restoration Conference. Denver, CO.

3. Nepf, H.M. and Vivoni, E.R. 1999. Flow Structure in Depth-Limited, Vegetated Flow: Transition between emergent and submerged regimes. IAHR XXVIII Congress, Graz, Austria.

4. Hoffman, R.N., Entekhabi, D., Grassotti, C. and Vivoni, E.R. 2000. Real-time distributed hydrometeorological forecasting using NEXRAD data. AGU Spring Meeting. Washington, D.C.

5. Bras, R.L., Ivanov, V.Y., Vivoni, E.R. and Entekhabi, D. 2001. The value of distributed modeling to flood forecasting. NASA Land Surface Hydrology Program Meeting. Poster. Potomac, MD.

6. Grassotti, C., Hoffman, R.N., Vivoni, E.R., Entekhabi, D. and Ivanov, V. 2001. NEXRAD-Based Precipitation Products: Validation and Application within a Hydrological Prediction Model. 7th International Precipitation Conference. Samoset Resort, Rockport, ME.

7. Vivoni, E.R. and Sheehan, D.D. 2001. Using NEXRAD Rainfall Data in an ArcView GIS-based Hydrology Model as an Educational Tool. ESRI International User Conference. San Diego, CA.

8. Vivoni, E.R., Grassotti, C., Ivanov, V.Y., Bras, R.L., Entekhabi, D. and Hoffman, R.N. 2001 Using NEXRAD-based QPEs and short-term QPFs in a TIN-based Distributed Hydrologic Model for Hydrologic Forecasting. AGU Fall Meeting. San Francisco.

9. Vivoni, E.R., Camilli, R., Rodríguez, M.A., Sheehan, D.D. and Entekhabi, D. 2002. Development of mobile computing applications for hydraulics and water quality field studies. Hydraulic Engineering Software IX. Montreal, CA.

10. Vivoni, E.R., Camilli, R., Rodríguez, M.A., Sheehan, D.D. and Frankel, S. 2002. Development of Software Tools for Environmental Field Studies using ArcPAD. ESRI International User Conference. San Diego, CA.

11. Grassotti, C., Vivoni, E.R., Hoffman, R.N. and Entekhabi, D. 2002. Hydrometeorological studies with NEXRAD-based precipitation products. AGU Spring Conference. Washington, DC.

12. Kolodziej, K., Tsou, C-H., Spieler, R., Agarwal, N., Richards, K., Lau, E., Camilli, R., and Vivoni, E.R. 2002. Real-time Field Data Mapping. URISA Annual Conference, Chicago, IL.

13. Vivoni, E.R. and Richards, K.T. 2002. GIS-based water quality sampling and modeling. American Water Resources Association Annual Meeting. Philadelphia, PA.

14. Bras, R.L., Ivanov, V.Y., Vivoni, E.R., Entekhabi. D. 2002. MIT TIN-based Real-time Integrated Basin Simulator. Distributed Model Intercomparison Project. Washington, DC.

15. Vivoni, E.R., Ivanov, V.Y., Bras, R.L., Entekhabi, D. 2002. Triangulated irregular networks and similarity in landscape processes. AGU Fall Conference. San Francisco, CA.

16. Van Horne, M.P., Vivoni, E.R., Entekhabi, D., Grassotti, C. and Hoffman, R.N. 2003. Short-term radar nowcasting for hydrologic applications over the Arkansas-Red River basin. 17th Conference on Hydrology. 83rd AMS Annual Meeting. Long Beach, CA.

17. Vivoni, E.R., Van Horne, M.P., Entekhabi, D., Grassotti, C. and Hoffman, R.N. 2003. Quantitative flood forecasts based on short-term radar nowcasting. 17th Conference on Hydrology. 83rd AMS Annual Meeting. Long Beach, CA.

18. Falorni, G., Vivoni, E.R., Teles, V. and Bras, R.L. 2003. Evaluating Shuttle Radar Topography Mission (SRTM) elevation products for hydrogeomorphic applications. EGS XXV General Assembly. Nice, France.

19. Ivanov, V.Y., Vivoni, E.R., Bras, R.L. and Entekhabi, D. 2003. Coupling hydrological processes within the framework of a TIN-based distributed model and experience in simulating long-term catchment dynamics. EGS XXV General Assembly. Nice, France.

20. Vivoni, E.R., Istanbulluoglu, E. and Bras, R.L. 2003. A Blueprint for an Integrated Watershed Hydrogeomorphic Modeling System. First Interagency Conference on Research in the Watersheds. Benson, AZ.

21. Vivoni, E.R. 2003. High resolution, multi-scale modeling of watershed hydrology. New Mexico Hydrologic Modeling Symposium. Socorro, NM.

22. Vivoni, E.R. 2003. High Performance, Multiple Resolution Modeling of Semi-Arid Hydrology at Regional Scales. SAHRA Annual Meeting. Tucson, AZ.

23. Vivoni, E.R., Istanbulluoglu, E. and Bras, R.L. 2003. Coupling catchment hydrology and landscape evolution: Interactive effects on hydrograph and basin shape. AGU Conference, San Francisco, CA.

24. Falorni, G., Teles, V., Vivoni, E.R.,Bras, R.L. and Istanbulluoglu, E., 2003. SRTM DEMs: Vertical accuracy, error characterization and methods for improving. AGU Conference, San Francisco, CA.

25. Tidwell, T., Brookshire, D., Chermak, J., Cockerill, K., Krumhans, J., Malczynski, L., Matthews, P., Paananen, O., Passell, H. and Vivoni, E.R. 2004. Options and consequences: Water banking/leasing explored for the Rio Grande in Southern New Mexico. UCOWR/NIWR Conference on Allocating Water: Economics and the Environment. Portland, OR.

26. Nardi, F., Vivoni, E.R., and Grimaldi, S. 2004. Caratterizzazione idrologica delle aree di inondazione tramite analisi di DEM. XXIX Convegno di Idraulica e Costruzioni Idrauliche. Trento, IT.

27. Falorni, G., Teles, V., Vivoni, E.R., and Bras, R.L. 2004. The vertical accuracy of SRTM DEMs: Analysis, Characterization, Effects and Methods for Improving. 32nd International Geological Congress, Florence, IT.

28. Haley, C.J., Vivoni, E.R., and Brister, B. S. 2004. Hydrogeological study of the coalbed methane resource in the Raton Basin, NM. New Mexico Geological Society Spring Meeting. Socorro, NM.

29. Thomson, B., Coonrod, J.A. and Vivoni, E.R. 2004. Development of the River Interaction & Observation (RIO) Field Laboratory. Consortium. Identifying Technologies to Improve Regional Water Stewardship Conference. Albuquerque, NM.

30. Xie, H., Hendrickx, J., Vivoni, E.R, and Zhou, X. 2004. Estimation of spatial-temporal monsoon rainfall amount, probability and frequency using archived NEXRAD Stage III data: New Mexico 1996-2003. ASPRS 2004 Annual Conference. Denver, Colorado.

31. Jakubowski, R.T., Richards, K., Bowman, R. S. and Vivoni, E.R. 2004. Interactions between the Rio Grande and the shallow aquifer system along the Bosque Riparian Corridor, New Mexico. American Water Resources Association Conference on Riparian Ecosystems and Buffers. Olympic Valley, CA.

32. Bowman, R.S., Dahm, C., Hendricks, J.M.H. and Vivoni, E.R. 2004. Combining land-based and satellite-based measurements for estimation of regional evapotranspiration. U.S.-Mexico Border Coalition of Resource Conservation & Development Districts Annual Meeting, Las Cruces, NM.

33. Gutierréz-Jurado, H.A., Vivoni, E.R., Aragón, C., Meier, D., and Díaz-Granados, A. 2004. Ecohydrological watershed characterization of semi-arid environments in New Mexico and Chihuahua, Mexico: A remote sensing and GIS approach. Second International Symposium on Transboundary Waters Management. Tucson, AZ.

34. Hong, S-H. and Vivoni, E.R. 2004. Ecohydrological Modeling of Grassland-Shrub-Tree Dynamics in the Sevilleta National Wildlife Refuge. New Mexico Water Research Conference. Socorro, NM.

35. Rittel, C. and Vivoni, E.R. 2004. Mapping geomorphic and hydrologic features from digital topography for the Rio Salado watershed. New Mexico Water Research Conference. Socorro, NM.

36. Rittel, C. and Vivoni, E.R. 2004. Geomorphic Mapping using Digital Terrain Algorithms along the Semi-arid Río Salado Watershed, New Mexico. Geological Society of America, Annual Meeting and Exposition. Denver, CO.

37. Vivoni, E.R., Ivanov, V.Y. and Bras, R.L. 2004. A coupled surface – subsurface hydrology model based on triangulated irregular networks: Distributed simulations in regional watersheds. Geological Society of America, Annual Meeting and Exposition. Denver, CO.

38. Bowman, R.S., Coonrod, J.E.A., Ferré, P.T.A, Hogan, J.F., Phillips, F.M., Rango, A., Rasmussen, R., Small, E.E., Springer, E.P. and Vivoni, E.R. 2004. A Semiarid Long-Term Hydrologic Observatory at the Continental Scale: The Upper Río Grande Basin. Geological Society of America, Annual Meeting and Exposition. Denver, CO.

39. Xie, H., Vivoni, E.R., Zhou, X. and Hendrickx, J.M.H. 2004. Rainfall Climatology of the Monsoon Season in New Mexico: Radar observations from NEXRAD Stage III (1996-2003). 85th American Meteorological Society Meeting. San Diego, CA.

40. Vivoni, E.R., Gutierrez, H. A., Brooks, B., Aragón, C. A., Rinehart, A., Wyckoff, R., Watts, C. J., Rodríguez, J. C. and Jackson, T. 2004. Topographic and Ecosystem Controls on Soil Moisture Distribution in the SMEX04-NAME Transect Study, Northern Sonora, Mexico. 85th American Meteorological Society Meeting. San Diego, CA.

41. Vivoni, E.R., Bowman, R. S., Wyckoff, R., Jakubowski, R. and Richards, K. 2004. Analysis of a Monsoon Flood Event in a Regional Semiarid Watershed. 85th American Meteorological Society Meeting. San Diego, CA.

42. Aragón, C.A. and Vivoni, E.R. 2004. System dynamics modeling of watershed tributary inflows to the Middle Rio Grande from Otowi to Elephant Butte, New Mexico. AGEP Annual Conference. Las Cruces, NM.

43. Ivanov, V.Y, Bras, R.L., Istanbulluoglu, E. and Vivoni, E.R. 2004. Aspects of radiation budget, subsurface lateral moisture exchange, and vegetation function in areas of complex topography. American Geophysical Union, Fall Conference, San Francisco, CA.

44. Wyckoff, R., Vivoni, E.R. and Rinehart, A. 2004. Fine-Resolution Hydrologic Modeling of Semiarid River Basins: Preliminary Results from Upper Rio Grande Subbasins. American Geophysical Union, Fall Conference, San Francisco, CA.

45. Hogan, J.F., Vivoni, E.R., Bowman, R.S., Coonrod, J.E.A, Thomson, B., Samani, Z., Ferré, P.T., Phillips, F.M., Rango, A., Rasmussen, R., Springer, E.S., Small, E.E. 2004. A Semiarid Long-Term Hydrologic Observatory at the Continental Scale: The Upper Río Grande Basin. American Geophysical Union, Fall Conference, San Francisco, CA.

46. Vivoni, E.R., Ivanov, V.Y, Bras, R.L., Entekhabi, D. 2004. On the effects of triangulated terrain resolution on distributed hydrologic model response. American Geophysical Union, Fall Conference, San Francisco, CA.

47. Bowman, R.S., Vivoni, E.R., Wyckoff, R., Jakubowski, R. and Richards, K. 2004. Analysis of a Monsoon Flood Event Effect on Surface and Groundwater Interactions in a Regional Semiarid Watershed. American Geophysical Union, Fall Conference, San Francisco, CA.

48. Gutiérrez, H.A., Vivoni, E.R., Aragón, C.A., Rinehart, A., Wyckoff, R., Watts, C.J., Rodríguez, J.C. and Jackson, T.J. 2004. Landscape Controls on Monsoon Soil Moisture Distribution in Northern Sonora, Mexico. American Geophysical Union, Fall Conference, San Francisco, CA.

49. Gutierrez-Jurado, H.A. and Vivoni, E.R. 2004. Preliminary Geospatial Assessment of Ecohydrological Variations in a Semiarid Catchment in the Sevilleta National Wildlife Refuge. SAHRA 4th Annual Conference, Albuquerque, NM.

50. Wyckoff, R. and Vivoni, E.R. 2004. Relationship Between the Pacific Decadal Oscillation, El Niño / Southern Oscillation, and Discharge in the Río Puerco Watershed New Mexico. SAHRA 4th Annual Conference, Albuquerque, NM.

51. Aragón, C. A. and Vivoni, E.R. 2004. System dynamics modeling of watershed tributary inflows to the Middle Rio Grande from Otowi Bridge to Elephant Butte Reservoir, New Mexico. SAHRA 4th Annual Conference, Albuquerque, NM.

52. Vivoni, E.R. 2004. Watershed Hydrology Impacts of Vegetation Change: Data Collection, Distributed Modeling and Data Assimilation. SAHRA 4th Annual Conference, Albuquerque, NM.

53. Vivoni, E.R. 2004. Integrative, fine-resolution modeling in the Río Grande: Physical Realism, Model Coupling and Data Integration. SAHRA 4th Annual Conference, Albuquerque, NM.

54. Vivoni, E.R. 2004. Climate Variability, Vegetation Change and Hydrology in the Southwestern United States. SACNAS National Conference. Austin, TX.

55. Gutierrez-Jurado, H.A., Ivanov, V.I., Vivoni, E.R., and Bras, R. L. 2005. Integrated approach to ecohydrology of semi-arid sites in areas of complex topography and biome transitions. American Geophysical Union, Spring Conference, New Orleans, LA.

56. Guan, H., Vivoni, E.R., Wilson, J.L. 2005. Effects of atmospheric teleconnections on seasonal precipitation in mountainous regions of the southwestern U.S.: A case study in northern New Mexico. New Mexico Water Research Conference. Socorro, NM.

57. Vivoni, E.R., Bowman, R.S., Wyckoff, R.L, Jakubowski, R.T. and Richards, K.E. 2005. Using observation networks to track a monsoon flood event in the Rio Puerco and its downstream effects. New Mexico Water Research Conference. Socorro, NM.

58. McGee, S., Reno, M., Aragón, C. and Vivoni, E.R. 2005. Amount and Variability in Tributary Inflows to the Rio Grande. New Mexico Water Research Conference. Socorro, NM.

59. Gutiérrez-Jurado, H.A., Vivoni, E.R., Harrison, J.B.J. and Guan, H. 2005. Ecohydrology of root zone water fluxes and soil development in a small drainage basin in central New Mexico. New Mexico Water Research Conference. Socorro, NM.

60. Wyckoff, R.L. and Vivoni, E.R. 2005. Paired Catchment Study for the Río Puerco Flood of September 2003. New Mexico Water Research Conference. Socorro, NM.

61. Rinehart, A.J., Vivoni, E.R., Frisbee, M., Aragón, C.A., Bisht, G., Cardenas, M.B., Forman, B., Gutierrez, H.A., Hong, S-H, Mendez, L.A., Tai, K., Wyckoff, R.L. 2005. Design and Implementation of a Hydrometeorological Field Campaign in the Valles Caldera, NM. New Mexico Water Research Conference. Socorro, NM.

62. Gutierrez-Jurado, H.A., Goodell, P.C., Vivoni, E.R. and M. Gebremichael. 2005. Temporal and spatial rainfall variability analysis of the Peña Blanca, Uranium District, Chihuahua, Mexico. Geological Society of America, Annual Meeting and Exposition. Salt Lake City, Utah.

63. Rinehart, A.J. and Vivoni, E.R. 2005. Numerical simulation of distributed snow processes in complex terrain utilizing triangulated irregular networks. American Geophysical Union, Fall Conference, San Francisco, CA.

64. Pullin, M.J., Vivoni, E.R., Harrison, J.B.J., Andrews, J. and Vargas, A. 2005. Rainfall in semiarid ecosystems: Coupled hydrology and biogeochemistry affect nitrogen cycling. American Geophysical Union, Fall Conference, San Francisco, CA.

65. Wyckoff, R.L. and Vivoni, E.R. 2005. Paired catchment modeling study for a monsoon flood event in neighboring semi-arid basins, New Mexico. American Geophysical Union, Fall Conference, San Francisco, CA.

66. Vivoni, E.R., Mniszewski, S., Fasel, P., Springer, E.S., Ivanov, V.Y., Bras, R.L. 2005. Parallelization of a Fully-Distributed Hydrologic Model using Sub-basin Partitioning. American Geophysical Union, Fall Conference, San Francisco, CA.

67. Gebremichael, M. and Vivoni, E.R. 2005. Spatiotemporal Variability of Precipitation over Complex Terrain during the North American Monsoon. American Geophysical Union, Fall Conference, San Francisco, CA.

68. Gutierrez-Jurado, H. and Vivoni, E.R. 2005. Aquifer Recharge Assessment from Surface Ecohydrological Conditions: A Spatial Analysis along an Ecotonal Gradient in New Mexico. American Geophysical Union, Fall Conference, San Francisco, CA.

69. Nardi, F., Vivoni, E.R. and Grimaldi, S. 2005. Investigating the Hydraulic Geometry of Floodplains Using a Hydrogeomorphic Delineation Method. American Geophysical Union, Fall Conference, San Francisco, CA.

70. Méndez-Barroso, L.A., Rinehart, A.J., Aragón, C.A., Bisht, G., Cardenas, M.B., Engle, E., Forman, B., Frisbee, M.D., Gutiérrez-Jurado, H.A., Hong, S-H., Tai, K., Wyckoff, R.L., Vivoni, E.R. 2005. Spatial and Temporal Analysis of Hydrometeorological Conditions in the Valles Caldera, New Mexico during the North American Monsoon. American Geophysical Union, Fall Conference, San Francisco, CA.

71. Hong, S.H., J.M.H. Hendrickx, J.B.J. Harrison, E. Vivoni and B. Borchers. 2005 Comparison of Two Methods for Root Zone Soil Moisture Estimation. Presentation in Pedometrics 2005, Naples, FL.

72. Rinehart, A.J. and Vivoni, E.R. 2005. Development of a TIN-Based Numerical Snow Model Prototype. SAHRA 5th Annual Conference, Tucson, AZ.

73. Vivoni, E.R. 2005. Distributed Observations and Modeling in the Valles Caldera: Science Questions, Field Campaign and Distributed Modeling. SAHRA 5th Annual Conference, Tucson, AZ.

74. Rinehart, A.J., Vivoni, E.R., Frisbee, M., Aragón, C.A., Bisht, G., Cardenas, M.B., Forman, B., Gutierrez, H.A., Hong, S-H, Mendez, L.A., Tai, K., Wyckoff, R.L. 2005. Design and Implementation of a Hydrometeorological Field Campaign in the Valles Caldera, NM. SAHRA 5th Annual Conference, Tucson, AZ.

75. Pullin, M.J.; Vivoni, E.R.; Harrison, J.B.J.; Andrews, J.; Vargas, A. 2005. Rainfall in Semiarid Ecosystems: Coupled Hydrology and Biogeochemistry Affect Nitrogen Cycling. Frontiers in the Exploration of the Critical Zone, Workshop.

76. Aragón, C.A., Malczynski, L.A., Vivoni, E. R., and Tidwell. 2006. Modeling Ungauged Tributaries using GIS and System Dynamics. 26th Annual ESRI International User Conference, San Diego, CA.

77. Mascaro, G., Vivoni, E.R., Gebremichael, M., and Deidda, R. 2006. Utility of downscaled precipitation fields for hydrological forecasts at the catchment scale. 2nd International Symposium on Quantitative Precipitation Forecasting and Hydrology, Boulder, CO.

78. Mascaro, G., Vivoni, E.R., Deidda, R. 2006. Utility of downscaled precipitation fields for ensemble hydrological forecasts at the catchment scale. Fourth European Conference of Radar Meteorology and Hydrology, Barcelona, Spain.

79. Grimaldi, S., Petroselli, A., Nardi, F. and Vivoni, E. R. 2006. Un approccio fisicamente basato per la correzione dei DEM. XXX Convegno di Idraulica e Costruzioni Idrauliche – IDRA. Trento, IT.

80. Vivoni, E.R. 2006. In Search of Organization and Complexity in Semiarid Mountain Regions with Monsoonal Climates. AGU Hydrology Days. Ft Collins, CO.

81. Vivoni, E.R. 2006. Spatiotemporal distribution of precipitation and soil moisture within the NAME-SMEX04 region. Monsoon Region Climate Applications: A Binational Workshop. Guaymas, MX.

82. Vivoni, E.R., Entekhabi, D. and Hoffman, R.N. 2006. Error Propagation from Radar Rainfall Nowcasting Fields to a Fully-Distributed Flood Forecasting Model. Fourth European Conference of Radar Meteorology and Hydrology, Barcelona, Spain.

83. Vivoni, E.R. 2006. Ecohydrology of seasonally-green desert landscape. CNR-MIT Summer School on Landscape form and processes: Models and applications in watershed analysis. Viterbo, Italy.

84. Dominguez, F., Kumar, P. and Vivoni, E.R. 2006. Precipitation recycling in the North American Monsoon Region. NAME SWG-8 Meeting. Tucson, AZ.

85. Tai, K., Vivoni, E. R. and Wyckoff, R. L. 2006. Evaluation and comparison of observed and modeled precipitation forcing to a distributed hydrological model to simulate a regional monsoon flood event. American Geophysical Union, Fall Conference, San Francisco, CA.

86. Aragón, C.A., Vivoni, E. R., Malczynski, L.A., Tidwell, V.C. and Gonzales, S. 2006. Modeling the contributions of ungauged tributaries to the Rio Grande: A system dynamics approach. American Geophysical Union, Fall Conference, San Francisco, CA.

87. Di Benedetto, F., Vivoni, E.R. and Grimaldi, S. 2006. Use of Hypsometric Analysis for a Classification of Basin Hydrological Response: Surface and Groundwater Partitioning. American Geophysical Union, Fall Conference, San Francisco, CA.

88. Gebremichael, M. and Vivoni, E.R. Do Distributed Hydrologic Models Capture Observed Spatial Scaling Properties of Soil Moisture Fields? American Geophysical Union, Fall Conference, San Francisco, CA.

89. Gutierrez-Jurado, H.A., Vivoni, E.R., Harrison, J.B.J, Turner, P., Bisht, G., Istanbulluoglu, E. and Bras, R.L. 2006. Analysis of an extreme monsoon event on the ecohydrologic and

geomorphologic conditions in a semiarid basin based on field instrumentation and reconnaissance. American Geophysical Union, Fall Conference, San Francisco, CA.

90. Santini, M., Petroselli, A., Nardi, F., Vivoni, E.R. and Grimaldi, S. 2006. A review of DEM-based flow direction characterization methods for hydrogeomorphic applications. American Geophysical Union, Fall Conference, San Francisco, CA.

91. Mascaro, G., Vivoni, E.R. and Deidda, R. 2006. Evaluation of Uncertainty in Nested Flood Forecasts by Coupling a Multifractal Precipitation Downscaling Model and a Fully-Distributed Hydrological Model. American Geophysical Union, Fall Conference, San Francisco, CA.

92. Istanbulluoglu, E., Vivoni, E.R., Gutierrez-Jurado, H. A. and Bras, R.L. 2006. On the topographic imprint of vegetation: Results from field observations and DEM analysis of small semiarid basins. American Geophysical Union, Fall Conference, San Francisco, CA.

93. Capolongo, D., Petroselli, A., Nardi, F., Vivoni, E. R. and Grimaldi, S. 2006. Evaluation of ASTER DEM for hydro-geomorphological applications. American Geophysical Union, Fall Conference, San Francisco, CA.

94. Forman, B.A., Vivoni, E.R. and Margulis, S.A. 2006. Ensemble-based Distributed Hydrological Modeling with Disaggregated Satellite-Derived Precipitation. American Geophysical Union, Fall Conference, San Francisco, CA.

95. Rinehart, A. J., Musselman, K., Brooks, P., Vivoni, E.R., and Molotch, N. 2006. Integrating Observations and Modeling of Snow-Vegetation Interactions: A Progress Report. SAHRA Annual Conference, Scottsdale, AZ.

96. Canalda, S.M., Osmer, E.M., Tapaha, F., Harrison, J.B.J., Vivoni E.R., Pullin, M.J. 2006. Rain-initiated biogeochemical cycling in semiarid environments. SACNAS Conference. Tampa, FL.

97. Mascaro, G., Deidda, R. and Vivoni, E.R. 2007. Development and verification of a hydrometeorological forecasting chain that couples a multifractal precipitation downscaling model and a fully-distributed hydrological model. EGU General Assembly, Vienna, Austria.

98. Mascaro, G, Deidda, R. and Vivoni, E.R. 2007. Verification of ensemble precipitation fields simulated by downscaling models by means of rank histograms. EGU General Assembly, Vienna, Austria.

99. Gebremichael, M. and Vivoni, E. R. 2007. Investigation of the Scaling Properties of Simulated Soil Moisture Fields. EGU General Assembly, Vienna, Austria.

100. Vivoni, E.R. 2007. Landscape Organization and its Control on Runoff Processes. UCLA Department of Civil and Environmental Engineering. Los Angeles, CA.

101. Vivoni, E.R. and Gutierrez-Jurado, H.A. 2007. Advances to Catchment Theory from Ecohydrological Patterns and Feedbacks in Complex Terrain. XXIV IUGG General Assembly, Perugia, Italy.

102. Vivoni, E.R. and Méndez-Barroso, L.A. 2007. Constraining Hydrologic Simulations with Remote Sensing in a Large-Scale Semiarid Basin with Monsoonal Climate. XXIV IUGG General Assembly, Perugia, Italy.

103. Mascaro, G., Vivoni, E.R. and Deidda, R. 2007. Testing the consistency hypothesis of the ensemble members forecasted by a statistical model for precipitation downscaling by means of the verification rank histogram. XXIV IUGG General Assembly, Perugia, Italy.

104. Mascaro, G., Vivoni, E.R. and Deidda, R. 2007. Uncertainty assessment of a hydrometeorological ensemble forecasting chain coupling a precipitation downscaling model and a distributed hydrological model. XXIV IUGG General Assembly, Perugia, Italy.

105. Noto, L.V., Ivanov, V.Y., Bras, R.L. and Vivoni, E.R. 2007. A physically-based and distributed approach to analyze soil erosion and rainfall triggered landslides at the watershed scale. XXIV IUGG General Assembly, Perugia, Italy.

106. Petroselli, A., Santini, M., Nardi, F., Grimaldi, S. and Vivoni, E.R. 2007. Flow direction methods in flat areas. XXIV IUGG General Assembly, Perugia, Italy.

107. Vivoni, E.R. 2007. Spatiotemporal Analysis of a Monsoon Flood Event in Northwestern Mexico: Insights from Remote Sensing and Hydrologic Modeling. AGU Joint Assembly, Acapulco, Mexico.

108. Mendez-Barroso, L. A. and Vivoni, E.R. 2007. Seasonal Evolution of Land Surface Conditions in the North American Monsoon Region from MODIS Observations. AGU Joint Assembly, Acapulco, Mexico.

109. Dominguez, F., Kumar, P. and Vivoni, E.R. 2007. Precipitation Recycling: a Mechanism for Hydroclimatological Stability in the North American Monsoon Region. AGU Joint Assembly, Acapulco, Mexico.

110. Forman, B.E., Vivoni, E.R. and Margulis, S. 2007. Toward Improved Calibration of Distributed Hydrologic Models via Uncertainty Analysis. AGU Joint Assembly, Acapulco, Mexico.

111. Istanbulluoglu, E., Yetemen, O. and Vivoni, E.R. 2007. On the long-term control of vegetation on landforms. AGU Hydrology Days, Fort Collins, CO.

112. Gutierrez-Jurado, H.A. and Vivoni-Gallart, E.R. 2007. Ecohidrología como estrategia de investigación sobre los recursos hídricos en zonas semiáridas. VI Congreso Internacional y XII Nacional de Ciencias Ambientales. Universidad de Chihuahua, Chihuahua, MX.

113. Vivoni, E.R., Wyckoff, R.L. and Tai, K. 2007. Hydrometeorological Observations and Numerical Modeling in a Large Semiarid Basin, Rio Puerco, New Mexico. ARO Arid Lands Workshop, Colorado Springs, CO.

114. Tai, K., Vivoni, E.R. and Gochis, D.J. 2007. Offline coupled WRF-distributed hydrological modeling: Preliminary testing for a warm season flood event in the Southwestern US. WRF Workshop. Boulder, CO.

115. Ivanov, V.Y., Bras, R.L. and Vivoni, E.R. 2007. Effects of Topography on Vetgetation-Hydrology Interactions in a Semiarid Grass Ecosystem. XXIV IUGG General Assembly, Perugia, Italy.

116. Vivoni, E.R., Mendez-Barroso, L.A., Rodriguez, J.C. and Watts, C.J. 2008. On the spatiotemporal organization of soil moisture in the North American Monsoon region. Catchment-scale Hydrological Modelling & Data Assimilation International Workshop. Melbourne, Australia.

117. Tai, K. and Vivoni, E.R. 2007. Offline coupled WRF-distributed hydrological modeling: Preliminary testing for a warm season flood event in the Southwestern US. NM WRRI Water Research Conference, Socorro, NM.

118. Mahmood, T. and Vivoni, E.R. 2007. Use of Landsat 5 TM imagery for Improved Distributed Hydrological Modeling. NM WRRI Water Research Conference, Socorro, NM.

119. Mantilla, R., Gomez, J. and Vivoni, E.R. 2007. Spatial Variability of Hillslope Vertical Profile and its effect on Runoff Generation Mechanisms: Implications for Land Surface Models. NM WRRI Water Research Conference, Socorro, NM.

120. Yatheendradas, S., Vivoni, E.R., Mendez-Barroso, L.A. and Watts, C.J. 2007. Effects of uncertainty in soil properties on semi-arid hydrologic forecasting: Initial results from a soil moisture field campaign during NAME. Fourth Symposium on Southwest Hydrometeorology, Tucson, AZ.

121. Tai, K., Vivoni, E.R. and Gochis, D. 2007. Offline coupled WRF-distributed hydrological modeling: Preliminary testing for a warm season flood event in the Southwestern US. GSA Graduate Student Research Conference, New Mexico Tech, Socorro, NM.

122. Gutierrez-Jurado, H., Vivoni, E.R., Istanbulluglou, E. and Bras, R.L. 2007. Ecohydrological response to a geomorphically significant flood event in a semiarid catchment with contrasting ecosystems. GSA Graduate Student Research Conference, New Mexico Tech, Socorro, NM.

123. Vivoni, E.R. 2007. Spatiotemporal Analysis of Land Surface Hydrology in Northwestern Mexico: Insights from Remote Sensing and Hydrologic Modeling. Mountain Hydroclimate and Water Resources Workshop. Boulder, CO.

124. Mendez-Barroso, L.A. and Vivoni, E.R. 2007. Seasonal Evolution of Land Surface Conditions in the North American Monsoon Region from MODIS Observations. Mountain Hydroclimate and Water Resources Workshop. Boulder, CO.

125. Vivoni, E.R., Watts, C.J., Rodriguez, J.C., Garatuza-Payan, J., Mendez-Barroso, L.A., Yepez, E.A., Saiz-Hernandez, J. and Gochis, D.J. 2007. Relation between Surface Flux Measurements and Hydrologic Conditions in a Subtropical Scrubland during the North American Monsoon. American Geophysical Union, Fall Conference, San Francisco, CA.

126. Gebremichael, M., and Vivoni, E.R. 2007. What is the ability of distributed hydrologic models to reproduce observed spatial soil moisture fields? American Geophysical Union, Fall Conference, San Francisco, CA.

127. Yatheendradas, S. and Vivoni, E.R. 2007. Distributed Soil Moisture Estimation in a Mountainous Semiarid Basin: Constraining Soil Parameter Uncertainty through Field Studies. American Geophysical Union, Fall Conference, San Francisco, CA.

128. Mantilla, R., Gomez, J. and Vivoni, E.R. 2007. A Framework to Compare Lumped and Distributed Hydrological Models of Climate-Land Surface-Groundwater Dynamics. American Geophysical Union, Fall Conference, San Francisco, CA.

129. White, A.B., Springer, E. and Vivoni, E.R. 2007. Examining severe drought-induced vegetation change and its influence on water resources. American Geophysical Union, Fall Conference, San Francisco, CA.

130. Mahmood, T. and Vivoni, E.R. 2007. Impacts of remotely-sensed vegetation dynamics on ecohydrological response in a small mountainous watershed. American Geophysical Union, Fall Conference, San Francisco, CA.

131. Tai, K., Vivoni, E.R., and Gochis, D. 2007. Evaluation of Ensemble Meteorological Forcing in a Distributed Hydrological Model: Decomposing the Nonlinear Basin Response. American Geophysical Union, Fall Conference, San Francisco, CA.

132. Gutiérrrez-Jurado, H.A., Vivoni, E.R. and Ennin, F. 2007. Analysis of catchment hydrogeomorphology and vegetation patterns based on a differential GPS and interferometric SAR. American Geophysical Union, Fall Conference, San Francisco, CA.

133. Petroselli, A., Santini, M., Nardi, F., Grimaldi, S. And Vivoni, E.R. 2007. Investigating the spatial variability of the hillslope flow velocities in the width function. American Geophysical Union, Fall Conference, San Francisco, CA.

134. Yetemen, O., Istanbulluoglu, E. and Vivoni, E.R. 2007. Topographic Analysis of Landscape Morphology and Vegetation Patterns in a Semiarid Basin in Central New Mexico. American Geophysical Union, Fall Conference, San Francisco, CA.

135. Zeweldi, D.A., Gebremichael, M., Anagonustou, E. N. and Vivoni, E. R. 2007. Evaluating Satellite Rainfall Products and their Impacts in Hydrologic Model Simulations. American Geophysical Union, Fall Conference, San Francisco, CA.

136. Nikolopoulus, E., Anagnostou, E., Gebremichael, M. and Vivoni, E.R. 2007. Can we Use Satellite-Rainfall to Predict Floods in Small Mountainous Basins? American Geophysical Union, Fall Conference, San Francisco, CA.

137. Mahmood, T. and Vivoni, E.R. 2007. Impacts of remotely-sensed vegetation dynamics on ecohydrological response in Redondo Creek watershed. SAHRA 7th Annual Conference, Tucson, AZ.

138. White, A., Springer, E. and Vivoni, E.R. 2007. Assessing climate-induced vegetation change and the consequences on water resources in Upper Rio Grande. SAHRA 7th Annual Conference, Tucson, AZ.

139. Rango, A., Vivoni, E.R., Gutzler, D., Hurd, B. and Bestelmeyer, S. 2007. Climate change impacts on New Mexico Mountain Sources of Water. AWRA 2007 Annual Conference. Albuquerque, NM.

140. Nikolopoulus, E.I., Anagnostou, E.N., Borga, M. and Vivoni, E.R. 2008. Hydrological analysis of flash floods in mountainous basin. EGU General Assembly, Vienna, Austria.

141. Istanbulluoglu, E., Yetemen, O., Vivoni, E.R. and Gutierrez-Jurado, H.A. 2008. Eco-geomorphology of semiarid moderate relief landscape with contrasting terrain aspect. Meeting of Young Researchers in Earth Science, New Orleans, LA.

142. Gutierrez-Jurado, H.A. and Vivoni, E.R. 2008. Multi-resolution analysis of vegetation and hydrogeomorphic interactions of a semiarid catchment with contrasting ecosystems. Meeting of Young Researchers in Earth Science, New Orleans, LA.

143. Vivoni, E.R., Lettenmaier, D., Watts, C.J., Garatuza-Payan, J. and Gochis, D.J. 2008. NAME Land surface and hydrological studies at basin and regional scales. 10th Meeting of NAME Science Working Group. Miami, FL.

144. Istanbulluoglu, E., Yetemen, O., Vivoni, E.R., Gutierrez-Jurado, H.A. and Bras, R.L. 2008. Influence of hillslope aspect on landscape evolution: Inferences from analysis of landscape morphology in central New Mexico. Hydrology Days, Fort Collins, CO.

145. Mendez-Barroso, L.A., Vivoni, E.R., Watts, C.J. and Rodriguez, J.C. 2008. Seasonal and interannual relations between precipitation, soil moisture and vegetation in the North American monsoon region. Regional Climate Forum for the Northwest Mexico and Southwest United States. Ensenada, Baja California, Mexico.

146. Narayan, U., Bisht, G., Bras, R.L., Ivanov, V.Y. and Vivoni, E.R. 2008. Coupling a regional atmospheric model (WRF) and a high resolution distributed ecohydrologic model (tRIBS-VEGGIE) to study soil moisture variability. Army-Air Force Workshop. Omaha, NE.

147. Vivoni, E.R. and Tai, K. 2008. Hydrometerological Forecasting using Distributed Models - Case Study in a Large Semiarid River Basin. Army-Air Force Workshop. Omaha, NE.

148. Gutierrez-Jurado, H.A., Harrison, J.B.J. and Vivoni, E.R. 2008. Vegetation-soil-aspect modulated hydrologic dynamics on semiarid hillslopes of central New Mexico Geological Society of America Annual Meeting, Houston, TX.

149. Forzieri, G., Guarnieri, L., Castelli, F., Preti, F. and Vivoni, E.R. 2008. Remote sensing derived woody structural parameters in riparian corridors. 4th European Center for River Restoration International Conference, Venice, IT.

150. Mahmood, T.H. and Vivoni, E.R. Evaluation of distributed soil moisture simulations in a forested mountain watershed, New Mexico. NM Water Research Conference, Socorro, NM.

151. Moreno, H.A. and Vivoni, E.R. 2008. Groundwater depth and air temperature effects on discharge and runoff generation in the Colorado Front Range. NM Water Research Conference, Socorro, NM.

152. Gutierrez-Jurado H.A. and Vivoni E.R. 2008. Analysis of catchment hydrogeomorphology, vegetation patterns and incoming solar radiation based on sequentially-improved terrain datasets: IFSAR, dGPS and ALSM. Studying Earth Surface Processes with High-Resolution Topographic Data Workshop, Boulder, Colorado.

153. Mascaro G., E.R. Vivoni, R. Deidda. 2008. A verification framework for ensemble hydrometeorological flood prediction systems, 10th Plinius Conference on Mediterranean Storms, Nicosia, Cyprus.

154. Gochis, D.J., Yates, D.N., Yu, W., Rutledge, S., Lang, T., Cifelli, R. and Vivoni, E.R. 2009. Evaluation of an operational heavy rainfall and flash-flood prediction system for the Colorado Front Range. American Meteorological Society, 89th Annual Meeting, Phoenix, AZ.

155. Mahmood, T. and Vivoni, E.R. 2009. Impacts of Remotely-Sensed, Seasonal Land Cover Dynamics on Distributed Hydrological Response in Two Forested Mountain Settings. American Meteorological Society, 89th Annual Meeting, Phoenix, AZ.

156. Moreno, H.A., Vivoni, E.R. and Gochis, D.J. 2009. Distributed flood forecasting using different radar-based products in the Colorado Front Range. American Meteorological Society, 89th Annual Meeting, Phoenix, AZ.

157. Mendez-Barroso, L.A. and Vivoni, E.R. 2009. Monitoring ecohydrological dynamics in the North American monsoon region from remote sensing and ground-based observations. American Meteorological Society, 89th Annual Meeting, Phoenix, AZ.

158. Trujillo, R.V., Hernández, C., Gutierrez-Jurado, H.A. and Vivoni, E.R. 2008. Ecohydrological dynamics in semiarid hillslopes. Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) National Conference. Salt Lake City, Utah.

159. Vivoni, E.R., Moreno, H.A., Mascaro, G., Rodriguez, J.C., Watts, C.J., Garatuza-Payan, J. and Scott, R.L. 2008. Effects of vegetation dynamics on the relations between ET and soil moisture in the North American monsoon: Comparison of regional observations and reanalysis products. Climate Prediction Program for the Americas Meeting, Silver Springs, MD.

160. Vivoni, E.R., Méndez-Barroso, L.A., Watts, C.J., Gochis, D.J., Rodríguez, J.C., Saíz-Hernandez, J.A., Garatuza-Payan, J., Yépez, E.A. and Robles-Morua, A. 2008. Improved seasonal hydrologic prediction in the North American monsoon region: Results from field experimentation, remote sensing and modeling in the Rio Sonora basin. Climate Prediction Program for the Americas Meeting, Silver Springs, MD.

161. Gochis, D., Rajagopal, S., Vivoni, E.R., Troch, P.A. and Scott, R. 2008. Evaluation of the Community Noah Land Surface model against tower flux data in the Tier 1 region of NAME. Climate Prediction Program for the Americas Meeting, Silver Springs, MD.

162. Yepez, E.A., Vivoni, E. R., Watts, C.J., Rodríguez, J.C., Garatuza-Payan, J., Méndez-Barroso, L.A., Saiz-Hernández, J. and Gochis, D.J. 2008. Componentes de la evapotranspiracion en matorrales xerofilos de Sonora en un context ecohidrologico. Sociedad Cientifica Mexicana de Ecologia. Merida, Mexico.

163. Mahmood, T.H. and Vivoni, E.R. 2008. Fine Resolution Soil Moisture Simulations - Redondo Creek Case Study. 8th Annual SAHRA Meeting, Tucson, AZ.

164. White, A.B., Springer, E.S., Langhorst, G.J. and Vivoni, E.R. 2008. Regional Soil Moisture and Vegetation Change Observations - Ojo Caliente Case Study. 8th Annual SAHRA Meeting, Tucson, AZ.

165. Vivoni, E.R., Springer, E.S., Mniszewski, S., Fasel, P., Langhorst, G., Moulton, D., Yatheendradas, S., Mahmood, T.H., Mascaro, G. and White, A.B. 2008. Overview of Regional Scale Simulations for Vegetation Change Analysis. 8th Annual SAHRA Meeting, Tucson, AZ.

166. Ivanov, V.Y., Bras, R.L. and Vivoni, E.R. 2008. Ecohydrologic Dynamics in Areas of Complex Topography in Semiarid Ecosystems. American Geophysical Union, Fall Conference, San Francisco, CA.

167. Gochis, D.J., Vivoni, E.R. and Nesbitt, S.N. 2008. The Influence of Satellite-based Estimates of Precipitation on Modeled Land Surface States and Fluxes over the North American Monsoon Region. American Geophysical Union, Fall Conference, San Francisco, CA.

168. Munoz-Arriola, F., Tang, Q., Zhu, C., Vivoni, E.R. and Lettenmaier, D.P. 2008. Interannual and intraseasonal interactions between greening process and soil moisture in the North American monsoon region in northwestern Mexico. American Geophysical Union, Fall Conference, San Francisco, CA.

169. Vivoni, E.R., Forzieri, G., Mendez-Barroso, L.A., and Castelli, F. 2008. Exploring topographic and climatic controls on vegetation dynamics in the North American monsoon region. American Geophysical Union, Fall Conference, San Francisco, CA.

170. Bowman, R., J. Hendrickx, E. Vivoni, C. Dahm, J. Cleverly, J. Coonrod, M. Litvak, K. Benedict, Z. Samani, and S. Bawazir. 2008. Improved estimation of evapotranspiration in semi-arid ecosystems. NSF Workshop on Water Dynamics, Burlington, VT.

171. Vivoni, E.R. and Gutierrez-Jurado, H.A. 2009. Vegetation impacts on surface geomorphology and solar radiation in aspect-controlled semiarid basins obtained from high resolution terrain data sets. Jornada Symposium, Las Cruces, NM.

172. Vivoni, E.R. 2009. Land-Atmosphere Interactions and Hydrologic Response in the NAME experiment: 2004-2008. WCRP/CLIVAR/VAMOS Panel, San Juan, Puerto Rico.

173. Vivoni, E.R. 2009. Exploring Monsoon Hydrology through Field Observations, Remote Sensing and Numerical Modeling. 2009 Annual Water Symposium, Scottsdale, AZ.

174. Vivoni, E.R. 2009. Observations and modeling of the effects of seasonal vegetation cover on evapotranspiration and soil moisture. ARO Meeting at the Topographic Engineering Center, Alexandria, VA.

175. Mascaro, G., Vivoni, E. R. and Deidda, R. 2009. Assessing the propagation of uncertainty associated with ensemble quantitative forecasts into streamflow response. 11th Plinius Conference on Mediterranean Storms, Barcelona, Spain.

176. Gutierrez-Jurado, H.A. and Vivoni, E.R. 2009. Topographic and Vegetation Feedbacks on the Ecogeomorphic and Radiation Properties of a Semiarid Basin with Contrasting Ecosystems. AGU Chapman Conference on Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions. Sun Valley, Idaho.

177. Vivoni, E.R., Watts, C.J. and Rodriguez, J.C. 2009. Catchment Patterns and Controls on Soil Moisture and Evapotranspiration in a Mountainous Basin within the North American Monsoon Region. AGU Chapman Conference on Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions. Sun Valley, Idaho.

178. Vivoni, E.R. 2009. Signatures of Seasonal Vegetation Dynamics on Catchment Hydrology in the North American Monsoon Region. AGU Fall Conference. San Francisco, CA.

179. Yepez, E.A., Perez-Ruiz, E.R., Rodriguez, J.C., Garatuza-Payan, J., Watts, C.J., Vivoni, E.R., Tarin, T., Mendez-Barroso, L. 2009. Eco-hidrologia del ciclo del carbono en ecosistemas estacionalmente secos de Sonora. Primer Simposio Mexicano del Carbono, Ensenada, BCN.

180. Mascaro, G., Vivoni, E.R. and Deidda, R. 2009. Downscaling satellite soil moisture estimates in the Southern Great Plains through a calibrated multifractal model for land surface applications. AGU Fall Conference. San Francisco, CA.

181. Gutierrez-Jurado, H.A., Vivoni, E.R., Bras, R. L., Harrison, J.B.J., Cikoski, C. and Istanbulluoglu, E. 2009. On the observed ecohydrologic dynamics of a semiarid catchment with topographic-induced microclimatic conditions. AGU Fall Conference. San Francisco, CA.

182. Mniszewski, S., Fasel, P., Vivoni, E.R., White, A. and Springer, E. 2009. Increasing model efficiency for high-resolution Baron Fork using basin structural characteristics. SAHRA 9th Annual Meeting, Tucson, AZ.

183. Vivoni, E.R., Mahmood, T.H., Springer, E. and Moulton, D. 2009. Exploring hillslope-scale soil moisture and runoff generation through distributed simulations at the Los Alamos Ponderosa Pine Study Site. SAHRA 9th Annual Meeting, Tucson, AZ.

184. White, A.B., Langhorst, G., Mniszewski, S., Fasel, P., Li, J., Vivoni, E.R. and Springer, E. 2009. Climate-induced regional vegetation change and its hydrologic implications. SAHRA 9th Annual Meeting, Tucson, AZ.

185. Childers, D.L., Grimm, N.B., Heffernan, J., Mickinley, T. and Vivoni, E.R. 2010. How Internal Processes Affect Resilience to State Change in High-Disturbance Wetland Ecosystems. Flood Pulsed Wetlands International Symposium, Botswana.

186. Vivoni, E.R. 2010. Seasonality of Watershed Hydrology Induced by Remotely-sensed Vegetation Dynamics. U.S. Army Environmental Sciences Coordinating Group Meeting. Hanover, NH.

187. Mascaro, G., Vivoni, E.R. and Deidda, R. 2010. Calibration of a Model for Satellite Soil Moisture Downsaling in Different Climatic Regimes. European Geophysical Union Annual Assembly, Vienna, Austria.

188. Nikolopoulos, E.I., Anagnostou, E.N., Borga, M., Vivoni, E.R. and Papadopoulos, A. 2010. Sensitivity of a Mountain Basin Flash Flood to Initial Soil Moisture and Rainfall Variability. European Geophysical Union Annual Assembly, Vienna, Austria.

189. Tarin, T., Garatuza-Payan, J., Watts, C.J., Rodriguez, J.C., Vivoni, E.R., Mendez-Barroso, L.A. and Yepez, E.A. 2010. Eficiencia de uso de agua de la vegetacion en un ecosistema estacional de Sonora. Segundo Simposio Internacional del Carbono en Mexico. San Carlos, Sonora, Mexico.

190. El-Ashmawy, L. and Vivoni, E.R. 2010. Exploration of Seasonal Rainfall Along Mountanous Watersheds in Sonora, Mexico. ASU FURI Symposium, Tempe, AZ.

191. Vivoni, E.R. 2010. Land Surface Ecohydrology of the North American Monsoon System, Research Insights in Semiarid Ecosystems, 10th Symposium, Tucson, AZ.

192. Vivoni, E.R. 2010. Impacts of Vegetation Dynamics on Watershed Hydrology. Army Research Office Meeting, Vicksburg, MS.

193. Watts, C.J., Garatuza-Payan, J., Rodriguez, J.C. and Vivoni, E.R. 2010. La investigacion del agua en Mexico: Avances, deficiencias y retos a supercar. Segundo Congreso Nacional de la RETAC-CONACYT. Cuernavaca, Morelos, Mexico.

194. Mahmood, T.M. and Vivoni, E.R. 2010. Transition of Spatial Controls on Distributed Soil Moisture and Runoff Simulations at Multiple Model Resolutions. American Geophysical Union Fall Meeting, San Francisco, CA.

195. Templeton, R.C., Vivoni, E.R., Mendez-Barroso, L.A., Rango, A., Laliberte, A.S. and Saripalli, S. 2010. Emerging Technologies for Ecohydrological Studies during the North American Monsoon in a Chihuahuan Desert Watershed. American Geophysical Union Fall Meeting, San Francisco, CA.

196. Mendez-Barroso, L.A., Vivoni, E.R., Rodriguez, J.C., Watts, C.J., Garatuza-Payan, J. and Yepez, E.A. 2010. Seasonal Evolution, Interannual Variability and Partitioning of Evapotranspiration in Two Mountainous Semiarid Forest Ecosystems. American Geophysical Union Fall Meeting, San Francisco, CA.

197. Moreno, H.A., Vivoni, E.R. and Gochis, D.J. 2010. Comparison of Multiple Quantitative Precipitation Estimates for Warm-Season Flood Forecasting in the Colorado Front Range. American Geophysical Union Fall Meeting, San Francisco, CA.

198. White, A.B., Vivoni, E.R. and Springer, E.S. 2010. Hydrological Alterations Due to Climate-Induced Regional Vegetation Change. American Geophysical Union Fall Meeting, San Francisco, CA.

199. Mascaro, G., Vivoni, E.R. and Deidda, R. 2010. Towards an Efficient and Global Downscaling Methodology Based on Multifractal Models for Satellite-Based Soil Moisture Estimates. American Geophysical Union Fall Meeting, San Francisco, CA.

200. Robles-Morua, A., Vivoni, E.R. and Mayer, A.S. 2010. Spatial Streamflow Forecasting in a Large River Basin in Northwestern Mexico using a Fully-Distributed Hydrological Model. American Geophysical Union Fall Meeting, San Francisco, CA.

201. Yetemen, O., Flores, J.H., Istanbullouglu, E. and Vivoni, E.R. 2010. Investigating the role of climate change during the late Pleistocene on landscape evolution: a case study from New Mexico, USA. American Geophysical Union Fall Meeting, San Francisco, CA.

202. Tarolli, P., Nikolopoulus, E.I., Anagnostou, E.N., Borga, M., Vivoni, E.R. and Papadopoulos, A. 2010. The Effect of High Resolution Topography Information on Complex Terrain Flash-Flood Response Modelling. American Geophysical Union Fall Meeting, San Francisco, CA.

203. Halvorsen, K.E., Robles-Morua, A., Mayer, A.S., Ballard, M., Fitzgerald, K. and Vivoni, E.R. 2010. Can hydrologic models change water-related risk perceptions? Results of a participatory modeling

workshop in the Sonora River Basin, Mexico. American Geophysical Union Fall Meeting, San Francisco, CA.

204. Tang, Q., Munoz-Arriola, F., Vivoni. E.R and Lettenmaier, D.P. 2011. Effects of vegetation dynamics on evapotranspiration and soil moisture in northwestern Mexico. 91st Annual American Meteorological Society Meeting, Seattle, WA.

205. Robles-Morua, A., Vivoni, E.R. and Mayer, A.S. 2011. Distributed Streamflow Predictions From Sparse Ground Networks and the North American Land Data Assimilation System in Northwest Mexico. 91st Annual American Meteorological Society Meeting, Seattle, WA.

206. Mascaro, G., Vivoni, E.R. and Deidda, R. 2011. Multisite Calibration of a Multifractal Downscaling Model for Satellite-Based Soil Moisture Estimates. 91st Annual American Meteorological Society Meeting, Seattle, WA.

207. Mascaro, G., Vivoni, E.R. and Deidda, R. 2011. Impact of Basin Scale and Initial Condition on Ensemble Streamflow Forecast Uncertainty. 91st Annual American Meteorological Society Meeting, Seattle, WA.

208. Vivoni, E.R. and Mendez-Barroso, L.A. 2011. Spatiotemporal Variations in Evapotranspiration Partitioning with the North American Monsoon Region: Role of Vegetation Dynamics. 91st Annual American Meteorological Society Meeting, Seattle, WA.

209. Watts, C.J., Rodriguez, J.C., Garatuza-Payan, J. and Vivoni, E.R. 2011. Estimating Evapotranspiration (ET) using Satellite Sensors in the North American Monsoon region in Western Mexico. 91st Annual American Meteorological Society Meeting, Seattle, WA.

210. Moreno, H.A., Vivoni, E.R. and Gochis, D.J. 2011. Hydrological Intercomparison of Quantitative Precipitation Estimates in the Colorado Front Range. 91st Annual American Meteorological Society Meeting, Seattle, WA.

211. Childers, D., Grimm, N.B., Heffernan, J., Minckely, T. and Vivoni, E.R. 2011. Resilience and State Change in High-Disturbance Ecosystems: Investigating how Internal Processes Determine Susceptibility to State Change. Resilience 2011. Tempe, AZ.

212. Mendez-Barroso, L.A., Vivoni, E.R., Rodriguez, J.C., Watts, C.J., Garatuza-Payan, J. and Yepez, E.A. 2011. Relacion estacional e interanual entre humedad de suelo, lluvia y dinamica de la vegetacion. III Congreso Mexicano de Ecologia, Veracruz, Mexico.

213. Vivoni, E.R. and Mascaro, G. 2011. High performance simulations of watershed hydrological processes: Evaluation of parallel model performances for real-world case. Universita degli Studi di Cagliari, Sardinia, Italy.

214. Vivoni, E.R. 2011. Distributed hydrologic modeling supported by observations: How do we provide predictions for a range of hydrologic applications? Universita degli Studi di Cagliari, Sardinia, Italy.

215. Mascaro, G., Vivoni, E. and Deidda, R. 2011. Statistical disaggregation of coarse soil moisture estimates across different landscape and climatic regions. European Geophysical Union Conference, Vienna, Austria.

216. Tarolli, P., Nikolopoulos, E.I., Anagnostou, E., Vivoni, E.R. and Papadopoulos, A. 2011. The effect of high resolution topography information on complex terrain flash-flood response modeling. European Geophysical Union Conference, Vienna, Austria.

217. Nikolopoulos, E.I., Borga, M., Anagnostou, E., Vivoni, E.R. and Papadopoulos, A. 2011. Identifying essential space-time information requirements for flood modeling of a mountainous mid-size basin. European Geophysical Union Conference, Vienna, Austria.

218. Piras, M., Mascaro, G., Deidda, R. and Vivoni, E.R. 2011. Sensitivity of the hydrological response in a Mediterranean catchment to different climate. European Geophysical Union Conference, Vienna, Austria.

219. Vivoni, E.R, Baish, A. and Garatuza-Payan, J. 2011. Modelacion Hidrologica Distribuida en la Cuenca del Rio Santa Catarina. ASU-Tec Symposio del Agua, Monterrey, Mexico.

220. Pérez Ruiz, E.R., Garatuza-Payán, J., Yépez, E.A., Watts, C.J., Rodríguez, J.C., Vivoni, E.R., Méndez Barroso, L.A. and Scott, R.L. 2011. Flujos biósfera-atmósfera en ecosistemas mexicanos influenciados por el sistema del monzón de Norteamérica. II Congreso Mexicano de Ecología. Veracruz, Mexico.

221. Childers, D.L., Earl, S., Grimm, N.B., Ruddell, B., Turnbull, L. and Vivoni, E.R. 2011. The Dynamics of Water in Arid Cities, Part I: Overview of the Central Arizona-Phoenix LTER research at the water-climate nexus. Austin, TX.

222. Turnbull, L., Childers, D., Hale, R., Earl, S., Grimm, N.B. and Vivoni, E.R. 2011. Ecosystem structure and hydrologic function of urban deserts. CAP-LTER Annual Research Symposium, Tempe, AZ.

223. Vargas, R., Yepez, E.A., Angeles, G., Arredondo, T., Briones, O.L., Balbuena, J.D., Garatuza Payan, J., Gonzalez, E., Mendez-Barroso, L.A., Paz, F., Rodriguez, J., Scott, R.L., Tinoco, C., Vivoni, E.R., Watts, C.J. and Wayson, C. 2011. Quovadis: Mexico en las Redes Globales y Regionales de Mediciones de Flujo de Ecosistemas. III Congreso Mexicano de Ecologia, Veracruz, Mexico.

224. Baish, A., Vivoni, E.R., Garatuza-Payan, J., Robles-Morua, A. and Basile, G. 2011. Participatory Modeling for Hydrologic Planning: An Application to Catastrophic Flooding in Nuevo Leon, Mexico, after Hurricane Alex. 24th Annual Symposium, Arizona Hydrological Society, Flagstaff, AZ.

225. Hawkins, G.A., Vivoni, E.R., Mahmood, T.M. and Moreno, H.A. 2011. Distributed Hydrologic Modeling of the Beaver Creek Watershed: A Platform for Land Cover and Climate Change Assessments. 24th Annual Symposium, Arizona Hydrological Society, Flagstaff, AZ.

226. Templeton, R.C., Vivoni, E.R., Mendez-Barroso, L., Laliberte, A. and Rango, A. 2011. Redesigning the Small Catchment Study: Distributed Model Evaluation in a Chihuahuan Desert basin and the Impact of Model Coarsening. 24th Annual Symposium, Arizona Hydrological Society, Flagstaff, AZ.

227. Robles-Morua, A., Vivoni, E.R., Rivera-Fernandez, E., Dominguez, F. and Meixner, T. 2011. Modeling the Transboundary Santa Cruz and San Pedro River Basins at High Spatiotemporal Resolution in a Multimodel Scenario Framework. 24th Annual Symposium, Arizona Hydrological Society, Flagstaff, AZ.

228. Mahmood, T.H. and Vivoni, E.R. 2011. Breakdown of Spatial Hydrologic Patterns upon Model Coarsening at Hillslope Scales. CZO All-Hands Meeting, Tucson, AZ.

229. Mascaro, G., Deidda, R. and Vivoni, E.R. 2011. Tecniche di verifica di previsioni di ensemble fornite da modelli idrologici. Workshop "La validazione dei modelli idraulici ed idrologici" Gruppo Italiano d'Idraulica. Bologna, Italy.

230. Gochis, D.J., Vivoni, E.R. and Xiang, T. 2011. The Role of Land Surface Physics on Intra-seasonal Forecast Skill in the Southwestern North America. WCRP Open Science Conference, Boulder, CO.

231. Pierini, N.A., Templeton, R.C., Robles-Morua, A., and Vivoni, E.R. 2011. Sonoran Desert Vegetation Shifts and Watershed-Scale Ecohydrological Dynamics during the North-American Monsoon. American Geophysical Union Fall Meeting, San Francisco, CA.

232. Xiang, T., Vivoni, E.R. and Gochis, D.J. 2011. The Utility of Remotely-Sensed Land Surface Temperature from Multiple Platforms for Testing Distributed Hydrologic Models over Complex Terrain. American Geophysical Union Fall Meeting, San Francisco, CA.

233. Baish, A.S., Vivoni, E.R., Garatuza-Payan, J., Robles-Morua, A. and Basile, G. 2011. A Participatory Modeling Application of a Distributed Hydrologic Model in Nuevo Leon, Mexico, for the 2010 Hurricane Alex Flood Event. American Geophysical Union Fall Meeting, San Francisco, CA.

234. Auer, M.T., Robles-Morua, A., Mayer, A.S., and Vivoni, E.R. 2011. Surface Water Quality Modeling of Pathogens in Mexican Rural Communities and Associated Public Health Implications. American Geophysical Union Fall Meeting, San Francisco, CA.

235. Robles-Morua, A., Vivoni, E.R., Volo, T., Rivera-Fernandez, E., Dominguez, F. and Meixner, T. 2011. Fine-resolution Modeling of the Santa Cruz and San Pedro River Basins for Climate Change and Riparian System Studies. American Geophysical Union Fall Meeting, San Francisco, CA.

236. Vivoni, E.R., Robles-Morua, A. and Mayer, A.S. 2011. Links between Spatially-Explicit Runoff Mechanisms and Land-Atmosphere Interactions during the North American Monsoon. American Geophysical Union Fall Meeting, San Francisco, CA.

237. Hawkins, G.A. and Vivoni, E.R. 2011. Distributed Hydrologic Modeling of Semiarid Basins in Arizona: A Platform for Land Cover and Climate Change Assessments. American Geophysical Union Fall Meeting, San Francisco, CA.

238. Peters, D., Herrick, J., Okin, G., Pillsbury, F., Duniway, M., Vivoni, E.R., Sala, O., Havstad, K., Monger, C., Yao, L., and Anderson, J. 2011. Modifying Patch-scale Connectivity to Initiate Landscape Change: An Experimental Approach to Link scales. American Geophysical Union Fall Meeting, San Francisco, CA.

239. Zhou, X., Fatichi, S., Istanbulluoglu, E., and Vivoni, E.R. 2011. Forecasting Spatial Plant Dynamics under Future Climate Change in a Semiarid Savanna Ecosystem with Complex Topography. American Geophysical Union Fall Meeting, San Francisco, CA.

240. Mayer, A.S., Robles-Morua, A., Halvorsen, K.E., Vivoni, E.R. and Auer, M.T. 2011. Integrated Water and Sanitation Risk Assessment and Modeling in the Upper Sonora River Basin (Northwest, Mexico). American Geophysical Union Fall Meeting, San Francisco, CA.

241. Yetemen, O., Flores-Cervantes, J.H., Istanbulluoglu, E. and Vivoni, E.R. 2011. Modeling the Role of Solar Radiation on Catchment Development in Semi-arid Ecosystems: Sensitivity Analysis under Variable Climate and Tectonic Uplift. American Geophysical Union Fall Meeting, San Francisco, CA.

242. Mascaro, G., Vivoni, E.R. and Deidda, R. 2012. Downscaling Satellite-based Soil Moisture Observations: Applications across Climate Regimes and Comparison of C- and L-band Products. 92nd Annual American Meteorological Society Meeting, New Orleans, LA.

243. Vivoni, E.R., Mascaro, G., Gochis, D.J., Robles-Morua, A., Mendez-Barroso, L.A., Watts, C.J., Rodriguez, J.C. and El-Ashmawy, L. 2012. Precipitation Characteristics along a Semiarid Mountain Front in the North American Monsoon Region: Implications for Hydrologic Modeling and Ecosystem Distribution. 92nd Annual American Meteorological Society Meeting, New Orleans, LA.

244. Gochis, D.J., Vivoni, E.R. and Xiang, T. 2012. Assessing the Role of Land Surface Hydrology in the Development of Terrain-Induced Convection. 92nd Annual American Meteorological Society Meeting, New Orleans, LA.

245. Watts, C.J., Rodriguez, J.C., Lizarraga-Celaya, C., Scott, R.L. and Vivoni, E.R. 2011. Estudio de los cambios estacionales de algunas características superficiales (albedo, índice de vegetación y temperatura de superficie) en la región del Monzón Norteamericano (NAM), desde Jalisco hasta Arizona. III Simposio Internacional del Carbono en Mexico, Toluca, Mexico.

246. Perez-Ruiz, E.R., Garatuza-Payan, J., Yepez, E.A., Watts, C.J., Rodriguez, J.C., Vivoni, E.R., Mendez-Barroso, L.A. and Scott, R.L. 2011. Intercambio neto de carbono en ecosistemas estacionales secos del noroeste de México. III Simposio Internacional del Carbono en Mexico, Toluca, Mexico.

247. Rango, A. and Vivoni, E.R. 2012. Hydrology with Unmanned Aerial Vehicles (UAVs). AGU Chapman Conference on Remote Sensing of the Terrestrial Water Cycle. Kona, Hawaii.

248. Pierini, N.A., Templeton, R.C., Robles-Morua, A. and Vivoni, E.R. 2011. Watershed-scale ecohydrological dynamics in the Santa Rita Experimental Range. Research Insights in Semiarid Ecosystems (RISE). Tucson, AZ.

249. Vivoni, E.R., Mascaro, G. Mniszewski, S., Fasel, P., Springer, E.P., Ivanov, V.Y. and Bras, R.L. 2012. Real-world Hydrologic Assessment of a Fully-Distributed Hydrological Model in a Parallel Computing Environment. XIX Computational Methods in Water Resources. Urbana, IL.

250. Mendez, L.A., Xiang, T., Robles-Morua, A. and Vivoni, E.R. 2012. Emergence of Landscape Ecohydrological Patterns from Merging Remotely-Sensed Vegetation Dynamics and a Parallelized Hydrologic Model. XIX Computational Methods in Water Resources. Urbana, IL.

251. Volo, T.J., Vivoni, E.R., Martin, C.A. and Earl, S. 2012. Modeling Soil Moisture and Plant Stress under Irrigated Conditions in Semiarid Urban Areas. XIX Computational Methods in Water Resources. Urbana, IL.

252. Hawkins, G.A. and Vivoni, E.R. 2012. Distributed Hydrologic Modeling of Semiarid Basins in Arizona: A Platform for Land Cover and Climate Change Assessments. AAAS Annual Meeting, Vancouver, CA.

253. Volo, T.J., Vivoni, E.R., Martin, C.A. and Earl, S. 2012. Modeling Soil Moisture and Plant Stress under Irrigated Conditions in Semiarid Urban Areas. Central Arizona-Phoenix LTER Symposium, Scottsdale, AZ.

254. Mascaro, G. and Vivoni, E.R. 2012. Utility of Coarse and Downscaled Soil Moisture Observations at C- and L-Band in Hydrological Simulations. European Geophysical Union Assembly, Vienna, Austria.

255. Robles-Morua, A., Vivoni, E.R. and Mascaro, G. 2012. Soil Moisture Field Studies, Remote Sensing and Modeling at Arizona State University. SMAP Applications Workshop, Tempe, AZ.

256. Anderson, C.A., Vivoni, E.R., Pierini, N., Templeton, R.C., Rango, A., Laliberte, A. and Saripalli, S. 2012. Characterization of shrubland-atmosphere interactions through use of the eddy covariance method and distributed footprint sampling. 17th Wildland Shrub Symposium. Las Cruces, NM.

257. Vivoni, E.R., Templeton, R.C., Méndez-Barroso, L.A., Rango, A. and Laliberte, A.S. 2012. Advances in Watershed Characterization using Sensor Networks and Unmanned Aerial Vehicle Products in a Mixed Shrubland. 17th Wildland Shrub Symposium. Las Cruces, NM.

258. Epshtein, O., Turnbull, L., Earl, S. and Vivoni, E.R. 2012. Effects of permeable pavements on management of stormwater runoff dynamics in a semiarid urban catchment. Association for Environmental and Engineering Geologists Annual Meeting, Salt Lake City, UT.

259. Rango, A. and Vivoni, E.R. 2012. Hydrology with Unmanned Aerial Vehicles (UAVs). Jornada Centennial Symposium. Las Cruces, NM.

260. Vivoni, E.R. and Baish, A. 2012. Modelación Hidrológica Distribuida en la Cuenca del Río Santa Catarina. Taller en Tec de Monterrey, Monterrey, Mexico.

261. Volo, T.J., Vivoni, E.R., Martin, C.A., Wang, Z. and Ruddell, B. 2012. A Comparison of One-Dimensional Soil Moisture Models under Urban Irrigation in a Desert City. American Geophysical Union Fall Meeting, San Francisco, CA.

262. Rango, A., Vivoni, E.R., Anderson, C.A., Pierini, N.A., Saripalli, S. and Laliberte, A. 2012. Application of high resolution images from unmanned aerial vehicles for hydrology and rangeland science. American Geophysical Union Fall Meeting, San Francisco, CA.

263. Mascaro, G. and Vivoni, E.R. 2012. Utility of Coarse and Disaggregated Soil Moisture Observations for High-Resolution Hydrological Simulations. American Geophysical Union Fall Meeting, San Francisco, CA.

264. Vivoni, E.R., Mascaro, G., Shupe, J., Hiatt, C., Potter, C., Stanley, J.D., Miller, R., Abraham, T. and Castilla-Rubio, J.C. 2012. Cloud Computing-based Platform for Drought Decision-Making using

Remote Sensing and Modeling Products: Preliminary Results for Brazil. American Geophysical Union Fall Meeting, San Francisco, CA.

265. Moreno, H.A., Vivoni, E.R. and Gochis, D.J. 2012. Exploring the Limits of Flood Forecasting in Mountain Basins by using QPE and QPF Products in a Physically-based, Distributed Hydrologic Model during Summer Convection. American Geophysical Union Fall Meeting, San Francisco, CA.

266. Pierini, N.P., Vivoni, E.R., Anderson, C.A., Saripalli, S. and Robles-Morua, A. 2012. Distributed Modeling Reveals the Ecohydrological Dynamics Linked with Woody Plant Encroachment in the Sonoran Desert. American Geophysical Union Fall Meeting, San Francisco, CA.

267. Che, D., Robles-Morua, A., Mayer, A.S. and Vivoni, E.R. 2012. Water Resources Sustainability in Northwest Mexico: Analysis of Regional Infrastructure Plans under Historical and Climate Change Scenarios. American Geophysical Union Fall Meeting, San Francisco, CA.

268. Ruddell, B., Moustaoui, M., Vivoni, E.R., Jenerette, D., Martin, C., Harlan, S., Mahalov, A., Chow, W., Shaffer, S., Volo, T. 2012. Modeling the Urban Climate at the Human Scale in Hot/Dry Regions. American Geophysical Union Fall Meeting, San Francisco, CA.

269. Robles-Morua, A., Vivoni, E.R., Rivera-Fernandez, E., Dominguez, F. and Meixner, T. 2012. High Performance Computing-based Assessment of the Impacts of Climate Change on the Santa Cruz and San Pedro River Basin at Very High Resolution. American Geophysical Union Fall Meeting, San Francisco, CA.

270. Anderson, C.A., Vivoni, E.R., Pierini, N., Robles-Morua, A., Rango, A., Laliberte, A. and Saripalli, S. 2012. Characterization of Shrubland-Atmosphere Interactions through Use of the Eddy Covariance Method, Distributed Footprint Sampling and Imagery from Unmanned Aerial Vehicles. American Geophysical Union Fall Meeting, San Francisco, CA.

271. Rossi, M.W., Whipple, K.X. and Vivoni, E.R. 2012. From Precipitation to Runoff: Controls on Discharge Variability. American Geophysical Union Fall Meeting, San Francisco, CA.

272. Gutiérrez-Jurado, H.A., Vivoni, E.R., Cikoski, C., Harrison, J.B.J., Bras, R.L., Istanbulluoglu, E. and Guan, H. 2012. Untangling the eco-hydro-geomorphic knot: Insights from an experiment seeking to explain patterns, processes, and feedbacks at the catchment scale. American Geophysical Union Fall Meeting, San Francisco, CA.

273. Chow, W., Ruddell, B., Jenerette, D., Vivoni, E.R. and Volo, T.J. 2012. Observations of the urban land surface energy balance in a Phoenix, AZ, residential suburb. American Geophysical Union Fall Meeting, San Francisco, CA.

274. Yepez, E.A, Garatuza-Payan, J., Castellanos-Villegas, A., Hinojo, C., Perez-Ruiz, E., Rivera-Diaz, M., Rodriguez, J.C., Tarin-Terrazas, T., Vivoni, E.R. and Watts, C.J. 2013. Carbon dynamics in northwestern Mexican ecosystems. 4th NACP All-Investigators Meeting, Albuquerque, NM.

275. Forzieri, G., Feyen, L., Vivoni, E.R. 2013. Ecosystem Response to Monsoon Rainfall Variability in Southwestern North America. EGU General Assembly, Vienna, Austria.

276. Piras, M., Mascaro, G., Deidda, R. and Vivoni, E.R. 2013. Hydrological impact of climate change in a Mediterranean catchment with limited data availability. EGU General Assembly, Vienna, Austria.

277. Vivoni, E.R., Pierini, N.A., Anderson, C.A., Schreiner-McGraw, A., Robles-Morua, A., Mendez-Barroso, L.A. and Templeton, R.C. 2013. Watershed-Scale Ecohydrological Studies of Woody Plant Encroachment in Sonoran and Chihuahuan Desert Landscapes. AGU Meeting of the Americas, Cancun, Mexico.

278. Robles-Morua, A., Vivoni, E.R., Rivera-Fernandez, E., Dominguez, F. and Meixner, T. 2013. Using High Resolution Satellite Precipitation fields to Assess the Impacts of Climate Change on the Santa Cruz and San Pedro River Basins. AGU Meeting of the Americas, Cancun, Mexico.

279. Mayer, A.S., Vivoni, E.R., Halvorsen, K.E., Robles-Morua, A., Dana, K., Che, D., Mirchi, A., Kossak, D. and Castaneda, M. 2013. Sustainable Water Resources for Communities under Climate

Change: Can State-of-the-Art Forecasting Inform Decision-Making in Data Sparse Regions? AGU Meeting of the Americas, Cancun, Mexico.

280. Gochis, D., Vivoni, E., Tewari, M., Xiang, T., and Yu, W. 2013. Assessing the Role of Land Surface Hydrology Model Initialization in the Simulation and Prediction of North American Monsoon Precipitation Character. AGU Meeting of the Americas, Cancun, Mexico.

281. Mendez-Barroso, L.A., Vivoni, E.R., Robles-Morua, A., Yepez, E.A., Rodriguez, J.C., Watts, C.J., Garatuza-Payan, J. and Saiz-Hernandez, J. 2013. Integrating dynamic ecohydrological relations with the catchment response: A multi-scale hydrological modeling effort in a monsoonal regime basin. AGU Meeting of the Americas, Cancun, Mexico.

282. Yepez, E., Tarin, T., Garatuza-Payan, J., Watts, C.J., Rodriguez, J.C., Vivoni, E.R., and Robles-Morua, A. 2013. Stable isotope ecohydrology of semiarid shrubland in northwestern Mexico. AGU Meeting of the Americas, Cancun, Mexico.

283. Mascaro, G., Piras, M., Vivoni, E.R., and Deidda, R. 2013. Utility of downscaling techniques and distributed hydrologic models for climate change predictions in a poorly monitored basin in Sardinia, Italy. International Symposium on Distributed Hydrological Modelling. Bologna, Italy.

284. Halvorsen, K.E., Mayer, A.S., Kossak, D.J., Vivoni, E.R., Robles-Morua, A. 2013. Climate Change, Water Resources Policy and Participatory Modeling in the Rio Sonora Basin. Northern Arizona University, Flagstaff, AZ.

285. Anderson, C.A., Vivoni, E.R., and Rango, A. 2013. Characterization of Shrubland-Atmosphere Interactions Through Use of the Eddy Covariance Method, Distributed Footprint Sampling and Imagery from UAVs. AZ Water Association Conference, Phoenix, AZ.

286. Vivoni, E.R., and Hawkins, G. 2013. Projections of Climate Change Impacts on Streamflow Forecasts in the Beaver Creek, Arizona. Watershed Restoration Forum, Tempe, AZ.

287. Bohn, T. and Vivoni, E.R. 2013. Does Mexican Land Management Influence US Southwest Rainfall? Effects of Vegetation Seasonality and Land Use Change on Atmospheric Moisture Transport in the North American Monsoon. AGU Fall Meeting, San Francisco, CA.

288. Schreiner-McGraw, A., Vivoni, E.R., Franz, T., and Anderson, C.A. 2013. Application of Cosmic-ray Soil Moisture Sensing to Understand Land-atmosphere Interactions in Three North American Monsoon Ecosystems. AGU Fall Meeting, San Francisco, CA.

289. Piras, M., Mascaro, G., Deidda, R., and Vivoni, E.R. 2013. Quantifying the Impacts of Climate Change in a Sparsely-monitored Basin in Sardinia, Italy, through Distributed Hydrologic Simulations and Hydrometeorological Downscaling. AGU Fall Meeting, San Francisco, CA.

290. Halvorsen, K.E., Mayer, A.S., Vivoni, E.R., and Robles-Morua, A. 2013. Impacts of Participatory Modeling on Climate Change-related Water Management Impacts in Sonora, Mexico. AGU Fall Meeting, San Francisco, CA.

291. Mascaro, G., Vivoni, E.R., Gochis, D.J., Watts, C.J., and Rodriguez, J.C. 2013. Characterization of Intermittency and Statistical Properties of High-resolution Rainfall Observations across a Topographic Transect in Northwest Mexico. AGU Fall Meeting, San Francisco, CA.

292. Volo, T.J., Vivoni, E.R., and Ruddell, B. 2013. Optimizing Urban Landscape Irrigation: A Modeling Approach to Water Savings through Tolerable Plant Stress and Seasonal Scheduling in Desert Cities. AGU Fall Meeting, San Francisco, CA.

293. Rango, A., Browning, D.M., Vivoni, E.R., Anderson, C.A., and Laliberte, A.S. 2013. Utilization of Unmanned Aerial Vehicles for Rangeland Resources Monitoring in a Changing Regulatory Environment. AGU Fall Meeting, San Francisco, CA.

294. Rossi, M.W., Whipple, K.X., and Vivoni, E.R. 2013. Precipitation and Evapotranspiration Controls on Event-Scale Runoff Variability in the Continental U.S. AGU Fall Meeting, San Francisco, CA.

295. Moreno, H.A., White, D.D., Gupta, H.V., Vivoni, E.R., and Sampson, D. 2013. Scaling up the Hydrologic Effects of Forest Thinning in Semi-Arid Basins of Arizona. AGU Fall Meeting, San Francisco, CA.

296. Yetemen, O., Flores-Cervantes, J.H., Istanbulluoglu, E., and Vivoni, E.R. 2013. Solar Radiation Signature Manifested on the Spatial Patterns of Modeled Soil Moisture, Vegetation, and Topography using an Ecohydro-geomorphic Landscape Evolution Model. AGU Fall Meeting, San Francisco, CA.

297. Castro, A., Saiz-Rodriguez, A., Saiz-Hernandez, J., Watts, C.J., Vivoni, E.R., Mascaro, G., Robles-Morua, A., Garatuza, J. 2013. Construccion e instalacion de un vertedor de pared delgada para aforo en una subcuenca del Rio San Miguel, Sonora. Semana de la Ingenieria, Universidad de Sonora, Hermosillo, Sonora.

298. Saiz-Hernandez, J., Castro, A., Saiz-Rodriguez, A., Watts, C.J., Rodriguez, J., Vivoni, E.R., Yepez, E.A., Robles-Morua, A., Garatuza, J. 2013. UMB-WEST: Programa de entrenamiento para la sostenibilidad hidrica ambiental en la frontera Mexico-Estados Unidos de America. Semana de la Ingenieria, Universidad de Sonora, Hermosillo, Sonora.

299. Saiz-Hernandez, J., Castro, A., Saiz-Rodriguez, A., Watts, C.J., Rodriguez, J., Vivoni, E.R., Mascaro, G., Robles-Morua, A., Garatuza, J., Yepez, E.A., 2013. Tecnologia para estudios hidrologicos y ambientales en la Cuenca del Rio San Miguel, Sonora. Semana de la Ingenieria, Universidad de Sonora, Hermosillo, Sonora.

300. Vivoni, E.R. and Mascaro, G. 2014. Remote Sensing-based Drought and Agricultural Risk Products for Mexico. 94th AMS Annual Meeting. Atlanta, GA.

301. Piras, M., Mascaro, G., Deidda, R., and Vivoni, E.R. 2014. Evaluation of Climate Change Effects on the Hydrology of a Medium-sized Mediterranean Basin affected by Data Sparseness. European General Assembly, Vienna, Austria.

302. Cazares-Rodriguez, J., Vivoni, E.R., White, D.D., and Ramirez, A.I. 2014. Analysis and Modeling of the Santa Catarina Watershed Response to Hurricane Alex in Monterrey, Mexico: Multimodel Applications for Stakeholder-driven Solutions. ASCE Environmental and Water Resources Institute Meeting, Portland, OR.

303. Cazares-Rodriguez, J., Vivoni, E.R., White, D.D., and Ramirez, A.I. 2014. Analysis and Modeling of the Santa Catarina Watershed Response to Hurricane Alex. AAAS Annual Meeting, Chicago, IL.

304. Vivoni, E.R. 2014. Land Cover and Water Supply in Mountain Regions: Supporting Stakeholders Using Distributed Ecohydrological Modeling. 8th International Congress on Environmental Modeling and Software, San Diego, CA.

305. Whitten, G., Hann, M., Robles-Morua, A., Mayer, A.S., and Vivoni, E.R. 2014. Enhancing the Link between Surface and Groundwater Models for Climate Change Assessment of Water Supply and Demand in Northwest Mexico. 8th International Congress on Environmental Modeling and Software, San Diego, CA.

306. Mayer, A.S., Halvorsen, K.E., Kossak, D., Vivoni, E.R. and Robles-Morua. 2014. Collaborative Water Resources Decision-Making through Participatory Modeling in the Rio Sonora Basin, Mexico. Water, Energy and Climate Conference 2014, Mexico City, Mexico.

307. Robles-Morua, A., Vivoni, E.R., Rivera-Fernandez, E., Dominguez, F., and Meixner, T. 2014. Using High-resolution Precipitation Fields to Assess the Impact of Climate Change on Mountain Front Recharge in the Transboundary Santa Cruz and San Pedro River Basins. Water, Energy and Climate Conference 2014, Mexico City, Mexico.

308. Volo, T.J., Vivoni, E.R., and Ruddell, B. 2014. Improving Residential Landscape Irrigation: An Ecohydrological Approach to Conserving Urban Water. 4th Annual SSEBE Graduate Research Symposium, Tempe, AZ.

309. Pierini, N.A., Vivoni, E.R., Anderson, C.A., and Robles-Morua, A. 2014. Using Observations and a Distributed Hydrologic Model to Explore Runoff Thresholds Linked with Mesquite Encroachment in the Sonoran Desert. 4th Annual SSEBE Graduate Research Symposium, Tempe, AZ.

310. Schreiner-McGraw, A., Vivoni, E.R., Franz, T., and Anderson, C.A. 2014. Application of Cosmic-Ray Sensing to Understand Land-Atmosphere Interactions in Monsoon Ecosystems. 4th Annual SSEBE Graduate Research Symposium, Tempe, AZ.

311. Vivoni, E.R., Cazares-Rodriguez, J., White, D.D., and Ramirez, A.I. 2014. Analysis and Modeling of the Santa Catarina Watershed Response to Hurricane Alex in Nuevo Leon, Mexico. Decision Center for a Desert City Annual Meeting, Tempe, AZ.

312. Schweitzer, S., Hab, K., Kathrin, Karer, B., Vivoni, E.R., and Hagen, H. 2014. A Novel Strategy for the Visualization of Spatio-temporal Hydrological Patterns. IEEE Conference on Visual Analytics Science and Technology, Paris, France.

313. Bohn, T.J., Vivoni, E.R., and White, D.D. 2014. Atmospheric Moisture Transport in the North American Monsoon: Linking Water and Land Governances Across Political Boundaries. Decision Center for a Desert City Annual Meeting, Tempe, AZ.

314. Bohn, T.J., Vivoni, E.R., and White, D.D. 2014. Atmospheric Moisture Transport in the North American Monsoon: Linking Water and Land Governances Across Political Boundaries. National Science Foundation SEES Meeting, Washington, DC.

315. Xiang, T., Vivoni, E.R., and Gochis, D.J. 2014. Land Surface Model Intercomparison of Ecohydrological Processes over Complex Terrain and Their Impact on Land Surface Temperature. 16th Conference on Mountain Meteorology, San Diego, CA.

316. Biederman, J., Scott. R., Bowling, D., Litvak, M., Oechel, W., Kolb, T., Goulden, M., Blanken, P., Yepez, E., Watts, C., Vivoni, E., Rodriguez, J., Garatuza, J., Dore, S., Bell, T., and Burns, S. Maturing flux datasets reveal carbon uptake sensitivity to temporal climate variability across a summer-rainfall gradient. AmeriFlux Annual Meeting, Potomac, Maryland.

317. Moreno, H.A., White, D.D., Gupta, H.V., Vivoni, E.R. and Sampson, D.A. 2014. Predicting the long term hydrologic effects of the four forest restoration project at Tonto Creek Basin, Arizona. 16th Annual CAP LTER Poster Symposium, Scottsdale, AZ.

318. Tarin, T.T., Yepez, E.A., Garatuza-Payan, J., Gonzalez-Pelayo, M.A., Mendez-Barroso, L.A., Rivera-Diaz, M.A., Robles-Morua, A., Robles-Zazueta, C., Rodriguez, J.C., Vargas-Terminel, M., Vega-Puga, Mazuly, Verduzco V.S., Vivoni, E.R., and Watts, C.J. 2014. Observatorios ecohidrológicos para la adaptabilidad ante el cambio climático en ecosistemas de Sonora. V Simposio Internacional del Carbono en México, Merida, Mexico.

319. Bohn, T.J., Mascaro, G., White, D.D., and Vivoni, E.R. 2014. Effects of Land Use on the Predictability of Land-Atmosphere Fluxes and Moisture Transport in the North American Monsoon Region. American Geophysical Union Fall Meeting, San Francisco, CA.

320. Rossi, M., Whipple, K.X., Vivoni, E.R., DiBiase, R.A., and Heimsath, A.M. 2014. The Influence of the Soil Water Balance within Catchment Hillslopes on Runoff Variability and Fluvial Incision. American Geophysical Union Fall Meeting, San Francisco, CA.

321. Mayer, A.S., Vivoni, E.R., Halvorsen, K.E., and Kossak, D. 2014. Participatory Water Resources Modeling in a Water-Scarce Basin (Rio Sonora, Mexico) Reveals Uncertainty in Decision-Making. American Geophysical Union Fall Meeting, San Francisco, CA.

322. Vivoni, E.R. 2014. Las Interacciones Atmósfera-Tierra Durante el Monzón de América del Norte: Estudios Ecohidrológicos de Modelación y de Campo. Reunión Anual Union Geofísica Mexicana. Puerto Vallarta, Jalisco, Mexico.

323. Bohn, T., Livneh, B., Munoz-Arriola, F., and Vivoni. E.R. 2014. Long-Term Gridded Meteorological Observations over the Continental US, Mexico, and Southern Canada, 1951-2013: Assessment over the North American Monsoon Region. Reunión Anual Union Geofísica Mexicana. Puerto Vallarta, Jalisco, Mexico.

324. Garatuza, J., Tarin, T., Rodriguez, J.C., Mendez-Barroso, L.A., Robles-Morua, A., Watts, C.J., Vivoni, E.R., and Yepez, E.A. 2014. Long-term Surface Carbon Dioxide and Water Flux Monitoring at a Subtropical Scrubland in the Core of the North American Monsoon Region. Reunión Anual Union Geofísica Mexicana. Puerto Vallarta, Jalisco, Mexico.

325. Whitney, K., Vivoni, E.R., Duniway, M., Bradford, J., Reed, S.C., and Belnap, J. 2015. Role of Biological Soil Crusts in Hydrologic Modeling of Western High-Desert Ecosystems. American Meteorological Society Annual Meeting, Phoenix, AZ.

326. Bohn, T.J., Vivoni, E.R. and Mascaro, G. 2015. Anthropogenic Impacts on Land-Atmosphere Fluxes and Moisture Transport in the North American Monsoon Region. American Meteorological Society Annual Meeting, Phoenix, AZ.

327. Schreiner-McGraw, A. and Vivoni, E.R. 2015. Application of Cosmic-ray Soil Moisture Sensing to Understand Land-atmosphere Interactions in three North American Monsoon Ecosystems. American Meteorological Society Annual Meeting, Phoenix, AZ.

328. Mascaro, G., Mendez-Barroso, L.A., and Vivoni, E.R. 2015. Quantifying the Hydrologic Response of a Regional Basin in Northwest Mexico through High-Resolution Hydrologic Simulations. American Meteorological Society Annual Meeting, Phoenix, AZ.

329. Ko, A., Mascaro, G., and Vivoni, E.R. 2015. Investigating Irrigation Impacts on Spatiotemporal Variability of Soil Moisture for Calibration of a Multifractal Downscaling Algorithm in Agricultural Areas. American Meteorological Society Annual Meeting, Phoenix, AZ.

330. Xiang, T., Vivoni, E.R., and Gochis, D.J. 2015. The Role of Land Surface Physics on Land-atmosphere Interactions and Convective Precipitation during the North American Monsoon Season. American Meteorological Society Annual Meeting, Phoenix, AZ.

331. Pierini, N.P., and Vivoni, E.R. 2015. A Distributed Hydrologic Model Application to Explore Ecohydrological Dynamics of Mesquite Encroachment during Winter and Summer Conditions. American Meteorological Society Annual Meeting, Phoenix, AZ.

332. Cazares-Rodriguez, J., Vivoni, E.R., White, D.D., and Ramirez, A. 2015. Flood Analysis and Mitigation Strategies in the Santa Catarina Watershed: Multimodel Applications for Stakeholder-driven Solutions. American Meteorological Society Annual Meeting, Phoenix, AZ.

333. Cazares-Rodriguez, J., Vivoni, E.R., White, D.D., and Ramirez, A. 2015. Flood Analysis and Mitigation Strategies in the Santa Catarina Watershed: Multimodel Applications for Stakeholder-driven Solutions. AAAS Annual Meeting, San Jose, CA.

334. Song, J., Wang, Z., Vivoni, E.R., Mascaro, G., and Ruddell, B.L. 2015. Investigating the Impacts of Urbanization on Regional Hydrometeorology by Coupling an Urban Canopy Model into a Distributed Hydrologic Model. Central Arizona Phoenix-Long-Term Ecological Research Annual Symposium, Scottsdale, AZ.

335. Piras, M., Mascaro, G., Deidda, R., and Vivoni, E.R. 2015. Propagation of Precipitation Extremes into Discharge Extremes in a Changing Climate. EGU General Assembly, Vienna, Austria.

336. Schreiner-McGraw, A., Vivoni, E.R., and Browning. D.M. 2015. Shrub Strategies in a Competition for Water Determine Ecosystem State. Ecological Society of America, Baltimore, MD.

337. Piras, M., Mascaro, G., Deidda, R., Vivoni, E.R., Cau, P.L., Marras, P.A., Meyer, S. and Ludwig, R. 2015. Assessment of climate change effects in a Mediterranean basin with different hydrologic models. International SWAT Conference, Pula, Italy.

338. Piras, M., Mascaro, G., Deidda, R., and Vivoni, E.R. 2015. Climate change effects in a medium-sized Mediterranean basin using the tRIBS hydrologic model. International SWAT Conference, Pula, Italy.

339. Lopez-Castrillo, I. and Vivoni, E.R. 2015. Urban Meteorological Flux Measurements using a New Mobile Platform. ASU FURI Symposium, Tempe, AZ.

340. Bohn, T., Mascaro, G., White, D., and Vivoni, E.R. 2015. Land Use Change and its Effects on the North American Monsoon. Water/Climate Briefing, Decision Center for a Desert City, Tempe, AZ.

341. Vivoni, E.R. 2015. Perspectivas Sobre la Modelación Hidrológica Para Evaluar Riesgos de Inundación y Sequía en el Noroeste de México. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Mexico.

342. Adams, D.K., Ochoa, C.A., Quintanar, A.I. and Vivoni, E.R. 2015. GPS Techniques for Studying Atmosphere Convection and Biosphere-Atmosphere Interactions during the North American Monsoon. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Mexico.

343. Bohn, T.J., and Vivoni, E.R. 2015. Enhancing the Variable Infiltration Capacity Model to Account for Natural and Anthropogenic Impacts on Evapotranspiration in the North American Monsoon Region. American Geophysical Union Fall Meeting, San Francisco, CA.

344. Schreiner-McGraw, A., Vivoni, E.R., and Browning, D.M. 2015. Partitioning Evapotranspiration to Illustrate the Effects of Shrub Competition and Soil Water on Ecosystem State Transitions. American Geophysical Union Fall Meeting, San Francisco, CA.

345. Xiang, T.T., Vivoni, E.R., Gochis, D.J., and Mascaro, G. 2015. Impact of land surface conditions on the predictability of hydrologic processes and mountain-valley circulations in the North American monsoon region. American Geophysical Union Fall Meeting, San Francisco, CA.

346. Ko, A., Mascaro, G., and Vivoni, E.R. 2015. Impacts of Irrigation on Soil Moisture Scaling Properties and Downscaling. American Geophysical Union Fall Meeting, San Francisco, CA.

347. Pierini, N.A., Vivoni, E.R., Lopez-Castrillo, I.A., and Schreiner-McGraw, A.P. 2015. Evaluating Water and Energy Fluxes across Three Land Cover Types in a Desert Urban Environment Through a Mobile Eddy Covariance Platform. American Geophysical Union Fall Meeting, San Francisco, CA.

348. Verduzco, V.S., Garatuza-Payan, J., Yepez, E.A., Watts, C.J., Rodriguez, J.C., Robles-Morua, A., and Vivoni, E.R. 2015. Seasonal Precipitation Variability Effects on Carbon Exchanges in a Tropical Dry Forest of Northwest Mexico. American Geophysical Union Fall Meeting, San Francisco, CA.

349. Goodrich, D., Heilman, P., Scott, R., Nearing, M., Moran. M., Nichols, M., Vivoni, E. and Archer, S. 2015. The Walnut Gulch and Santa Rita Wildland Watershed-Scale LTAR Sites. American Geophysical Union Fall Meeting, San Francisco, CA.

350. Browning, D.M., Vivoni, E.R., Tweedie, C., Maynard J.J., and Karl, J. 2015. Bridging Multiple Lines of Evidence to Quantify Plant Phenology and Assess Links to Dryland Ecosystem Function. American Geophysical Union Fall Meeting, San Francisco, CA.

351. Fang, L., Vivoni, E.R., and Mascaro, G. 2016. Regional Assessment of Observed Rainfall-Runoff Relations in Maricopa County and its Hydrologic Modeling for Selected Areas. CAP-LTER Annual All-Scientist Meeting, Scottsdale, AZ.

352. Peters, D.P.C., Archer, S.R., Sala, O.E., Vivoni, E.R., Havstad, K.M., Monger, C., Yao, J., and Burruss, N. 2016. Complex landscapes in the American Southwest: Are desertified systems novel? Ecological Society of American Annual Meeting, Fort Lauderdale, FL.

353. Muñoz-Hernández, A., Mayer, A.S., Vivoni, E.R., and Robles-Morua, A. 2016. Emergence of a Novel Food-Energy-Water Nexus in Sonora: The Case of the Acueducto Independencia. IV Congreso Nacional de Manejo de Cuencas Hidrograficas. Xalapa, Mexico.

354. Nytch, C.J., Melendez-Ackerman, E.J., Vivoni, E.R., Grove, J.M., and Ortiz-Zayas, J.R. 2016. Fundamental concepts and research priorities for advancing the science of urban stormwater hydrology and flood management. AGU Fall Meeting, San Francisco, CA.

355. Wheeler, M.M., Vivoni, E.R., and Hall, S.J. 2016. Residential soil water model evaluation to improve outdoor water use recommendations in Phoenix, Arizona. AGU Fall Meeting, San Francisco, CA.

356. Muñoz-Hernández, A., Mayer, A., Vivoni, E.R., Robles-Morua, A., Hallack-Alegria, M., and Salazar-Adams, A. 2016. Emergence of a Food-Energy-Water Nexus in Northwest Mexico as a Result of Inter-Basin Water Transfers. AGU Fall Meeting, San Francisco, CA.

357. Vivoni, E.R., Mayer, A.S., Halvorsen, K., Robles-Morua, A., and Kossak, D. 2016. Use of participatory modeling workshops in a water-stressed basin of northern Mexico to assess sustainable water resources management and conduct community outreach. AGU Fall Meeting, San Francisco, CA.

358. Bohn, T.J., and Vivoni, E.R. 2016. Impacts of Land Cover and Land Use Change on the Hydrology of the US-Mexico Border Region, 1992-2011. AGU Fall Meeting, San Francisco, CA.

359. Schreiner-McGraw, A.P., and Vivoni, E.R. 2016. Hydrologic Causes and Effects of Vegetation State Change in the Semiarid Southwest US: Observations and Model Results from a Small, Instrumented Watershed. AGU Fall Meeting, San Francisco, CA.

360. Perra, E., Piras, M., Deidda, R., Paniconi, C., Mascaro, G., Vivoni, E.R., Cau, P., Marras, P.A., Meyer, S., and Ludwig, R. 2016. Evaluation of climate change effects in a Mediterranean basin using different hydrologic models. XXXV National Congress in Hydraulics, Bologna, Italy.

361. Khalid, S., and Vivoni, E.R. 2017. Inferring Groundwater Recharge using Remotely-sensed Land Surface Temperature in the Phoenix Metropolitan Area. AZ Water Conference, Phoenix, AZ.

362. Khalid, S., and Vivoni, E.R. 2017. Inferring Groundwater Recharge using Remotely-sensed Land Surface Temperature in the Phoenix Metropolitan Area. Space Grant Annual Poster Session, Tempe, AZ.

363. Ko, A., Mascaro, G., and Vivoni, E.R. 2017. High-Resolution Distributed Hydrological Modeling over a Large Basin. AZ Water Conference, Phoenix, AZ.

364. Wheeler, M.M., Vivoni, E.R., and Hall, S.J. 2017. Residential Soil Water Model Evaluation to Improve Outdoor Water Use Recommendations in Phoenix, Arizona. CAP All Scientist Meeting, Tempe, AZ.

365. Templeton, N.P., Vivoni, E.R., Wang, Z-H., and Schreiner-McGraw, A.P. 2017. Quantifying Water and Energy Fluxes over Different Urban Land Covers in Phoenix, Arizona. CAP All Scientists Meeting, Tempe, AZ.

366. Perra, E., Piras, M., Deidda, R., Paniconi, C., Mascaro, G., Vivoni, E.R., Cau, P., Marras, P.A., Meyer, S., and Ludwig, R. 2017. Multi-model assessment of hydrologic impacts of climate change in a small Mediterranean basin. EGU General Assembly, Vienna, Austria.

367. Naito, A.T., Archer, S.R., Barron-Gafford, G.A., Biederman, J.A., Heilman, P., Predick, K.T., Scott, R.L., Swetnam, T.L., Throop, H.L., Templeton, N.P., and Vivoni, E.R. 2017. Brush Management: An Ecosystem Services Perspective. Science on the Sonoita Plain Symposium, Elgin, AZ.

368. Verduzco, V., Navarro, J., Robles-Morua, A., Vivoni, E.R., and Penunuri, L. 2017. Geographical Data Layers of Urban Features in Hermosillo, Sonora to Address Urban Resilience to Extremes. UREX SRN Annual Meeting, New York, NY.

369. Verduzco, V., Bohn, T.J., Robles, A. and Vivoni, E.R. 2017. Impacts of Meteorological Extreme Events on Regional Water Balance and Susceptibility of Urban Populations. UREX SRN Annual Meeting, New York, NY.

370. Whitney, K., Bohn, T.J. and Vivoni, E.R. 2017. Modeling Land Surface Hydrology Sensitivity in the Colorado River Basin and its Urban Areas to Historical Meteorological Data. UREX SRN Annual Meeting, New York, NY.

371. Navarro, J., Robles-Morua, A., and Vivoni, E.R. 2017. Local and Regional Extreme Heat Analysis in Northwest Mexico: Observed Trends and Future Scenarios. UREX SRN Annual Meeting, New York, NY.

372. Nytch, C.J., Vivoni, E.R., Melendez-Ackerman, E.J., Grove, J.M., Ortiz-Zayas, J.R. and Perez, M-E. 2017. Drainage Network Structure, Urban Development and Data Limitations in Cities. Ecological Society of American Annual Meeting, Portland, OR.

373. Schreiner-McGraw, A.P. and Vivoni, E.R. 2017. Deep Percolation in Arid Shrublands: Observations from a Dense Instrument Network and Linkages to Historical Conditions at the Jornada Basin. Ecological Society of American Annual Meeting, Portland, OR.

374. Verduzco, V.S., Vivoni, E.R., Yepez, E.A., Tarin, T., Garatuza-Payan, J. and Ivanov, V.Y. 2017. Climate Change Impacts on Net Ecosystem Production in a Subtropical Scrubland of Northwestern México. VIII Symposio del Programa Mexicano del Carbono, Ensenada, Mexico.

375. Perez-Ruiz, E.R., Vivoni, E.R., and Templeton, N.P. 2017. Evaluation of the Urban Net Ecosystem Exchange across Different Landscapes in Phoenix, Arizona. VIII Symposio del Programa Mexicano del Carbono, Ensenada, Mexico.

376. Schreiner-McGraw, A.P. and Vivoni, E.R. 2017. Deep Percolation in Arid Piedmont Watersheds: Observations from a Dense Instrument Network and Linkages to Historical Conditions. Jornada LTER Annual PI Meeting, Las Cruces, New Mexico.

377. Vivoni, E.R. 2017. Expanding Ecohydrologic Research from Watershed to Landscape Scales. Jornada LTER Annual PI Meeting, Las Cruces, New Mexico.

378. Montecelos-Zamora, Y., Cavazos, T., Krestzschmar, T., Molina Navarro, E., Vivoni, E.R., and Corzo, G. 2017. Tropical Hydrology with SWAT: A Case Study of the Cauto River, Cuba. 2017 International SWAT Conference, Warsaw, Poland.

379. Verduzco, V.S., Whitney, K.M., Navarro, J., Bohn, T.J., Robles-Morua, A., and Vivoni, E.R. 2017. Extreme Hydrometeorolgoical Events in Urban Regions. UREX SRN Climate and Hydrologic Extremes Meeting, Asheville, NC.

380. Perez-Ruiz, E.R., Vivoni, E.R., and Templeton, N.P. 2017. Urban Land Cover Type Influences CO_2 Fluxes within Phoenix, Arizona. American Geophysical Union, Fall Meeting, New Orleans, LA.

381. Ko, A., Mascaro, G., and Vivoni, E.R. 2017. Effect of Downscaled Forcings and Soil Texture Properties on Hyperresolution Simulations in a Regional Basin in Northwest Mexico. American Geophysical Union, Fall Meeting, New Orleans, LA.

382. Bohn, T.J., and Vivoni, E.R. 2017. Hydrologic Impacts of Land Cover Variability and Change at Seasonal to Decadal Time Scales over North America, 1992-2016. American Geophysical Union, Fall Meeting, New Orleans, LA.

383. Schreiner-McGraw, A.P., Vivoni, E.R., and Browning, D.M. 2017. Deep Percolation in Arid Piedmont Slopes: Multiple Lines of Evidence Show How Land Use Change and Ecohydrological Properties affect Groundwater Recharge. American Geophysical Union, Fall Meeting, New Orleans, LA.

384. Whitney, K.M., Bohn, T.J., and Vivoni, E.R. 2017. Modeling Land Surface Hydrology Sensitivity in the Colorado River Basin to Historical Climate Variability. American Geophysical Union, Fall Meeting, New Orleans, LA.

385. Okin, G.S., Sala, O.E., and Vivoni, E.R. 2017. How Will Wind and Water Erosion Change in Drylands in the Future? American Geophysical Union, Fall Meeting, New Orleans, LA.

386. Baker, I., Prihodko, L., Vivoni, E.R., and Denning, A.S. 2017. Landscape-scale Soil Moisture Variability and its Influence on Surface Fluxes at the Jornada LTER site: Evaluating a New Model Parameterization for Subgrid-scale Soil Moisture Variability. American Geophysical Union, Fall Meeting, New Orleans, LA.

387. Adams, D., Vivoni, E.R., Grutter, M., Cabral, E., Lintner, B., Granados-Olivos, A., Vazquez-Galvez, F.A., Rodriguez, J.C., Perez-Ruiz, E.R., Verduzco, V., Minjarez-Sosa, C., Serra, Y., Haase, J., Gochis, D.J., Yepez, E.A., and Robles-Morua, A. 2017. The North American Monsoon GPS Hydrometeorological Network: A New Look at an Old Problem. American Geophysical Union, Fall Meeting, New Orleans, LA.

388. Cabral-Cano, E., Salazar-Tlaczani, L., Adams, D., Vivoni, E.R., Grutter, M., Serra, Y.L., DeMets, C., Galetzka, J., Feaux, K., Mattioli, G.S., and Miller, M. 2017. TLALOCNet Continuous GPS-Met Array in Mexico supporting the 2017 NAM GPS Hydrometeorological Network. American Geophysical Union, Fall Meeting, New Orleans, LA.

389. Herrick, J., Okin, G.S., Bestelmeyer, B., Hanan, N.P., Neff, J.C., Debers, D.P.C., Sala, O.E., Salley, S.W., Vivoni, E.R., and Wills, S.A. 2017. Dirt: Integrating Scientific and Local Knowledge to Support Global Land Management. American Geophysical Union, Fall Meeting, New Orleans, LA.

390. Navarro-Estupiñán, J., Robles-Morua, A., Vivoni, E.R., Espíndola, J., Montoya-Laos, J., and Verduzco, V.S. 2017. Tendencias Observadas y Proyecciones Futuras de Calor Extremo en Sonora, Mexico. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Jalisco, Mexico.

391. Perez-Ruiz, E.R., Vivoni, E.R., Rodriguez, J.C., Verduzco, V.S., Adams, D., Gochis, D.J., Yepez, E.A., and Robles-Morua, A. 2017. Red GPS-Hidrometeorologico del Monzon 2017: Resultados Preliminares de Flujos de Agua, Energia y Carbono en Tres Ecosistemas del Noroeste de Mexico. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Jalisco, Mexico.

392. Tandazo-Bustamante, F. Sanchez-Mejia, Z., Mendez-Barroso, L., Yepez-Gonzales, E.A., Yepiz-Alvarez, J.C., Vivoni, E.R, and Robles-Morua, A. 2017. Percepcion de Riesgos de Desastres Naturales, Uso y Manejo del Agua en Comunidades Rurales de los Principales Cuencas del Estado de Sonora. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Jalisco, Mexico.

393. Adams, D., Vivoni, E.R., Grutter, M., Cabral, E., Lintner, B., Granados-Olivos, A., Vazquez-Galvez, F.A., Rodriguez, J.C., Perez-Ruiz, E.R., Verduzco, V., Minjarez-Sosa, C., Serra, Y., Haase, J., Gochis, D.J., Yepez, E.A., and Robles-Morua, A. 2017. The North American Monsoon GPS Hydrometeorological Network 2017: A New Look at an Old Problem. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Jalisco, Mexico.

394. Del Toro, F., Vivoni, E.R., Kretzschmar, T., Bullock, S., and Vazquez, R. 2017. Orientacion de las Laderas como Control en la Recarga de Bloque de Montana en una Region Semiarida Mediterranea en Baja California, Mexico. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Jalisco, Mexico.

395. Verduzco, V.S., Vivoni, E.R., Yepez, E., Rodriguez, J.C., Watts, C.J., Tarin, T., Robles, A., Garatuza, J., and Ivanov, V.Y. 2017. Modelos de Procesos Ecosistemicos como Herramiento para Estudiar el Cambio Climatico en la Regional del Monzon Norteamericano. Reunion Anual de la Union Geofisica Mexicana, Puerto Vallarta, Jalisco, Mexico.

396. Adams, D., Vivoni, E.R., Grutter, M., Cabral, E., Lintner, B., Granados-Olivos, A., Vazquez-Galvez, F.A., Rodriguez, J.C., Perez-Ruiz, E.R., Verduzco, V., Minjarez-Sosa, C., Serra, Y., Haase, J., Gochis, D.J., Yepez, E.A., and Robles-Morua, A. 2018. The North American Monsoon GPS Hydrometeorological Network 2017. American Meteorological Society Annual Meeting, Austin, TX.

397. Baker, I., Prihodko, L., Vivoni, E.R., and Denning A.S. 2018. Landscape-scale Soil Moisture Heterogeneity and its Influence on Surface Fluxes at the Jornada LTER site: Evaluating a New Model Parameterization for Subgrid-scale Soil Moisture Variability. American Meteorological Society Annual Meeting, Austin, TX.

398. Xiang, T.T., Vivoni, E.R., Gochis, D., Dugger, A., and Barlage, M. 2017. Exploring the Role of Soil Moisture Feedbacks in the North American Monsoon Region. WRF-Hydro Workshop, Madeira, Portugal.

399. Lopez-Castrillo, I. and Vivoni, E.R. 2018. Hydrological Modeling of South Mountain under an Extreme Event and Implications for Downstream Urban Growth and Ecological Design Alternatives. CAP-LTER Annual All-Scientist Meeting, Scottsdale, AZ.

400. Perez-Ruiz, E.R., Vivoni, E.R., and Templeton, N.P. 2018. Urban Land Cover Type Influences CO_2 Fluxes within Phoenix, Arizona. CAP-LTER Annual All-Scientist Meeting, Scottsdale, AZ.

401. Perra, E., Piras, M., Deidda, R., Paniconi, C., Mascaro, G., Vivoni, E.R., Cau, P., Marras, P.A., Meyer, S., and Ludwig, R. 2018. Multi-model assessment of hydrologic impacts of climate change in a small Mediterranean basin. Terrestrial Systems Research: Monitoring, Prediction & High Performance Computing Conference, Bonn, Germany.

402. Nytch, C.J., Melendez-Ackerman, E.J., Grove, J.M., Vivoni, E.R., Ortiz-Zayas, J.R., and Perez-Hernandes, M.E. 2018. Combined Analysis of Land Cover and Drainge Network Structure for Evaluating Stormwater Discharges in Urban Basins. Ecological Society of America Annual Meeting, New Orleans, LA.

403. Okin, G., Vivoni, E.R., and Sala, O.E. 2018. State Change and Connectivity: Essential Linkages in Drylands. Ecological Society of America Annual Meeting, New Orleans, LA.

404. Whitney, K.M., Bohn, T.J., and Vivoni, E.R. 2018. Modeling Land Surface Hydrology Sensitivity in the Colorado River Basin and its Urban Areas to Historical and Future-Projected Extreme Hydroclimate Events at Various Watershed Scales. UREX SRN Annual Meeting, Tempe, AZ.

405. Vivoni, E.R. 2018. Channel Transmission Losses and Streamflow Yield in Arid Piedmont Slopes. Arizona Hydrological Society Annual Symposium, Phoenix, AZ.

406. Perez-Ruiz, E.R., Vivoni, E.R., Adams, D., Rodriguez, J.C., and Verduzco, V.S. 2018. Intercambio Neto del Ecosistema en Tres Ecosistemas en la Zona del Monzon de Norteamerica. IX Simposio Internacional del Carbono en Mexico. Alamos, Sonora, Mexico.

407. Wang, Z., Bohn, T.J., and Vivoni, E.R. 2018. On the Land Surface Hydrology Sensitivity to Climate and Land Use Change in the Phoenix Metropolitan Area. Decision Center for a Desert City Symposium, Tempe, AZ.

408. Vivoni, E.R., Templeton, N.P., and Perez-Ruiz, E.R. 2018. Water, Energy and Carbon Fluxes in Phoenix Urban Landscapes: Role of Available Soil Water. Hydrosystems Engineering Seminar Series, Tempe, AZ.

409. Peters, D.P.C., Bestelmeyer, B., Okin, G., Sala, O., Vivoni, E.R., Schooley, R.L., Hanan, N.P., Archer, S.R., Brungard, C.W., Garcia-Pichel, F., Herrick, J., Monger, H.C., Pietrasiak, N., and Tweedie, C.E. 2018. Data-Model Integration to Develop a Knowledge Landscape Map for Improved Prediction. American Geophysical Union, Fall Meeting, Washington, D.C.

410. Bohn, T.J., Whitney, K.M., Mascaro, G., and Vivoni, E.R. 2018. Precipitation Isosceles Triangle (PITRI): A Simple Approach for Approximating the Diurnal Cycle of Precipitation for Use in Hydrological Simulations. American Geophysical Union, Fall Meeting, Washington, D.C.

411. Ko, A., Mascaro, G., and Vivoni, E.R. 2018. Improvement of Hyperresolution Hydrologic Simulations through Spatial Pattern Validation. American Geophysical Union, Fall Meeting, Washington, D.C.

412. Perez-Ruiz, E.R., Vivoni, E.R., Rodriguez, J.C., Robles-Morua, A., Yepez, E.A., and Adams, K.K. 2018. Response of Coupled Water-Energy-Carbon Dynamics to North American Monsoon in Three Woodland Ecosystems: Results from GPS Hydrometeorological 2017 Campaign. American Geophysical Union, Fall Meeting, Washington, D.C.

413. Bautista, L., Escoto, E.A., Vivoni, E.R., Kavazanjian, E. and Hamad, N. 2018. Weather Station Installation and Assessment of Meteorological Data used to Validate Conformance of a Rainfall Simulator. CBBG REU Program Presentation and Poster, Tempe, AZ.

414. Castro-Lopez, J.A., Yepez, E.A., Robles-Morua, A., Garatuza-Payan, J., Mendez-Barroso, L.A., Vega-Puga, M., Vivoni, E.R., and Adams, D. 2018. La relación entre la composición isotópica del vapor atmosférico, la lluvia y la humedad en la región del Monzón de Norteamérica. Union Geofisica Mexicana, Puerto Vallarta, Mexico.

415. Bohn, T.J., Whitney, K.M., Mascaro, G., and Vivoni, E.R. 2019. Precipitation Isosceles Triangle (PITRI): A Simple Approach for Approximating the Diurnal Cycle of Precipitation for Use in Hydrological Simulations. American Meteorological Society Annual Meeting, Phoenix, AZ.

416. Whitney, K.M., Bohn, T.J., and Vivoni, E.R. 2019. Modeling Hydrological Extremes in the Colorado River Basin at Various Watershed Scales. American Meteorological Society Annual Meeting, Phoenix, AZ.

417. Wang, Z., Bohn, T.J., and Vivoni, E.R. 2019. Modeling the Climate and Land Cover Change Effects on Urban Water and Energy Dynamics in the Phoenix Metropolitan Area. American Meteorological Society Annual Meeting, Phoenix, AZ.

418. Perez-Ruiz, E.R., Vivoni, E.R., and Templeton, N.P. 2019. Urban Land Cover Type Influences CO_2 Fluxes within Phoenix, Arizona. American Meteorological Society Annual Meeting, Phoenix, AZ.

419. Escoto, E.A., Vivoni, E.R., Kavazanjian, E., Hamdan, N., and Wilkes, C. 2019. Design and construction of a hillslope-scale rainfall-runoff simulator in Phoenix, Arizona. American Meteorological Society Annual Meeting, Phoenix, AZ.

420. Castro, C.L., Adams, D.K., Arellano, A.F., Quintanar, A.I., Ochoa-Moya, C., Minjarez-Sosa, C.M., Rodriguez, J.C., Lizarraga, C., Vivoni, E.R., Perez-Ruiz, E.R., Robles, A., Risanto, C.B., Chang, H.I., Mendoza-Fierro, L., and Moker, J.M. 2019. A New Hydrometeorological Testbed in Northern Mexico for Improved Weather Forecasts and Climate Monitoring. American Meteorological Society Annual Meeting, Phoenix, AZ.

421. Wang, Z., and Vivoni, E.R. 2019. On the Effects of Climate and Land Cover Change on Urban Water and Energy Dynamics. AAAS Annual Meeting, Washington, D.C.

422. Wang, Z., Vivoni, E.R., and Bohn, T.J. 2019. On the Synergistic Effects of Climate and Land Cover Change on Extreme Heat Risk in the Phoenix Metropolitan Area. AEESP Research and Education Conference, Tempe, AZ.

423. Kindler, M., Davis, S., and Vivoni, E.R. 2019. Water Conservation Potential of Compost in City of Phoenix Parks. AEESP Research and Education Conference, Tempe, AZ.

424. Vivoni, E.R. 2019. Channel Transmission Losses and Streamflow Yield in Arid Piedmont Slopes. JE Fuller Hydrology and Geomorphology, Tempe, AZ.

425. Perez-Gutierrez, J.D., Guzman, S., Lopez-Castrillo, I., Jones, J., Sutter, J., and Vivoni, E.R. 2019. Machine Learning for State-Scale E. Coli Assessments. ASABE Annual International Meeting, Boston, MA.

426. Wang, Z., Bohn, T.J., and Vivoni, E.R. 2019. Urban Growth Induced Water and Energy Dynamics Changes in the Phoenix Metropolitan Area. SSEBE Graduate Student Symposium, Tempe, AZ.

427. Meili, N., Fatichi, S., Manoli, G., Burlando, P., Roth, M., Velasco, E., Nice, K.A., Tapper, N.J., Daly, E., Coutts, A.M., Chow, W.T.L., and Vivoni, E.R. 2019. Vegetation biophysical and ecophysiological properties mediating Urban Microclimate and Water Fluxes: A modelling study. Asia Oceania Geosciences Society Conference, Singapore.

428. Whitney, K.M., Bohn, T.J., and Vivoni, E.R. 2019. Exploring the Response of the Colorado River Basin to Future Climate. Arizona Hydrological Society Annual Symposium, Tucson, AZ.

429. Vivoni, E.R., Templeton, N.P., Scott, R.L., Archer, S.R., Biederman, J.A., and Naito, A.T. 2019. Degree of Woody Plant Encroachment Influences Seasonality of Water, Energy and Carbon Dioxide Exchanges. RISE Annual Symposium, Tucson, AZ.

430. Whitney, K.M., Bohn, T.J., Vivoni, E.R., and Wang, Z. 2019. Simulating Hydrologic Responses in the Colorado River to Climate Change. Geological Society of America Annual Meeting, Phoenix, AZ.

431. Escoto, E.A., and Vivoni, E.R. 2019. Rainfall Kinetic Energy in the Sonoran and Chihuahuan Deserts. Geological Society of America Annual Meeting, Phoenix, AZ.

432. Kindler, M., and Vivoni, E.R. 2019. Observations and Modeling of Soil Moisture in Urban Parks: Implications for Groundwater Recharge in Phoenix, Arizona. Geological Society of America Annual Meeting, Phoenix, AZ.

433. Schreiner-McGraw, A.P., Ajami, H., and Vivoni, E.R. 2019. Shrub Encroachment and Climate Change Controls on Mountain Front Recharge in Drylands. Geological Society of America Annual Meeting, Phoenix, AZ.

434. Perez-Ruiz, E.R, and Vivoni, E.R. 2019. Seasonal and inter-annual variability of water-energy-carbon fluxes in a mixed shrubland of the eastern bajada. Jornada LTER Annual Symposium, Las Cruces, NM.

435. Mascaro, G., Vivoni, E.R., and Ko, A. 2019. Hyper-Local Soil Moisture Estimates from Satellites via Scale Invariance of Hydrologic Simulations. American Geophysical Union Fall Meeting, San Francisco, CA.

436. Whitney, K.M., Bohn, T.J., Vivoni, E.R., and Wang, Z. 2019. Simulating Hydrologic Responses in the Colorado River to Climate Change. American Geophysical Union Fall Meeting, San Francisco, CA.

437. Kindler, M., Perez-Ruiz, E.R., Wang, Z., and Vivoni, E.R. 2019. Observations and Modeling of Soil Moisture and Evapotranspiraiton in Irrigated Urban Parks of a Desert City. American Geophysical Union Fall Meeting, San Francisco, CA.

438. Perez-Ruiz, E.R., and Vivoni, E.R. 2019. Linking Carbon Exchanges to Watershed Dynamics in a Mixed Shrubland of the Chihuahuan Desert. American Geophysical Union Fall Meeting, San Francisco, CA.

439. Wang, Z., Vivoni, E.R., and Bohn, T.J. 2019. Modeling Urban Irrigation Impact on Land Surface Temperature in Central Arizona. American Geophysical Union Fall Meeting, San Francisco, CA.

440. Schreiner-McGraw, A.P., Vivoni, E.R., Ajami, H., Sala, O.E., Throop, H.L., and Peters, D.P.C. 2019. Woody Plant Encroachment has a Larger Impact than Climate Change on Dryland Water Budgets. American Geophysical Union Fall Meeting, San Francisco, CA.

441. Escoto, E.A., and Vivoni, E.R. 2019. Characteristics of Rainfall from Drop Size Distribution Measurements in Arizona and New Mexico. American Geophysical Union Fall Meeting, San Francisco, CA.

442. Robles-Morua, A., Navarro-Estupinan, J., Diaz-Caravantes, R., and Vivoni, E.R. 2019. Heat Risk Mapping Through Spatial Analysis of Remotely-Sensed Data and Socioeconomic Vulnerability in Hermosillo, Mexico. American Geophysical Union Fall Meeting, San Francisco, CA.

443. Lintner, B., Adams, D., Scott, R., Vivoni, E.R., Perez-Ruiz, E.R., Gonzalez, M.I., Minjarez, C., Rodriguez, J.C., Serra, Y., Haase, J., and Tannenbaum, S. 2020. Linking Latent Heat Fluxes to Column Water Vapor: Results from the North American Monsoon GPS Hydrometeorological Network Experiment 2017. American Meteorological Society Annual Meeting, Boston, MA.

444. Meili, N., Burlando, P., Carmeliet, J., Chow, W.T.L., Coutts, A.M., Manoli, G., Roth, M., Velasco, E., Vivoni, E.R., and Fatichi, S. 2020. Radiation, Evapotranspiration, and Roughness Effects of Urban Trees on Local Microclimate: A Modeling Study. EGU Annual Meeting, Vienna, Austria.

445. Whitney, K.M., Bohn, T.J., Vivoni, E.R., Wang, Z., Mascaro, G., and Xiao, M. 2020. Increased Temperatures Overwhelm Precipitation Changes Leading to Streamflow Declines in the Colorado River Basin. AGU Fall Meeting, Virtual.

446. Xiao, M., Wang, Z., Mascaro, G., Whitney, K.M., and Vivoni, E.R. 2020. Application of Satellite Products in Surface Hydrological Modeling of the Colorado River Basin. AGU Fall Meeting, Virtual.

447. Wang, Z., Vivoni, E.R., Bohn, T.J., and Wang, Z-H. 2020. Irrigation Cooling Capacity in Agricultural and Urban Settings of Central Arizona: A Multiyear Assessment. AGU Fall Meeting, Virtual.

448. Navarro, J., Robles-Morua, A., Vivoni, E.R., and Montoya, J.A. 2020. Extreme Heat Events Analysis and its Relation to Social Vulnerability in Hermosillo, México. AGU Fall Meeting, Virtual.

449. Keller, Z.T., and Vivoni, E.R. 2020. Hillslope-Channel Runoff Connectivity During the North American Monsoon Across an Arid Piedmont Landscape. AGU Fall Meeting, Virtual.

450. Menchu Maldonado, M.E., Muenich, R.L., and Vivoni, E.R. 2020. Spatiotemporal Patterns of Escherichia coli Impairment in Arid Environments: Implications for Environmental Management. AGU Fall Meeting, Virtual.

451. Perez-Ruiz, E.R., and Vivoni, E.R. 2020. Linking Watershed Water Balance Dynamics to Carbon Fluxes in Two Woody-plant Encroached Ecosystems in the southwestern US. AGU Fall Meeting, Virtual.

452. Yepez, E.A., Rodríguez, J.C., Garatuza-Payan, J., Watts, C.J., Vivoni, E.R., Sanchez-Mejia, Z.M., Méndez-Barroso, L, Delgado Balbuena, J., Rojas-Robles, N.E., Tarin, T., Perez-Ruiz, E.R., Vargas-Terminel, M., Robles-Zazueta, C.A., and Rivera-Diaz, M. 2020. Carbon and water flux assessment at seasonally dry ecosystems of northwestern Mexico. AmeriFlux Virtual Annual Meeting.

453. Whitney, K.M., Bohn, T.J., Vivoni, E.R., Wang, Z., Mascaro, G., and Xiao, M. 2021. Increased Temperatures Overwhelm Precipitation Changes Leading to Streamflow Declines in the Colorado River Basin. EGU Annual Meeting, Virtual.

454. Tarin, T., Yepez, E.A., Barreras-Apodaca, A., Benitez-Valenzuela, L., Castellanos, A.E., Delgado-Balbuena, J., Garatuza-Payan, J., Granados-Martinez, K., Hinojo-Hinojo, C., Lizarraga, C., Mendez-Barroso, L.A., Perez-Ruiz, E.R., Rivera, M.A., Rodriguez, J.C., Rojas-Robles, N., Robles-Zazueta, C., Sanchez-Mejia, Z.M., Vargas-Terminel, M.L., Vivoni, E.R., and Watts, C.J. 2021 Assessing Carbon and Water Fluxes in Seasonally-Driven Ecosystems in Northwestern Mexico. North American Carbon Program Annual Meeting, Virtual.

455. Smilovsky, D., Vivoni, E.R., Wang, Z., Spindler, P., Maynard, C., Smart, M., and Huth, H. 2021. Determining and Monitoring Streamflow Regimes in Dryland Rivers Using Small Satellite Sensors. Society for Freshwater Science, Annual Conference, Virtual.

456. Vivoni, E.R. 2021. Mobilizing Knowledge: Overview, In Action and How You Can Do It! Graduate and Professional Student Association Research Meeting, Tempe, AZ.

457. Keller, Z.T., Vivoni, E.R., Escoto, E.A., and Perez-Ruiz, E.R. 2021. Hillslope-Channel Runoff Quantification Within a First Order Arid Watershed. Arizona Hydrological Society Annual Meeting, Tempe, AZ.

458. Whitney, K.M., Vivoni, E.R., Bohn, T.J., Wang, Z., Xiao, M., and Mascaro, G. 2021. Data-infused scenario modeling of long-range streamflow projections in the Colorado River Basin. NEXO-UA Speaker Series, Virtual.

459. Keller, Z.T., and Vivoni, E.R. 2021. Hillslope-Channel Runoff Connectivity During the North American Monsoon in an Arid Piedmont Watershed. Jornada LTER Annual Meeting, Virtual.

460. Perez-Ruiz, E.R., Vivoni, E.R., and Sala, O.E. 2021. Seasonality of Water-Carbon Dynamics in a Mixed Shrubland of a Bajada Landscape. Jornada LTER Annual Meeting, Virtual.

461. Cederstrom, J.C., Vivoni, E.R., Mascaro, G., and Svoma, B.M. 2021. Forest Thinning Effects on Snow Cover and Streamflow Responses in Central Arizona under Warming Conditions. Arizona Hydrological Society Annual Meeting, Tempe, AZ.

462. Vivoni, E.R., Kindler, M., Wang, Z., and Perez-Ruiz, E.R. 2021. Enhanced Evaporative Losses and Carbon Releases during Heat Waves in Urban Irrigated Areas. AGU Fall Meeting, New Orleans, LA.

463. Wang, Z., and Vivoni, E.R. 2021. Detecting Flow Presence in Arid Environments. AGU Fall Meeting, New Orleans, LA.

464. Wang, Z., and Vivoni, E.R. 2021. Combined Effects of Future Urban Growth and Climate Change on Irrigation Water Demand in Central Arizona. AGU Fall Meeting, New Orleans, LA.

465. Whitney, K.M., Vivoni, E.R., Bohn, T.J., Wang, Z., Xiao, M., Mascaro, G., Mahmoud, M.I., Cullom, C., and White, D.D. 2021. Warming-driven Snowfall Declines and Evaporative Increases

Overwhelm Precipitation Increases Leading to Colorado River Streamflow Declines. AGU Fall Meeting, New Orleans, LA.

466. Whitney, K.M., Vivoni, E.R., Wang, Z., and Mascaro, G. 2021. Assessing Future Climate and Land Use Impacts to the Colorado River using a Bottom-up Modelling Approach informed by Water Managers. AGU Fall Meeting, New Orleans, LA.

467. Perez-Ruiz, E.R., Vivoni, E.R., and Sala, O.E. 2021. Seasonal variations of water-carbon dynamics in a mixed shrubland of the Chihuahuan Desert. AGU Fall Meeting, New Orleans, LA.

468. Escoto, E.A., and Vivoni, E.R. 2021. Assessment of an Outdoor Rainfall Simulator using a Disdrometer. AGU Fall Meeting, New Orleans, LA.

469. Whitney, K.M., Vivoni, E.R., Wang, Z., and Mascaro, G. 2022. Assessing Future Climate and Land Use Impacts to the Colorado River using a Bottom-up Modelling Approach Informed by Water Managers. EGU Annual Meeting, Virtual.

470. Wang, Z., and Vivoni, E.R. 2022. Detecting Streamflow in Dryland Rivers using CubeSats. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

471. Wang, Z., and Vivoni, E.R. 2022. Impacts of Future Urban Growth and Climate Change on Irrigation Water Use in Central Arizona. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

472. Vivoni, E.R., Perez-Ruiz, E.R., Kindler, M., and Wang, Z. 2022. Anthropogenic Effects on Water, Energy, and Carbon Budgets in Urban Parks. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

473. Kimsal, C., and Vivoni, E.R. 2022. Combining Remote Sensing and Field Observations to Understand Hydrologic Connectivity in Dryland Playas. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

474. Whitney, K.M., Vivoni, E.R., Wang, Z, and Mascaro, G. 2022. Improving and Employing a Hydrologic Model to Enable Water Resource Planning Under Future Climate and Land Cover Uncertainties. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

475. Xiao, M., Mascaro, G., Wang, Z., Vivoni, E.R., and Whitney, K.M. 2022. Improving Surface Hydrological Modeling in the Colorado River Basin with Remote Sensing Products. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

476. Robles-Morua, A., Quiroz-Antunez, U., Vivoni, E.R., and Garatuza-Payan, J. 2022. Development of a Decision Support System to Evaluate Causes and Effects of Water Crises in the Sonora-Arizona MegaRegion. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

477. Orci-Fernandez, L., Vivoni, E.R., Mascaro, G., Robles-Morua, A., and Cederstrom, C.J. 2022. Modeling the Effects of Stand-Replacing Wildfire on Grassland Water Budgets and Evapotranspiration Partitioning at two Eddy Covariance Towers. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

478. Nardi F., Annis, A., Ivanov, V.Y., Grimaldi, S., Istanbulluoglu, E., Vivoni, E.R., and Bras, R.L. 2022. Interfacing Signatures of Geomorphic and Hydrologic Processes Unveil Riparian Corridors: from the Charles River to Puerto Rico Floodplains. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

479. Cederstrom, J.C., Vivoni, E.R., Mascaro, G., and Svoma, B. 2022. Forest Thinning Effects on the Hydrologic Cycle in Central Arizona under Warming Conditions. Frontiers in Hydrology Meeting. San Juan, Puerto Rico.

480. Wang, Z., and Vivoni, E.R. 2022. Detecting Streamflow in Dryland Rivers using CubeSats. 12th Annual SSEBE Graduate Symposium. Tempe, AZ.

481. Wang, Z., and Vivoni, E.R. 2022. Detecting Streamflow in Dryland Rivers using CubeSats. 34th Annual Arizona Hydrological Society Meeting, Tucson, AZ.

482. Wang, Z., and Vivoni, E.R. 2022. Impacts of Future Urban Growth and Climate Change on Irrigation Water Use in Central Arizona. 34th Annual Arizona Hydrological Society Meeting, Tucson, AZ.

483. Vivoni, E.R., Cederstrom, J.C., Mascaro, G., and Svoma, B. 2022. Forest Thinning Effects on the Hydrologic Cycle in Central Arizona under Warming Conditions. 34th Annual Arizona Hydrological Society Meeting, Tucson, AZ.

484. Spindler, P., Vivoni, E.R., and Wang, Z. 2022. Novel Methods for Revising Flow Regimes of Nine Hassayampa River Reaches in Arizona. Joint Aquatic Sciences Meeting. Grand Rapids, MI.

485. Murray, J., and Vivoni, E.R. 2022. Temporal Changes in Soil Infiltrability and Role in Hillslope Runoff Production. Jornada LTER Desert Ecology Short Course. Las Cruces, NM.

486. Kimsal, C., and Vivoni, E.R. 2022. Quantifying Hydrologic Dynamics of Dryland Playas and Their Catchments. Jornada LTER Desert Ecology Short Course. Las Cruces, NM.

487. Hurtado, R.Y., and Vivoni, E.R. 2022. Field-Scale Soil Moisture at Watershed and Playa Sites Using Cosmic Ray Neutron Sensing. Jornada LTER Desert Ecology Short Course. Las Cruces, NM.

488. Menchu, M., Vivoni, E.R., and Muenich, R.L. 2022. *Escherichia coli* Drivers in Surface Water in Arid and Semiarid Regions of Arizona. AGU Fall Meeting, Chicago, IL.

489. Vivoni, E.R. 2023. Water Conservation and Evapotranspiration in Arid Urban Parks. ASCE EWRI 2023 Congress, Henderson, NV.

490. Vivoni, E.R. 2023. Modeling Forest Treatment Water Benefits under a Warming Climate. ASCE EWRI 2023 Congress, Henderson, NV.

491. Wang, Z., and Vivoni, E.R. 2023. Detecting Streamflow Presence in Arid Rivers with Small Satellite Constellations. International Geoscience and Remote Sensing Symposium. Pasadena, CA.

492. Wang, Z., and Vivoni, E.R. 2023. Mapping a Flash Flood Event in Gila Bend, Arizona, using CubeSats. International Geoscience and Remote Sensing Symposium. Pasadena, CA.

493. Vivoni, E.R., Whitney, K.M., Wang, Z., White, D.D., and Mascaro, G. 2023. End of 21st Century Conditions in the Colorado River Basin. Arizona Hydrological Society Symposium, Flagstaff. AZ.

494. Sun, X., Vivoni, E.R., Perez-Ruiz, E.R., Stewart, Q., and Earl, S.R. 2023. Long-term eddy covariance measurement of heat and carbon dioxide fluxes in a low-rise residential neighborhood of Phoenix, Arizona. AmeriFlux Annual Meeting, Boston, MA.

495. Ghimire, S., Wang, Z, and Vivoni, E.R. 2023. Leveraging Ground and Remote Sensing Products with Hydrologic Modeling to Develop Drought Signatures in the Colorado River Basin. AGU Fall Meeting, San Francisco, CA.

496. Raming, L.W., Mascaro, G., Meyer, S., Barton, E., and Vivoni, E.R. 2023. Controls on Non-linear Response to Forest Thinning: Insight from Distributed Hydrological Modeling of Tree Removal at Small Catchment Scales. AGU Fall Meeting, San Francisco, CA.

497. Wang, Z., Vivoni, E.R., and Kimsal, C. 2023. Mapping Surface Water Presence in Drylands using Commercial CubeSat Imagery. AGU Fall Meeting, San Francisco, CA.

498. Wang, Z., Vivoni, E.R., Whitney, K.M., Xiao, M., and Mascaro, G. 2023. On the Sensitivity of Future Snowpack and Streamflows in the Colorado River Basin to the Selection of Precipitation Partition Method. AGU Fall Meeting, San Francisco, CA.

499. Hurtado, R.Y., Vivoni, E.R., Franz, T.E., Gonzales, N.F., Hardgrove, C.J., Perez-Ruiz, E.R., Robles-Morua, A., Becerra, J.A., and Kimsal, C.R. 2023. Investigating Field-Scale Soil Moisture at Upland Watershed and Ephemeral Lake Sites Using Stationary and Roving Cosmic Ray Neutron Sensing. AGU Fall Meeting, San Francisco, CA.

500. Yue, H., Mascaro, G., Vivoni, E.R., and Wang, Z. 2023. Can North American Multi-Model Ensemble (NMME) Forecasts Improve Streamflow Forecasting in the Colorado River Basin? AGU Fall Meeting, San Francisco, CA.

501. Hossain, A., Wang, Z., Raming, L.W., and Vivoni, E.R. 2023. Ephemeral Snowpack Delineation in Mid-Latitude Mountainous Regions Using CubeSat Imagery. AGU Fall Meeting, San Francisco, CA.

502. Ferguson, M., Vivoni, E.R., and Saffell, E. 2023. Drivers and Trends in Pan Evaporation for an Arid Urban Environment. AGU Fall Meeting, San Francisco, CA.

503. Whitney, K.M., Vivoni, E.R., White, D.D., Wang, Z., Quay, R., Mahmoud, M.I., and Templeton, N.P. 2023. Enhancing the Accessibility and Interactions of Satellite-informed Hydrologic Projections under Climate and Forest Changes for Water Managers. AGU Fall Meeting, San Francisco, CA.

504. Becerra, J.A., Vivoni, E.R., and Raming, L.W. 2023. Modeling the Hydrologic Response to Forest Thinning in Water Supply Basins of the southwestern United States. AGU Fall Meeting, San Francisco, CA.

505. Perez-Ruiz, E.R., Vivoni, E.R., Robles-Morua, A., Kimsal, C.R., and Hurtado, R.Y. 2023. Water and Carbon Dynamics of an Arid Playa of the Chihuahuan Desert. AGU Fall Meeting, San Francisco, CA.

506. Torn, M.S., Biraud, S., Cheah, Y-W., Keenan, T.F., Yi, K., Kuperberg, J.M., Papele, D., Stover, D.B., Vivoni, E.R., and Yi, K. 2023. AmeriFlux Town Hall: Enhancing the Impact of Flux Science for the World. AGU Fall Meeting, San Francisco, CA.

507. Sun, X., Vivoni, E.R., Perez-Ruiz, E.R., Stewart, Q., and Earl, S.R. 2023. Examining Long-term Dynamics and Budget of CO_2 Flux Dynamics in a Suburban Community in Phoenix, Arizona. AGU Fall Meeting, San Francisco, CA.

508. Tarin, T., Yepez, E.A., Rojas-Robles, N., Perez-Ruiz, E.R., Valenzuela, Y.C., Madueno, M.G., Sanchez, Z.M., Rodriguez, J.C., Vivoni, E.R., and Garatuza-Payan, J. 2023. Water Use Efficiency in Semi-arid Ecosystems of Northern Mexico. AGU Fall Meeting, San Francisco, CA.

509. Sun, X., Vivoni, E.R., Perez-Ruiz, E.R., Stewart, Q., and Earl, S.R. 2023. Eddy Covariance Site Selection for the SW-IFL and Insights into Historical CO2 Flux Dynamics in a Suburban Community in Phoenix, Arizona. DOE Urban Integrated Field Laboratory Meeting, Washington, DC.

510. Dominguez-Eusebio, C., Alvarado-Barrientos, S., Arredondo, T., Bullock, S., Cervantes-Jimenez, M., Cueva-Rodriguez, A., Delgado, J., Flores-Renteria, Z.M., Garatuza-Payan, J., Gonzalez-Sosa, E., Sanchez-Mejia, Z.M., Oechel, W., Vivoni, E.R., and Yepez, E.A. 2023. Estimacion de la Produccion Primaria Gruesa de Ecosistemas de Latitudes Bajas con Modelos Basados en la Eficiencia del Uso de la Luz. Programa Mexicano del Carbono, Virtual.

511. Whitney, K.M., Vivoni, E.R., White, D.D., Wang, Z., Quay, R., Mahmoud, M.I., and Templeton, N.P. 2024. Enhancing the Accessibility, Applicability and Interactions of Satellite-informed Hydrologic Projections under Climate and Forest Changes for Water Managers. AMS Annual Meeting, Baltimore, MD.

512. Wang, Z., Vivoni, E.R., Spindler, P., and Smart, M. 2024. Detecting Streamflow Presence in Arizona using CubeSats. Water Resources Research Center Annual Conference, Tucson, AZ.

513. Yue, H., Mascaro, G., Vivoni, E.R., Wang, Z., Templeton, N.P., and Kartha, V. 2024. Evaluating the North American Multi-Model Ensemble (NMME) Forecasts as an Alternative for the 24-month Study Used to Manage the Colorado River Basin. Water Resources Research Center Annual Conference, Tucson, AZ.

514. Raming, L.W., Mascaro, G., Meyer, S., Barton, E., Svoma, B., Vivoni, E.R., and Buchanan, H. 2024. The ASU-SRP Applied Innovation Partnership to Determine Hydrologic Response from Forest Thinning Projects. Water Resources Research Center Annual Conference, Tucson, AZ.

515. Mondal, S., Vivoni, E.R., and Saffell, E. 2024. Drought Resilience through Advanced Monitoring, Prediction, and Mitigation Strategies. Water Resources Research Center Annual Conference, Tucson, AZ.

516. Sun, X., Vivoni, E.R., Perez-Ruiz, E.R., Stewart, Q., Earl, S.R., Hultine, K., and Hyneman, L. 2024. Collaboration with local community stakeholders to develop an eddy covariance flux network in Phoenix, Arizona. Water Resources Research Center Annual Conference, Tucson, AZ.

517. Perez-Ruiz, E.R., Vivoni, E.R., Keller, Z.T., Kimsal, C., and Hurtado, R.Y. 2024. An Experimental Catchment for Understanding Ecohydrological Processes on Piedmont Slopes in the Chihuahuan Desert: Jornada Experimental Range. WaterSciCon24, Saint Paul, MN.

518. Vivoni, E.R., Hurtado, R.Y., Kimsal, C., Keller, Z.T., and Perez-Ruiz, E.R. 2024. Hydrologic Connectivity in Arid Shrublands from Hillslopes to Ephemeral Playas. Ecological Society of America Annual Meeting, Long Beach, CA.

519. Penaranda-Velez, V.M., Ochoa, C.A., Quintanar, A.I., and Vivoni, E.R. 2024. The Topographic Random Cascade Approach for Downscaling and Extreme Event Modeling of Coarse-Scale Precipitation Products over Complex Terrain Regions. Study case: the metropolitan area of Mexico City. 58th CMOS Congress. (Virtual).

520. Karion, A., Ahlswede, B., Negri, C., Ricciuto, D., Perez-Ruiz, E., Bou-Zeid, E., Vivoni, E.R., Chen, G., Bohrer, G., Velasco, E., Chu, H., Horne, J., Chen, J., Frank, J., Davis, K., Parazoo, N., Rojas-Robles, N.E., Matamala, R., Murphy, S., Collis, S., Biraud, S., Metzger, S., Grimmond, S., Sun, X., Lee, X., Pan, Y., Pal, S., and Muryadyan, P. 2024. Land-Atmosphere Exchanges in Complex Urban Landscapes: From Process Diagnosis to Climate Impacts. Integrated Carbon Observation System Science Conference 2024, Versailles, France.

521. Acero Triana, J.S., Pulido, J.A., Ajami, H., Whitney, K.M., Vivoni, E.R., Papalexakis, E.E. 2024. Improving Colorado River Flow Predictions under Climate Change Scenarios using Machine Learning Approaches. Computational Methods in Water Resources, Tucson, AZ.

522. Raming, L.W., Mascaro, G., Meyer, S., Barton, E., Svoma, B.M., and Vivoni, E.R. 2024. A Novel Method for Simulating Forest Thinning in a Distributed Hydrologic Model. Computational Methods in Water Resources Conference, Tucson, AZ.

523. Alshehri, M., Vivoni, E.R., and Mascaro, G. 2024. Controls of Large-Scale Meteorological Patterns on Annual Maximum Streamflow across the United States. American Geophysical Union Annual Meeting, Washington, DC.

524. Wang, Z., Baskar, J.V.J., Sarma, M., Svoma, B., and Vivoni, E.R. 2024. Detection of Intermittent Snow Cover Dynamics using Transfer Learning and PlanetScope Imagery. American Geophysical Union Annual Meeting, Washington, DC.

525. Wang, Z., Malvi, S., and Vivoni, E.R. 2024. Monitoring Forest Thinning using Deep Learning based on NAIP and PlanetScope Imagery. American Geophysical Union Annual Meeting, Washington, DC.

526. Raming, L.W., Mascaro, G., Meyer, S., Barton, E., Svoma, B.M., Becerra, J.A., Gallegos, L.L., Hossain, M.A., and Vivoni, E.R. 2024. Seeing the Forest for the Trees: Integrating Individual Trees in a Distributed Hydrologic Model to Evaluate Forest Thinning Impacts on Water Resources. American Geophysical Union Annual Meeting, Washington, DC.

527. Chen, X., Ghimire, S., Wang, Z., and Vivoni, E.R. 2024. Uncertainty in Future Hydrology of the Colorado River Basin under CMIP5 and CMIP6. American Geophysical Union Annual Meeting, Washington, DC.

528. Barzin, R., Vivoni, E.R., Wang, Z., French, A.N., and Guillevic, P.C. 2024. Crop Change Detection After Drought Declarations in Arizona using Planet Fusion and Planetary Variables. American Geophysical Union Annual Meeting, Washington, DC.

529. Gallegos, L.L., Raming, L.W., Wang, Z., and Vivoni, E.R. 2024. Quantifying Vegetation Regrowth in Treated Ponderosa Pine Forests for Input to Distributed Hydrologic Models. American Geophysical Union Annual Meeting, Washington, DC.

530. Mondal, S., and Vivoni, E.R. 2024. The 2023 Diurnal Compounding Hot Drought Over Southwestern North America. American Geophysical Union Annual Meeting, Washington, DC.

531. Raming, L.W., Hossain, M.A., Cederstrom, C.J., Becerra, J.A., Gallegos, L.L., and Vivoni, E.R. 2024. Enhancing Accessibility in Distributed Hydrologic Modeling: Introducing pytRIBS for the TIN-based Real-time Integrated Basin Simulator (tRIBS). American Geophysical Union Annual Meeting, Washington, DC.

532. Lamer, K., Vivoni, E.R., Currans, K.V.M., Georgescu, M., Keith, L., New, J.R., Joshi, P., Davis, E., Li, F., Roy, M., Mages, Z., Salamanca, S., Perez-Ruiz, E.R., Molla, A., Sun, X., Allen Dumas, M.R., Andino, J., Sailor, D. and SW-IFL team. 2024. Numerical Modelers, Resilience Solution Experts and Observationalists Came Together to Design Urban Field Experiments Focused on Extreme Heat and Related Hazards. American Geophysical Union Annual Meeting, Washington, DC.

533. Ghimire, S., Wang, Z., and Vivoni, E.R. 2024. Unraveling the Role of Soil Moisture Memory in Snowmelt Runoff Generation during the Colorado River Basin Drought. American Geophysical Union Annual Meeting, Washington, DC.

534. Sharma, S., Wang, Z., and Vivoni, E.R. 2024. Differential Effects of the Colorado River Drought Declaration on Agricultural Districts of Central Arizona. American Geophysical Union Annual Meeting, Washington, DC.

535. Rojas-Robles, N.E., Sun, X., Perez-Ruiz, E.R., Vizuete-Jaramillo, E., and Vivoni, E.R. 2024. Improving the Understanding of Land-Atmospheric Energy and Matter Exchanges in Hot Urban Systems. American Geophysical Union Annual Meeting, Washington, DC.

536. Whitney, K.M., Bolten, J.D., Kumar, S.V., Vivoni, E.R., White, D.D., and Locke, K. 2024. Advancing Water Resource Decision-Making Through Remote Sensing, Modeling, and Stakeholder Engagement. American Geophysical Union Annual Meeting, Washington, DC.

537. Mondal, S., and Vivoni, E.R. 2024. The 2023 Diurnal Compounding Hot Drought Over Southwestern North America. Arizona Drought Monitoring Technical Committee. Phoenix, AZ.

538. Perez-Ruiz, E.R., Alvarado-Soto, S., Martinez-Hernandez, D., Vivoni, E.R., and Dominguez-Acosta, M. 2024. Estimacion de la Tasa de Infiltracion Del Suelo en una Cuenca Semiarida del Desierto de Chihuahua Utilizando el Metodo de Beerkan. Reunion Annual de la Union Geofisisca Mexicana. Puerto Vallarta, Mexico.

539. Vivoni, E.R. 2025. Water Resources for Public Impact Through A Process-Based Watershed Model. American Meteorological Society Annual Meeting, New Orleans, LA.

540. Vivoni, E.R. 2024. Water Resources for Public Impact Through A Process-Based Watershed Model. Arizona Floodplain Management Association Meeting, Prescott, AZ.

541. Rojas-Robles, N.E., and Vivoni, E.R. 2024. Synergies Between Extreme Heat Events and Urban Land Cover on Controlling Water, Energy, and Carbon Dynamics. SW-IFL All Hands Meeting, Tempe, AZ.

542. Dao, M., Rojas-Robles, N.E., and Vivoni, E.R. 2024. A Comparison of Oasis Days and Extreme Heat Warning Days in 2019 and 2020. SW-IFL All Hands Meeting, Tempe, AZ.

18. SPONSORED RESEARCH PROJECTS:

Summary: *E.R.V. has been PI or co-PI on 87 research grants sponsored by local, national and international agencies, including NASA, NSF, NOAA, DOD, DOE, USDA, USGS, TNC, IDB, CAP, MWD, Google Research, CAP, SRP and US Department of State, among others.*

1. Distributed Hydrologic Modeling for Water Resources Planning: A GIS-based, System Dynamics Approach. Sandia National Laboratories ($20,000).

2. Integrating Satellite Rainfall Estimates with Weather Radar Data for Hydrologic Assessments in New Mexico. New Mexico Space Grant Consortium ($15,000).

3. Dynamic Hydrology and Ecosystem Modeling in Semi-Arid Complex Terrain using NASA EOS Observations from TERRA and AQUA. NASA Earth Science Enterprise ($252,786).
4. High Performance, Multiple Resolution Modeling of Semi-Arid Hydrology at Regional Scales. NSF Hydrological Sciences ($130,076).
5. GIS-based System Dynamics Modeling of Watershed Processes for Water Resources Management of the Rio Grande, New Mexico. Sandia National Laboratories ($80,000).
6. New Mexico EPSCoR Phase II. National Science Foundation: EPSCoR Program. ($794,831).
7. Interdisciplinary Science for the Environment: Research Experience for Undergraduates at New Mexico Tech. National Science Foundation: Special Projects, Undergraduate Programs ($261,945).
8. Spatial Scaling of Soil Moisture and Evapotranspiration in the Upper Río Grande Basin. Los Alamos National Laboratory – New Mexico Tech Program ($49,961).
9. Linking Atmospheric Dynamics with Land-Surface Hydrology over Complex Terrain: A Multiple Resolution Modeling Approach. U.S. Army Research Office ($148,474).
10. Development of Geospatial Modeling Tools for Watershed-based Water Resources Management in New Mexico. New Mexico Water Resources Research Institute, Seed-Money Grant ($30,000).
11. Effects of Land-Cover Change on Streamflow Yield through Watershed Modeling in the Gila River Basin. Sandia National Laboratory. ($59,648).
12. A US-Mexico Collaboration on Hydrological Studies of the North American Monsoon. National Science Foundation ($121,000).
13. Impacts of Climate Change on Water Resources in the Rio Grande Basin based on High Performance Computing Simulations. LANL-NMT Collaborative Agreement. ($66,904).
14. Investigation of the Scaling Properties of Terrestrial Hydrology. NASA THP. ($151,086).
15. Improved Streamflow Forecasts in the Rio Sonora Basin. NOAA Climate Program Office. ($390,943).
16. Improved Hydrometeorological Forecasting through Physically-based Distributed Models. NWS Office of Hydrologic Development ($260,630).
17. On Topographic Imprint of Hillslope Aspect: Deciphering Aspect Control on Vegetation and Landform in Central New Mexico. NSF Geomorphology and Land Use ($109,581).
18. US-Mexico Studies on Ecohydrological Interactions during the North American Monsoon. U.S. Fulbright Program ($35,000).
19. Effects of Seasonal Land Surface Conditions on Hydrometeorological Dynamics in Southwestern North America. Army Research Office ($999,960).
20. Biotic Alteration of Soil Hydrologic Properties and Feedback with Vegetation Dynamics in Water Limited Ecosystems. National Science Foundation ($41,854).
21. Jemez River Basin and Santa Catalina Mountains Critical Zone Observatory. National Science Foundation ($108,913).
22. Sustainable Water Resources for Communities under Climate Change: Can State-of-the-Art Forecasting Inform Decision-Making in Data Sparse Regions. National Science Foundation ($286,814).
23. The Role of Land Surface Physics in Controlling Intraseasonal Precipitation Variability over Complex Terrain. NOAA Climate Program Office ($444,568).
24. Distributed Hydrologic Modeling in the Salt and Verde River Basins. National Science Foundation, Decision Center for a Desert City ($138,146).

25. Climate and Population Change and Thresholds of Peak Ecological Water: Integrated Synthesis for Dryland Rivers. National Science Foundation, Water Climate Sustainability ($392,881).

26. The San Juan River Basin Pilot Project: Translating Information to Sustainable Water Resources Management. ASU-Tec de Monterrey Water Innovation Consortium ($98,306).

27. Decision Support System For The San Juan River Basin In Mexico. InterAmerican Development Bank ($100,000, 47% recognition or $47,000).

28. Assessing decadal climate change impacts on urban populations in the Southwestern USA. National Science Foundation, Earth System Modeling ($750,000).

29. IRES: US-MEXICO Border Water & Environmental Sustainability Training (UMB-WEST). National Science Foundation, International Research Experiences for Students ($149,989).

30. CAP3: Urban Sustainability in the Dynamic Environment of Central Arizona. National Science Foundation LTER Program. ($5,640,000, 2% recognition or $112,800).

31. Partnership for Education on Climate Change, Engineered Systems and Society. National Academy of Engineering. ($217,895, 15% recognition or $32,684).

32. Cloud Computing-based Delivery of Drought Information at Multiple Scales. National Aeronautics and Space Administration, Water Resources Program ($199,947).

33. Copper Triangle Pilot Project: Enhancing Opportunities for Geoscience Studies and Careers in a Culturally Diverse, Underserved Rural Mining Area. National Science Foundation. ($198,975).

34. Stakeholder Engagement in the Hydrological Forecasting of Land Use and Engineering Solutions to Flooding in Monterrey, Mexico. National Science Foundation, Decision Center for a Desert City ($60,614).

35. Atmospheric Water Transport from Mexico to the U.S.: A Holistic, Binational Approach to Reducing Vulnerability to the North American Monsoon. National Science Foundation, SEES Postdoctoral Fellowship ($490,147).

36. Ensemble Generation of Downscaled Soil Moisture from Satellite Observations. NASA Terrestrial Hydrology Program. ($219,895).

37. Cloud Computing-Based Visualization and Access of Global Climate Data Sets. Google App Engine Research Program. (In-kind contribution of $60,000).

38. The Emergence of Coupled Natural and Human Landscape in the Western Mediterranean. National Science Foundation Coupled Human and Natural Systems. ($1,500,000).

39. Terrestrial Water Dynamics under a Changing Climate in the Southern Rockies. USGS Colorado Ecosystems Studies Unit. ($57,489).

40. The Dynamics of Multi-scalar Adaptation in the Megalopolis: Autonomous action, institutional change and social-hydrological risk in Mexico City (MEGADAPT). National Science Foundation Coupled Human and Natural Systems. ($1,498,870, 10% recognition or $149,887).

41. Town of Gila Bend Aquifer Study. Walton Sustainability Solutions Service. ($21,500, 50% recognition or $10,750).

42. Novel Deployment of Mobile Eddy Covariance Tower Observations Across Variations in the Built Environment in a Desert Urban Area. Army Research Office STIR program. ($49,936, 100% recognition or $49,936).

43. Sustainable urban development in the Sun Corridor: Finding engineering alternatives through coupled WRF-urban land surface modeling. National Science Foundation Environmental Sustainability. ($299,592, 30% recognition or $89,878).

44. Brush Management and Ecosystem Services: A Quantification of Trade-offs on Western Rangelands. USDA-ARS Renewable Energy, Natural Resources, and Environment. ($98,761, 100% recognition or $98,761).

45. Return on Investment of Natural and Built Infrastructure for the Monterrey Water Fund. The Nature Conservancy. ($29,997, 100% recognition or $29,997).

46. Hydroclimate Variability and Climate Change Impacts on Water Resources in Mexico. U.S. Fulbright Scholar Program. ($39,000, 100% recognition or $39,000).

47. Urban Resilience To Climate Change-Driven Extreme Event. National Science Foundation Sustainability Research Network ($11,999,720, 10% recognition or $1,199,972).

48. A Water Resources Decision Support System to Reduce Drought Vulnerability and Enable Adaptation to Climate Variability and Change in Pernambuco. InterAmerican Development Bank. ($500,000, 40% recognition or $200,000).

49. DMUU: DCDC III: Transformational Solutions for Urban Water Sustainability Transitions in the Colorado River Basin. National Science Foundation Decision Making Under Uncertainty. ($4,499,896, 10% recognition or $449,989).

50. Engineering Research Center For Bio-Mediated And Bio-Inspired Geotechnics. National Science Foundation. ($18,500,000, 2% or $370,000).

51. Improvements in Modeling Regional Land-Atmosphere Interactions and Hydrologic Responses in Complex Terrain and Seasonal Ecosystems. NASA Earth and Space Science Fellowship Program. ($30,000, 100% recognition or $30,000).

52. Emergence of a Food-Energy-Water Nexus Due to an Inter-Basin Transfer in a Context of a Highly Variable Climate. NSF Environmental Sustainability Program. ($56,522, 100% recognition or $56,522).

53. Impactos de la Variabilidad Hidroclimática y El Cambio Climático sobre los Recursos de Agua en el Noroeste de México. CONACYT Sabbatical Program. ($24,000, 100% recognition or $24,000).

54. Urban Sustainability across the US-Mexico Border: A Comparison of Urban Climate, Built Environments and Water Management in Phoenix and Hermosillo. ASU Program for Transborder Communities. ($20,650, 100% recognition or $20,650).

55. Mapping Irrigated Agriculture and Its Temporal Changes in Arid and Semiarid Regions at the Global Scale from Remote Sensing. Google Earth Engine Research Program. ($45,417, 100% recognition or $45,417).

56. Determining Hydrologic Cause and Effects of Plant Community Changes and their Effects on Ecosystem Carbon Uptake in the North American Monsoon Region. USDA National Institute of Food and Agriculture Graduate Fellowship Program. ($47,069, 100% recognition or $47,069).

57. Interdisciplinary Student Research on Urban Resilience in Latin America. NSF IRES Program ($249,705, 25% recognition or $62,426).

58. CAPIV: Investigating Urban Ecology and Sustainability through the Lense of Urban Ecological Infrastructure. National Science Foundation LTER Program. ($4,508,000, 2% recognition or $90,160).

59. Ecohydrological controls on vegetation distribution patterns in global drylands: Mutual study of Jornada and Lehavim Long-term Ecological Research sites. ASU-BGU Projects in Environmental Science. ($45,000, 50% recognition or $25,000).

60. Water Conservation and the Circular Economy. ASU Walton Sustainability Solutions Services Resource Innovation Solutions Network. ($20,000, 100% recognition or $20,000).

61. Water Conservation Potential of Compost in Parks. Metropolitan Water District of Southern California Innovative Conservation Program. ($50,000, 100% recognition or $50,000, plus cost-share from City of Phoenix of $50,000 for a total of $100,000).

62. Exploring the Response of the Colorado River Basin to Future Climate. Central Arizona Project. ($75,000, 100% recognition or $75,000).

63. Averting Drought Shortages in the Colorado River: Transitioning Long-Range, Data-Infused Scenario Modeling to Operations of the Central Arizona Project. NASA Water Resources Applications Program. ($1,014,713, 50% recognition or $507,357).

64. Watershed Response to Climate Change and Forest Thinning in the Beaver Creek of central Arizona. Salt River Project. ($114,518, 100% recognition or $114,518).

65. Hillslope-Channel Connectivity in Runoff Across a Bajada Landscape. Jornada LTER Graduate Fellowship Program and Equipment Grant. ($65,000, 100% recognition or $65,000).

66. Development of Strategic Plan for the Food-Energy-Water (FEW) Nexus in the Sonora-Arizona Mega-Region. ASU Program for Transborder Communities. ($9,000, 100% recognition or $9,000).

67. Interacciones Superficie-Atmosfera en Usos de Suelo Naturales y Urbanos en Zonas Aridas y Semiaridas. CONACYT Fellowship Program. ($32,530, 100% recognition or $32,530).

68. Sycamore Watershed Hydrologic Monitoring Model. Salt River Project. ($175,000, 50% recognition or $87,500).

69. Extension of Water Conservation Potential of Compost in Parks. Central Arizona Project ($32,260, 100% recognition or $32,260).

70. US-Mexico Training in Environment, Agriculture and Management (TEAM). 100,000 Strong in the Americas Innovation Fund. ($24,996, 50% recognition or $12,498).

71. LTER: Long-Term Research at the Jornada Basin (LTER-VII). NSF LTER Program. ($76,000, 100% recognition or $76,000).

72. Determining Streamflow Duration from Remotely-Sensed Imagery in the Hassayampa River, Arizona. Arizona Department of Environmental Quality. ($50,440, 100% recognition or $50,440).

73. Determining Streamflow Regimes from Commercial Smallsat Data in Arid and Semiarid Regions. NASA Commercial Smallsat Program. ($172,908, 100% recognition or $172,908).

74. Water Sustainability for the Belmont Project. ASU University City Exchange. ($33,526, 100% recognition or $33,526).

75. Managing the Colorado River as an Infrastructure Asset: Fusing Remote Sensing and Numerical Modeling in the Operations of the Central Arizona Project. NASA Water Resources Applications Program. ($1,049,933, 50% recognition or $524,967).

76. Dude Fire Hydrologic Modeling Phases 1 and 2. Salt River Project. ($60,383, 100% recognition or $60,383).

77. Forests and Water Collaboration: Cragin Restoration 1 and 2. Salt River Project. ($187,207, 75% recognition or $140,405).

78. Southwest Urban Corridor Integrated Field Laboratory. Department of Energy. ($25,000,000, 10% recognition or $2,500,000).

79. Effects of Solar Panels on Canal Evaporation: Phase 1. Salt River Project. ($301,633, 50% recognition or $150,500).

80. Advanced Water Observatory and Decision Support System. Arizona Office of the Governor. ($1,000,000, 100% recognition or $1,000,000).

81. Forests and Water Collaboration: Phase II. Salt River Project. ($222,433, 100% recognition or $222,433).

82. Workshop on Land-Atmosphere Exchanges in Complex Urban Landscapes. Department of Energy. ($20,000, 100% recognition or $20,000).

83. Enhanced Snow Monitoring using Planet Data and Machine Learning. ASU-Planet Collaboration. ($125,000, 100% recognition or $125,000).

84. Crop Change Detection After Drought Shortage Declarations in Arizona using Planet Imagery and Planetary Variables. ASU-Planet Collaboration. ($100,000, 100% recognition or $100,000).

85. Fostering Water Conservation through Algae Solutions for AZ Farms. State of Arizona Water Infrastructure Finance Authority. ($3,000,000, 50% recognition or $1,500,000).

86. Closing the Water Budget of Forested Watersheds. Salt River Project. ($140,000, 100% recognition or $140,000).

87. Woody Plant Encroachment and Its Consequences on Subsurface Water Redistribution. DOE Environmental System Sciences. ($1,000,000, 50% recognition or $500,000).

88. Desert-Urban SysTem Integrated Atmospheric Monsoon (DUSTIEAIM) in the Southwestern United States. DOE ARM Facilities Grant. (scientific equipment loan and collaboration).

89. Effects of Solar Panels on Canal Evaporation: Phase 2. Salt River Project. ($300,000, 75% recognition or $225,000).

19. PATENT APPLICATIONS:

Summary: *E.R.V. has disclosed the following patents at MIT and ASU.*

1. "Method for producing property-preserving variable resolution models of surfaces" USA Serial No. 10/458612 (MIT, 2003-2004, not completed).
2. "System for determining streamflow duration from remotely-sensed imagery" US patent application, Pub. No: US 2023/0245447 A1 (Aug. 3, 2023)
3. "Incorporating trees into multiple resolution meshes used in environmental modeling" US patent application.