Amir AghaKouchak, PhD, PE

Amir AghaKouchak
Dept. of Civil & Environmental Engineering
University of California Irvine
E/4130 Engineering Gateway
Irvine, CA 92697

Office: (949) 824-9350
Mobile: (949) 231-8987
Fax: (949) 824-8831
Email: amir.a@uci.edu
Website: http://amir.eng.uci.edu/

Current Position

Assistant Professor, University of California, Irvine

Professional Licensure

Professional Licensed Civil Engineer in the State of California (License Number: 78586).

Education

PhD, Civil and Environmental Engineering, University of Stuttgart, Germany, 2010

Dissertation: Simulation of remotely sensed rainfall fields using copulas

MSc, Civil Engineering - Water Resources, K.N.Toosi University of Technology, Tehran, Iran, 2005

BSc, Civil Engineering (Major: Water Resources), K.N.Toosi University of Technology, Tehran, Iran, 2003

Academic Experience

Assistant Professor, University of California, Irvine, Irvine, CA, Jul. 2011 - present.

Postdoctoral Associate, University of California, Irvine, Irvine, CA, Jan. 2010 - Jun. 2011.

Visiting Scholar, University of Louisiana at Lafayette, Lafayette, LA, Dec. 2007 - Oct. 2009.

Graduate Student, University of Stuttgart, Stuttgart, Germany, Oct. 2005 - Nov. 2009.

Honors & Awards

2014 United States Frontiers of Engineering (FOE), National Academy of Engineering (NAE) of the National Academies ("*The FOE program brings together a select group of emerging engineering leaders from industry, academe, and government labs to discuss pioneering technical work and leading edge research in various engineering fields and industry sectors*").

2014-15 Early Career Innovation in Teaching Award.

2013-14 Hellman Fellowship Award.

2012 Frontiers of Engineering Education (FOEE) Award, National Academy of Engineering (NAE) of the National Academies ("*The FOEE program brings together some of the nation's most engaged and innovative engineering educators in order to recognize, reward, and promote effective, substantive, and inspirational engineering education through a sustained dialogue within the emerging generation of innovative faculty*").

World Climate Research Programme (WCRP) award to support participation and oral presentation in the WCRP Workshop on Drought Predictability and Prediction in a Changing Climate, March 2-4, 2011, Barcelona, Spain.

National Oceanic and Atmospheric Administration (NOAA) Educational Partnership Program Award, 2009.

Grants, Awards & Projects

Total funding: **PI: $2,187,049**; Co-PI/Co-I: $9,328,172

14. Title: Advancing Drought Onset Detection and Seasonal Prediction Using a Composite of NASA Models and Satellite Data Agency: **NASA**; Dates: 12/1/14-11/30/18
    Funding: $1,172,549; PI: **Amir AghaKouchak**

13. Title: A Nested Multi-Scale Hydrological Modeling Framework: Assessing Resilience and Vulnerability to Climate Change
    Agency: **NSF-Hydrological Sciences**; Dates: 9/1/13-8/31/16
    Funding: $225,000; PI: **Amir AghaKouchak**

12. Title: Advancing Drought Monitoring and Prediction Using a Multi-Index Multivariate Framework
    Agency: **NOAA**; Dates: 9/1/14-8/31/17
    Funding: $440,000 (UCI's share: $247,000); Lead PI: **Amir AghaKouchak**; Co-PIs: Andy Wood, Mark Svoboda

11. Title: Drought Emergency Seasonal Forecasting via Conditional Analog Year
    Agency: **CA Dept. of Water Resources**; Dates: 10/1/14-5/31/15
    Funding: $134,599; PI: **Amir AghaKouchak**

10. Title: Frameworks for Analysis of Regional, Concurrent, Conditional and Non-Stationary Extremes in Geosciences
    Agency: **ARL**; Dates: 12/1/14-8/31/15
    Funding: $50,000; PI: **Amir AghaKouchak**

9. Title: Drought Monitoring Using NASA Atmospheric Infrared Sounder (AIRS) Data
    Agency: **NASA**; Dates: 10/1/14-9/30/15
    Funding: $54,000; PI: **Amir AghaKouchak**

8. Title: Global Integrated Drought Monitoring and Prediction System
   Agency: **NSF - Innovation Corps (I-Corps)**; Dates: 10/1/13-9/30/14
   Funding: $50,000; PI: **Amir AghaKouchak**

7. Title: Building a Climate Change Resilient Electricity System for Meeting California's Energy and Environmental Goals
   Agency: **California Energy Commission (CEC)**; Dates: 07/1/15-6/30/18
   Funding: $698,792; PI: Scott Samuelsen; Co-Investigators: **Amir AghaKouchak**, Brian Tarroja, David Feldman, Brendan P. Shaffer, Kaveh Madani

6. Title: Hazards SEES Type 2: Preventing Flood Hazards from Becoming Disasters through Two-Way Communication of Parcel-Level Flood Risk
   Agency: **NSF**; Dates: 09/1/14-8/31/17
   Funding: $2,819,380; PI: Brett Sanders; Investigators: **Amir AghaKouchak**, Victoria Basolo, John Houston, Richard Matthew, James Famiglietti

5. Title: Low Energy Options for Making Water from Wastewater
   Agency: **NSF**; Dates: 10/1/12-9/30/17
   Funding: $4,900,000; PI: Stanley Grant; Investigators: **Amir AghaKouchak**, R Ambrose, P Bowler, B Cooper, R Detwiler, S Elghobashi, D Feldman, S Jiang, R Lejano, L Levin, M McBride, M Prather, J.D. Saphores, D Rosso, B Sanders, A Sengupta, E Stein, M Sutula, W Tang, K Treseder, J Vrugt, R Brown, P Cook, A Deletic, T Fletcher, A Hamilton, I Marusic, D McCarthy, M Stewardson, A Western

4. Title: Analysis of Weather and Climate Extremes Using AIRS Satellite Data
   Agency: **NASA**; Dates: 5/1/13-4/30/14
   Funding: $53,901; PI: **Amir AghaKouchak**

3. Title: Quantifying Climate Projections Uncertainty Using a Non-Gaussian Model and an Adaptive Weighting Ensemble Algorithm: Application to Water Resources Management
   Agency: **USBR**; Dates: 9/1/11-8/31/13
   Funding: $200,000; PI: **Amir AghaKouchak**; Co-PI: Jialun Li

2. Title: Improving near real-time high-resolution satellite-derived precipitation estimation for hydrologic modeling and decision-making applications
   Agency: **ARL**; Dates: 10/1/11-9/30/13
   Funding: $670,000; PI: Soroosh Sorooshian; Co-PIs: **Amir AghaKouchak**, Kuolin Hsu, Xiaogang Gao

1. Title: Impacts of Global Climate Change (GCC) on the Water Resources of Morocco
   Agency: **World Bank**; Dates: 8/1/11-12/31/12
   Funding: $240,000; PI: Soroosh Sorooshian; Co-PIs: **Amir AghaKouchak**, Jialun Li

Editorial

Editorial Board Member, ***Scientific Reports*** (Nature Publishing Group), 2015-present.

Editorial Board Member, ***Scientific Data*** (Nature Publishing Group), 2014-present.

Editor, Extremes in a Changing Climate: Detection, Analysis & Uncertainty, 2013, Springer.

Reviewer, Water Resources Research (AGU), Geophysical Research Letters (AGU), Journal of Hydrometeorology (AMS), Journal of Geophysical Research (AGU), Journal of Climate (AMS), Theoretical and Applied Climatology (Springer), Hydrology and Earth System Sciences (EGU), Advances in Water Resources (Elsevier), Journal of Hydrology (Elsevier), Environmental Modelling and Software (Elsevier), Atmospheric Research (Elsevier), Stochastic Environmental Research and Risk Assessment (Springer), Computer Applications in Engineering Education (Wiley), Journal of Applied Meteorology and Climatology (AMS), Journal of Hydrologic Engineering (ASCE), Hydrological Sciences Journal (IAHS), Journal of Water Resources Planning and Management (ASCE), Regional Environmental Change (Springer), Natural Hazards and Earth System Sciences (EGU), Computers & Geosciences (Elsevier), Journal of the American Water Resources Association (Wiley), Water Resources Management (Springer), Remote Sensing (MDPI), Water (MDPI), Water Science and Technology (IWA).

Patent

Global Integrated Drought Monitoring and Prediction System (GIDMaPS), United States Pending Patent (EFS ID: 15781319, Application Number: 61823491), **AghaKouchak A.**, Hao Z., Nakhjiri N., 2013.
Selected as a 2013 National Science Foundation (NSF) Innovation Corps (I-Corps).

Publications

Journal Publications *(Students and Postdocs Underlined)*

58. **AghaKouchak A.**, Feldman D., Hoerling M., Huxman T., Lund J., 2015, Recognize Anthropogenic Drought, ***Nature***, 524 (7566), 409-4011, doi:10.1038/524409a.

57. Mazdiyasni O., **AghaKouchak A.**, 2015, Substantial Increase in Concurrent Droughts and Heatwaves in the United States, ***Proceedings of the National Academy of Sciences***, doi: 10.1073/pnas.1422945112.

56. Vahedifard F., **AghaKouchak A.**, Robinson J.D., 2015, Drought threatens California's levees, ***Science***, 349 (6250), 799, doi: 10.1126/science.349.6250.799-a.

55. **AghaKouchak A.**, Farahmand A., Teixeira J., Wardlow B.D., Melton F.S., Anderson M.C., Hain C.R., 2015, Remote Sensing of Drought: Progress, Challenges and Opportunities, ***Reviews of Geophysics***, 53(2), 452-480, doi: 10.1002/2014RG000456.

54. Mehran A., Mazdiyasni O., **AghaKouchak A.**, 2015, A Hybrid Framework for Assessing Socioeconomic Drought: Linking Climate Variability, Local Resilience, and Demand, ***Journal of Geophysical Research***, 120 (15), 7520–7533, doi: 10.1002/2015JD023147.

53. Shukla S., Safeeq M., **AghaKouchak A.**, Guan K., Funk C., 2015, Temperature Impacts on the Water Year 2014 Drought in California, ***Geophysical Research Letters***, 42, 4384-4393, doi: 10.1002/2015GL063666.

52. Askarizadeh A., Rippy M., Fletcher T., Feldman D., Peng J., Bowler P., Mehring A., Winfrey B., Vrugt J., **AghaKouchak A.**, Jiang S., Sanders B., Levin L., Taylor S., Grant S., 2015, From rain tanks to catchments: Use of low-impact development to address hydrologic symptoms of the urban stream syndrome, ***Environmental Science & Technology***, doi: 10.1021/acs.est.5b01635.

51. **AghaKouchak A.**, Norouzi H., Madani K., Mirchi A., Azarderakhsh M., Nazemi N., Nasrollahi N., Mehran M., Farahmand A., Hasanzadeh E., 2015, Aral Sea Syndrome Desiccates Lake Urmia: Call for Action, ***Journal of Great Lakes Research***, 41(1), 307-311, doi: 10.1016/j.jglr.2014.12.007.

50. Cheng L., **AghaKouchak A.**, Phillips T., 2015, Non-stationary Return Levels of CMIP5 Multi-Model Temperature Extremes, ***Climate Dynamics***, 44(11), 2947-2963, doi: 10.1007/s00382-015-2625-y.

49. Nasrollahi N., **AghaKouchak A.**, Cheng L., Damberg L., Phillips T., Miao C., Hsu K., Sorooshian S., 2015, How Well Do CMIP5 Climate Simulations Replicate Historical Trends and Patterns of Meteorological Droughts?, ***Water Resources Research***, 51(4), 2847-2864, doi: 10.1002/2014WR016318.

48. Cheng L., **AghaKouchak A.**, 2015, A Methodology for Deriving Ensemble Response from Multimodel Simulations, ***Journal of Hydrology***, 522, 49-57, doi: 10.1016/j.jhydrol.2014.12.025.

47. Farahmand A., **AghaKouchak A.**, Teixeira J., 2015, A Vantage from Space Can Detect Earlier Drought Onset: An Approach Using Relative Humidity, ***Scientific Reports***, 5, 8553, doi: 10.1038/srep08553.

46. **AghaKouchak A.**, 2015, A Multivariate Approach for Persistence-Based Drought Prediction: Application to the 2010-2011 East Africa Drought, ***Journal of Hydrology***, 526, 127-135, doi: 10.1016/j.jhydrol.2014.09.063.

45. Farahmand A., **AghaKouchak A.**, 2015, A Generalized Framework for Deriving Nonparametric Standardized Drought Indicators, ***Advances in Water Resources***, 76, 140-145, doi: 10.1016/j.advwatres.2014.11.012.

44. Prakash S., Mitra A.K., **AghaKouchak A.**, Pai D.S., 2015, Error characterization of TRMM Multisatellite Precipitation Analysis (TMPA-3B42) products over India for different seasons, ***Journal of Hydrology***, doi: 10.1016/j.jhydrol.2015.08.062.

43. Nguyen P., Thorstensen A., Sorooshian S., Hsu K., **AghaKouchak A.**, 2015, Flood Forecasting and Inundation Mapping Using Hiresflood-Uci and Near Real-Time Satellite Precipitation Data: The 2008 Iowa Flood, ***Journal of Hydrometeorology***, 16(3), 1171-1183, doi: 10.1175/JHM-D-14-0212.1.

42. Norouzi H., Temimi M., **AghaKouchak A.**, Azarderakhsh M., Khanbilvardi R., Shields G., Tesfagiorgis K., 2015, Inferring Land Surface Parameters from the Diurnal Variability of Microwave and Infrared Temperatures, ***Physics and Chemistry of the Earth***, doi: 10.1016/j.pce.2015.01.007.

41. Golian S., Mazdiyasni O., **AghaKouchak A.**, 2015, Trends in Meteorological and Agricultural Droughts in Iran, *Theoretical and Applied Climatology*, 119, 679-688, doi: 10.1007/s00704-014-1139-6.

40. Li J., Hsu K., **AghaKouchak A.**, Sorooshian S., 2015, An Object-based Approach for Verification of Precipitation Estimation, ***International Journal of Remote Sensing***, 36(2), 513-529, doi: 10.1080/01431161.2014.999170.

39. **AghaKouchak A.**, Cheng L., Mazdiyasni O., Farahmand A., 2014, Global Warming and Changes in Risk of Concurrent Climate Extremes: Insights from the 2014 California Drought, ***Geophysical Research Letters***, 41 (24), 8847-8852, doi: 10.1002/2014GL062308.

38. **AghaKouchak A.**, Feldman D., Stewardson M.J., Saphores J.-D., Grant S., Sanders B., 2014, Australia's Drought: Lessons for California, ***Science***, 343 (6178), 1430-1431, doi:10.1126/science.343.6178.1430.

37. Cheng L., **AghaKouchak A.**, 2014, Nonstationary Precipitation Intensity-Duration-Frequency Curves for Infrastructure Design in a Changing Climate, ***Scientific Reports***, 4, 7093, doi:10.1038/srep07093.

36. **AghaKouchak A.**, 2014, Entropy-Copula in Hydrology and Climatology, ***Journal of Hydrometeorology***, 15(6), 2176-2189, doi: 10.1175/JHM-D-13-0207.1.

35. Cheng L., **AghaKouchak A.**, Gilleland E., Katz R.W., 2014, Non-stationary Extreme Value Analysis in a Changing Climate, ***Climatic Change***, 127(2), 353-369, doi: 10.1007/s10584-014-1254-5.

34. Hao Z., **AghaKouchak A.**, Farahmand A., Nakhjiri N., 2014, Global Integrated Drought Monitoring and Prediction System, ***Scientific Data***, 1:140001, doi: 10.1038/sdata.2014.1.

33. Cheng L., Gilleland E., Heaton M.J., **AghaKouchak A.**, 2014, Empirical Bayes estimation for the conditional extreme value model, ***Stat***, 3, 391-406, doi: 10.1002/sta4.71.

32. Mehran A., **AghaKouchak A.**, Phillips T.J., 2014, Evaluation of CMIP5 Continental Precipitation Simulations Relative to Satellite-Based Gauge-Adjusted Observations, ***Journal of Geophysical Research***, 119(4), 1695-1707, doi: 10.1002/2013JD021152.

31. Song X., Zhang J., **AghaKouchak A.**, Sen Roy S., Xuan Y., Wang G., He R., Wang X., Liu C., 2014, Rapid Urbanization and Changes in Spatiotemporal Characteristics of Precipitation in Beijing Metropolitan Area, ***Journal of Geophysical Research***, 119(19), 11250-11271, doi: 10.1002/2014JD022084.

30. Sorooshian S., **AghaKouchak A.**, Li J., 2014, Influence of Irrigation on Land Hydrological Processes over California, ***Journal of Geophysical Research***, 119 (23), 13137-13152, doi: 10.1002/2014JD022232.

29. Tabari H., **AghaKouchak A.**, Willems P., 2014, A Perturbation Approach for Assessing Trends in Precipitation Extremes across Iran, ***Journal of Hydrology,*** 519, 1420-1427, doi: 10.1016/j.jhydrol.2014.09.019.

28. Tarroja B., **AghaKouchak A.**, Samuelsen S., Sobhani R., Feldman D., Jiang S., 2014, Evaluating Options for Balancing the Water-Electricity Nexus in California: Part 1 - Securing Water Availability, ***Science of the Total Environment***, doi: 10.1016/j.scitotenv.2014.06.060.

27. Tarroja B., **AghaKouchak A.**, Samuelsen S., Sobhani R., Feldman D., Jiang S., 2014, Evaluating Options for Balancing the Water-Electricity Nexus in California: Part 2 - Greenhouse Gas and Renewable Energy Utilization Impacts, ***Science of the Total Environment***, doi: 10.1016/j.scitotenv.2014.06.071.

26. **AghaKouchak A.**, 2014, A Baseline Probabilistic Drought Forecasting Framework Using Standardized Soil Moisture Index: Application to the 2012 United States Drought, ***Hydrology and Earth System Sciences***, 18, 2485-2492, doi: 10.5194/hess-18-2485-2014.

25. Momtaz F., Nakhjiri N., **AghaKouchak A.**, 2014, Toward a Drought Cyberinfrastructure System, ***Eos, Transactions American Geophysical Union***, 95 (22), 182-183.

24. Hao Z., **AghaKouchak A.**, 2014, A Nonparametric Multivariate Multi-Index Drought Monitoring Framework, ***Journal of Hydrometeorology***, 15, 89-101, doi:10.1175/JHM-D-12-0160.1.

23. Liu Z., Mehran A., Phillips T., **AghaKouchak A.**, 2014, Seasonal and Regional Biases in CMIP5 Precipitation Simulations, ***Climate Research***, 60, 35-50, doi: 10.3354/cr01221.

22. Mehran A., **AghaKouchak A.**, 2014, Capabilities of Satellite Precipitation datasets to Estimate Heavy Precipitation Rates at Different Temporal Accumulations, ***Hydrological Processes***, 28, 2262-2270, doi: 10.1002/ hyp.9779.

21. Damberg L., **AghaKouchak A.**, 2014, Global Trends and Patterns of Droughts from Space, ***Theoretical and Applied Climatology***, 117(3) 441-448, doi: 10.1007/s00704-013-1019-5.

20. **AghaKouchak A.**, Mehran A., 2013, Extended Contingency Table: Performance Metrics for Satellite Observations and Climate Model Simulations, ***Water Resources Research***, 49, 7144-7149, doi:10.1002/wrcr.20498.

19. Hao Z., **AghaKouchak A.**, Phillips T.J., 2013, Changes in Concurrent Monthly Precipitation and Temperature Extremes, ***Environmental Research Letters***, 8(4), 034014, doi:10.1088/1748-9326/8/3/034014.

18. Farahmand A., **AghaKouchak A.**, 2013, A Satellite-Based Global Landslide Model, ***Natural Hazards and Earth System Sciences***, 13, 1259-1267, doi:10.5194/nhess-13-1259-2013.

17. Hao Z., **AghaKouchak A.**, 2013, Multivariate Standardized Drought Index: A Parametric Multi-Index Model, ***Advances in Water Resources***, 57, 12-18, doi: 10.1016/j.advwatres.2013.03.009.

16. **AghaKouchak A.**, Nakhjiri N., and Habib E., 2013, An educational model for ensemble streamflow simulation and uncertainty analysis, ***Hydrology and Earth System Sciences***, 17, 445-452, doi:10.5194/hess-17-445-2013.

15. **AghaKouchak A.**, Nakhjiri N., 2012, A Near Real-Time Satellite-Based Global Drought Climate Data Record, ***Environmental Research Letters***, 7 (4), 044037, doi:10.1088/1748-9326/7/4/044037.

14. **AghaKouchak A.**, Mehran A., Norouzi H., Behrangi A., 2012, Systematic and Random Error Components in Satellite Precipitation Data Sets, ***Geophysical Research Letters***, 39, L09406, doi:10.1029/2012GL051592.

13. Nasrollahi N., **AghaKouchak A.**, Li J., Gao X., Hsu K., Sorooshian S., 2012, Assessing the impacts of different WRF parameterization schemes in hurricane modeling, ***Weather and Forecasting***, 27 (4), 1003-1016, doi:10.1175/WAF-D-10-05000.1.

12. Sorooshian S., **AghaKouchak A.**, Arkin P., Eylander J., Foufoula-Georgiou E., Harmon R., Hendrickx J., Imam B., Kuligowski R., Skahill B., Skofronick-Jackson G., 2011, Advanced Concepts on Remote Sensing of Precipitation at Multiple Scales, ***Bulletin of the American Meteorological Society***, 92 (10), 1353-1357, doi: 10.1175/2011BAMS3158.1.

11. **AghaKouchak A.**, Behrangi A., Sorooshian S., Hsu K., Amitai E., 2011, Validation of satellite-retrieved extreme precipitation Rates across the Central United States, ***Journal of Geophysical Research***, 116, D02115, doi: 10.1029/2010JD014741.

10. **AghaKouchak A.**, Nasrollahi N., Li J., Imam B., Sorooshian S., 2011, Geometrical Characterization of Precipitation Patterns, ***Journal of Hydrometeorology,*** 12 (2), 274-285, doi: 10.1175/2010JHM1298.

9. Behrangi A., Khakbaz B., Jaw T.C., **AghaKouchak A.**, Hsu K., Sorooshian S., 2011, Hydrologic Evaluation of Satellite Precipitation Products over a Mid-size Basin, 397, 225-237, ***Journal of Hydrology***, doi: 10.1016/j.jhydrol.2010.11.043.

8. **AghaKouchak A.**, Bárdossy A., Habib E., 2010, Conditional Simulation of Remotely Sensed Rainfall Fields Using a Non-Gaussian V-Transformed Copula, ***Advances in Water resources***, 33 (6), 624-634,
doi:10.1016/j.advwatres.2010.02.010.

7. **AghaKouchak A.**, Bárdossy A., Habib E., 2010, Copula-based uncertainty modeling: Application to multi-sensor precipitation estimates, ***Hydrological Processes***, 24 (15), 2111-2124, doi: 10.1002/hyp.7632.

6. **AghaKouchak A.**, Habib E., Bárdossy A., 2010, Modeling Radar Rainfall Estimation Uncertainties: Random Error Model, ***Journal of Hydrologic Engineering***, 15(4), 265-274, doi: 10.1061/(ASCE)HE.1943-5584.0000185.

5. **AghaKouchak A.**, Nasrollahi, N., 2010, Semi-parametric and parametric inference of extreme value models for rainfall data, ***Water Resources Management***, 24(6), 1229-1249, doi: 10.1007/s11269-009-9493-3.

4. **AghaKouchak A.**, Habib E., 2010, Application of a conceptual hydrologic model in teaching hydrologic processes, ***International Journal of Engineering Education***, 26(4), 963-973.

3. **AghaKouchak A.**, Ciach G., Habib E., 2010, Estimation of tail dependence coefficient in rainfall accumulation fields, ***Advances in Water resources***, 33(9), 1142-1149, doi: 10.1016/j.advwatres.2010.07.003.

2. **AghaKouchak A.**, Habib E., Bárdossy A., 2010, A comparison of three remotely sensed rainfall ensemble generators, ***Atmospheric Research***, 98(2-4), 387-399, doi: 10.1016/j.atmosres.2010.07.016.

1. **AghaKouchak A.**, Nasrollahi, N., Habib, E., 2009, Accounting for Uncertainties of the TRMM Satellite Estimates, ***Remote Sensing***, 1(3), 606-619, doi: 10.3390/rs1030606.

Books

3. **AghaKouchak A.**, Easterling D., Hsu K., Schubert S., Sorooshian S., Extremes in a Changing Climate, Springer Netherlands, Dordrecht, ISBN 978-94-007-4478-3.

2. **AghaKouchak A.**, 2010, Simulation of Remotely Sensed Rainfall Fields Using Copulas, University of Stuttgart, ISBN 978-3-933761-92-7.

1. **AghaKouchak A.**, Nasrollahi N., Firouz Bahadori, 2002, Engineering Hydrology: Practice Questions and Answers, Angizeh, ISBN 964-7517-03-3 (in Persian).

Book Chapters

7. **Amir AghaKouchak**, Zengchao Hao, Navid Nakhjiri, Lisa Damberg, 2013, Droughts, Invited Book Chapter in: Encyclopedia of Natural Hazards, Taylor & Francis, accepted.

6. Sorooshian S., Nguyen P., Sellars S., Braithwaite D., **AghaKouchak A.**, Hsu, K., 2014, Satellite-based Remote Sensing Estimation of Precipitation for Early Warning Systems, Book Chapter in: Extreme Natural Hazards, Disaster Risks and Societal Implications (eds. Ismail-Zadeh A., Fucugaughi J. , Kijko A., Takeuchi K., Zaliapin I.), Cambridge University Press, ISBN: 9781107033863.

5. **AghaKouchak A.**, Sorooshian S., Hsu K., Gao X., 2013, The Potential of Precipitation Remote Sensing for Water Resources Vulnerability Assessment in Arid Southwestern United States, Invited Book Chapter in: Climate Vulnerability: Understanding and Addressing Threats to Essential Resources - Water Encyclopedia (eds. Hossain and Pielke), Elsevier, Academic Press, 141Ű149 pp., ISBN: 9780123847034.

4. **AghaKouchak A.**, Sellars S., Sorooshian S., Methods of Tail Dependence Estimation, In: Extremes in a Changing Climate (eds. AghaKouchak A., Easterling D., Hsu K., Schubert S. and Sorooshian S.), Springer Netherlands, Dordrecht, ISBN 978-94-007-4478-3.

3. **Amir AghaKouchak**, Kuolin Hsu, Soroosh Sorooshian, Xiaogang Gao, Bisher Imam, 2012, Precipitation Estimation from Remotely Sensed Information using the Artificial Neural Networks Algorithm: Application to Drought Monitoring and Analysis, Book Chapter in: Remote Sensing of Drought - Innovative Monitoring Approaches (eds. B. Wardlow, M. Anderson, J. Verdin), CRC Press, ISBN: 978-1439835579.

2. Soroosh Sorooshian, **Amir AghaKouchak**, 2011, Advancement towards a state-of-the-art hydrologic flood forecasting system, Invited Book Chapter in: Korea Environmental Institute Book Series, Korea Institute of Construction Technology (KICT).

1. Hengl T., **AghaKouchak A.**, Perčec Tadić M., 2010, Methods and data sources for spatial prediction of rainfall, Book Chapter in Rainfall: State of the Science (eds. Testik F.Y. and Gebremichael M.), American Geophysical Union, ISBN: 978-0-87590-481-8.

Technical Reports, White Papers, and Other Publications

11. Mirchi A., Madani K., **Amir AghaKouchak**, 2015, Lake Urmia: how Iran's most famous lake is disappearing, The Guardian, Friday 23 January 2015, View Article: http://gu.com/p/455zb/tw

10. Hoerling M., Schubert S., Mo K., **AghaKouchak A.**, Berbery H., Dong J., Kumar A., Lakshmi V., Leung R., Li J., Liang X., Luo L., Lyon B., Miskus D., Quan X., Seager R., Sorooshian S., Wang H., Xia Y., Zeng N., 2013, An Interpretation of the Origins of the 2012 Central Great Plains Drought, Assessment Report, NOAA Drought Task Force Narrative Team, Office of Oceanic and Atmsopheric Research, Climate Program Office.

9. Kuolin Hsu, Soroosh Sorooshian, Xiaogang Gao, Dan Braithwaite, **Amir AghaKouchak**, 2012, Monitoring global precipitation using satellites, SPIE Newsroom.

8. Christa Peters-Lidard, Ana Barros, Wade Crow, Witold Krajewski, Robert Houze, Walt Petersen, **Amir AghaKouchak**, Manos Anagnostou, Eyal Amitai, Rafael Bras, Robert Cifelli, David Gochis, David C. Goodrich, Kuolin Hsu, Dennis Lettenmaier, Douglas Miller, Timothy Schneider, Marshall Shepherd, James Smith, Soroosh Sorooshian, Ali Tokay, Jingfeng Wang, Xubin Zeng, 2011, Global Precipitation Mission (GPM) Integrated Hydrologic Ground Validation Science Implementation Plan, PMM Hydrology Working Group, Goddard Space Flight Center, Greenbelt, MD.

7. NOWCAST ARTICLE: Sorooshian S., **AghaKouchak A.**, Arkin P., Eylander J., Foufoula-Georgiou E., Harmon R., Hendrickx J., Hsu K., Imam B., Kuligowski R., Skahill B., Skofronick-Jackson G., 2011, Advancing the Remote Sensing of Precipitation, *Bulletin of the American Meteorological Society - Nowcast*, 92 (10), 1271-1272 doi: 10.1175/BAMS-D-11-00116.1.

6. Wade T. Crow, Kuolin Hsu, Jingfeng Wang, **Amir AghaKouchak**, Eyal Amitai, Rafael Bras, David Gochis, David C. Goodrich, Soroosh Sorooshian, and Xubin Zeng, 2011, Potential GPM Ground Validation Activities within the Semi-Arid Walnut Gulch/Upper San Pedro River Basin, White Paper submitted to the Global Precipitation Mission (GPM) Ground Validation Program, NASA GSFC, Greenbelt, MD.

5. Sorooshian S., **AghaKouchak A.**, Hsu K., Gao X., 2011, Annual Report: Satellite Data Support for Hydrologic and Water Resource Planning and Management, University of California Irvine, submitted to the National Oceanic and Atmospheric Administration, National Environmental Satellite Data and Information Service, National Climatic Data Center.

4. Sorooshian S., **AghaKouchak A.**, Hsu K., Gao X., Imam B., 2010, Annual Report: Satellite Data Support for Hydrologic and Water Resource Planning and Management, University of California Irvine, submitted to the National Oceanic and Atmospheric Administration, National Environmental Satellite Data and Information Service, National Climatic Data Center.

3. **Amir AghaKouchak**, Soroosh Sorooshian, 2010, Workshop Report: Advanced Concepts on Remote Sensing of Precipitation at Multiple Scales, University of California Irvine, March 15-17, 2010.

2. **AghaKouchak A.**, Sorooshian S., Imam B., Hsu K., Gao X., 2010, NASA Satellites Help Monitor the Pakistan Flooding: An Application of Near-Real-Time Satellite Observations, *The Earth Observer*, 22 (6), 4-6.

1. Contributing author to the Wold Climate Research Program (WCRP) White Paper on Drought Predictability and Prediction in a Changing Climate: Assessing Current Predictive Knowledge and Capabilities, User Requirements and Research Priorities.

Scientific & Educational Software

5. **Non-stationary Extreme Value Analysis (NEVA) Toolbox**:
   By Linyin Cheng, and **Amir AghaKouchak**
   URL: http://amir.eng.uci.edu/neva.php

4. **Standardized Drought Analysis Toolbox (SDAT)**:
   By Alireza Farahmand, and **Amir AghaKouchak**
   URL: http://amir.eng.uci.edu/sdat.php

3. **Validation Toolbox**: Performance Metrics for Evaluation of Remote Sensing Observations and Climate Model Simulations
   By **Amir AghaKouchak** and Ali Mehran
   URL: http://amir.eng.uci.edu/downloads/ValidationToolbox.zip

2. **HBV-EDU**: A MATLAB Hands-on Toolbox for Teaching Hydrologic Processes
   By **Amir AghaKouchak** and Emad Habib
   URL: http://amir.eng.uci.edu/education.html

1. **HBV-Ensemble**: A MATLAB Toolbox for Ensemble Streamflow Simulation
   By **Amir AghaKouchak**, Navid Nakhjiri, and Emad Habib
   URL: http://amir.eng.uci.edu/downloads/HBV_Ensemble.zip

Service, Committee & Panel Assignments

National and International

Ad-hoc proposal reviewer for NSF, NASA, ARL and DOI.

Co-Chair, The 2015 United States Frontiers of Engineering, National Academy of Engineering (NAE) of the National Academies.

Secretary of Natural Hazards 2015 (elected), American Geophysical Union.

Member, Visiting International Fellow (VIF) Technical Committee, Environmental and Water Resources Institute (EWRI), American Society of Civil Engineers, 2015-present.

Horton Research Grant Committee, American Geophysical Union (AGU), 2015.

Member of the NOAA Drought Task Force (2014-2017).

Proposal Review Panel, NSF Graduate Research Fellowships Program (GRFP), 2015.

Proposal Review Panel, National Science Foundation (NSF), 2014.

Proposal Review Panel, NSF Graduate Research Fellowships Program (GRFP), 2014.

Graduate Student Award Committee, American Geophysical Union (AGU), Natural Hazards Focus Group, 2014.

Chair of the Organizing Committee, IAHS Summer School Copulas for Hydrology and Climate, 28 Jul - 1 Aug 2014, University of California, Irvine, USA.

Member, Coordinated Energy and Water Cycle Observations Project (CEOP), Global Energy and Water Cycle Experiment (GEWEX) Extremes Work Group.

Member, Drought Interest Group (DIG), Climate Variability and Predictability Project (CLIVAR).

Vice President of the IAHR Student Chapter, University of Stuttgart, 2006-2008

Project Coordinator of the IAHR Student Chapter, University of Stuttgart, 2005-2006

Vice President of the Student Science Council, Department of Civil Engineering, K.N.Toosi University of Technology, 2003-2004

Member of the Editorial Board, Abangan Student Water Engineering Journal, Department of Civil Engineering, K.N.Toosi University of Technology, 1999-2002

Conference/Session Chair, Convener, or Moderator

Co-Convener of the session Science for Disaster Risk Reduction: From Integrated Research and Assessment of Risks to Communication and Engagements, AGU Fall Meeting, 14-18 Dec 2015, San Francisco, CA, USA.

Co-Convener of the session Advances in Remote Sensing of Natural Hazards, AGU Fall Meeting, 14-18 Dec 2015, San Francisco, CA, USA.

Co-Convener of the session Monitoring, Prediction, and Hazard Mitigation of Hydroclimatic Extreme Events, AGU Fall Meeting, 14-18 Dec 2015, San Francisco, CA, USA.

Moderator, Session on Adaptive Management and Impact Assessment, ASCE, World Environmental & Water Resources Congress, Austin TX, Austin, Texas, USA, May 17-21, 2015.

Co-Chair of the Scientific Committee, California Drought: Causes, Impacts, and Policy, AGU Chapman Conference, Beckman Center of the National Academies of Sciences and Engineering, Irvine, California, USA, April 20-22, 2015.

Convener of the session Hydroclimatic Extremes: Drought, AGU Fall Meeting, 15-19 Dec 2014, San Francisco, CA, USA.

Convener of the session Satellite Remote Sensing and Management of Natural Disasters, AGU Fall Meeting, 15-19 Dec 2014, San Francisco, CA, USA.

Convener of the session Sustainable Water Quantity and Quality in the Built Environment, AGU Fall Meeting, 15-19 Dec 2014, San Francisco, CA, USA.

Member of the Scientific Committee, IAHS 5th STAHY workshop, 10-11 Nov 2014, Abu Dhabi, United Arab Emirates.

Technical Committee, 2013 ASCE International Workshop on Computing in Civil Engineering, June 23-25, 2013, University of Southern California, Los Angeles, CA, USA.

Convener of the session Hydrohazards: Processes, Diagnosis and Projection, AGU Fall Meeting, 3-7 Dec 2012, San Francisco, CA, USA.

Convener of the session Hydroclimatic Extremes: Monitoring, Diagnosis & Prediction, AGU Fall Meeting, 5-9 Dec 2011, San Francisco, CA, USA.

Convener of the session Hydroclimatic Extremes: Monitoring, Diagnosis & Prediction, AGU Fall Meeting, 13-17 Dec 2010, San Francisco, CA, USA.

Co-convener and coordinator, Advanced Concepts Workshop on Remote Sensing of Precipitation at Multiple Scales, March 15-17, 2010, University of California Irvine, Beckman Center, Irvine, CA, USA.

Member of the Scientific Committee, 7th IWA Biennial World Water Congress, 19-24 September 2010, Montreal, Canada.

Member of the organizing committee of the IAHR-SSC 2007 Colloquium: Hydraulic Engineering and Renewable Energy, 31 October 2007, Stuttgart, Germany.

Member of the organizing committee of the IAHR-SSC 2006 Colloquium: Integrated Surface Water Management, 5 July 2006, Stuttgart, Germany.

Member of the Organizing Committee, International Conference on Hydraulics of Dams and Rivers Structures, Tehran, 26-28 April 2004

University of California, Irvine

Graduate Advisor, 2012 - Present

Faculty Search Committee Member, 2013-2014

Edison Scholarship Selection Committee, California Alliance for Minority Participation, 2014 and 2015

Environmental Engineering Seminar Series, Organizer of Hydrology Talks, 2011-2013

Graduate and Postdoctoral Advisees

Postdoctoral Scholars

Hamed Moftakhari Rostamkhani (2015 - present).
Shahrbanou Madadgar (2014 - present).
Zengchao Hao (2012 - 2013).

PhD Students (Advisor, and Committee Chair)

Ali Mehran, PhD, 2015.
Linyin Cheng, PhD, 2014.
Alireza Farahmand, PhD Student, 2011 - present.
Elisa Ragno, PhD Student, 2014 - present.
Omid Mazdiyasni, 2014 - present.
Charlotte Love, PhD Student, 2015 - present.
Felicia Chiang, PhD Student, 2015 - present.

PhD Students (Co-Advisor)

Phu Nguyen, PhD, 2014 (Advisor: S Sorooshian).
Jingjing Li, PhD, 2012 (Advisor: S Sorooshian).

MS Students (Advisor, and Committee Chair)

Mohsen Niknejad, 2015.
Omid Mazdiyasni, 2015.
Lei Li, 2015.
Zhu Liu, 2014.
Lisa Damberg MSc, 2013.
Alireza Farahmand MSc, 2013.
Hassan Anjileli, 2014 - present.
Juan Diego Rivadeneira, 2015 - present.

PhD Dissertation Committee Member

Masoud Irannezhad PhD, 2015, University of Oulu, Finland, (Advisors: Bjørn Kløve).
Hussein Wazneh PhD, 2015, Institut national de la recherche scientifique - Eau Terre Environnement (INRS-ETE), Québec, Canada, (Advisors: F Chebana).
Hao Liu PhD, 2015 (Advisor: S Sorooshian).
Mojtaba Sadegh PhD, 2015 (Advisor: J Vrugt).
Sasha Richey PhD, 2014 (Advisor: J Famiglietti).
Shakiba Ayatollahi PhD, 2013 (Advisor: W Cooper).
Marzi Azarderakhsh PhD, 2011, City University of New York (Advisors: W Rossow, R Khanbilvardi).

Teaching Experience

CEE 274: Climate Data Analysis (graduate), UC-Irvine, (2015, 2014).

CEE 173 and CEE 273: Watershed Modeling (undergraduate, graduate), UC-Irvine, (2015, 2014, 2013, 2012, 2011).

CEE 81B: Civil Engineering Practicum II (undergraduate), UC-Irvine, (2015, 2014, 2013, 2012).

CEE 176 and CEE 276: Hydrology (undergraduate, graduate), UC-Irvine, (2012).

CEE 195: Introduction to Surveying (undergraduate), UC-Irvine, (2012).

Invited Talks, Invited Lectures, Summer Schools

30. **Amir AghaKouchak**, Anthropogenic Drought: A Global-Local Perspective, Santa Monica Public Library, July 29, 2015.

29. **Amir AghaKouchak**, Madadgar S., Cheng L., Shukla S., Wood A., Svoboda M., Improving seasonal precipitation forecasting in California through integration of dynamic and statistical models, NOAA Modeling, Analysis, Predictions, and Projections (MAPP) Webinar Series, June 9, 2015.

28. **Amir AghaKouchak**, Madadgar S., Cheng L., Shukla S., Advancing Drought Prediction Using an Analog-Year Model Combined with Dynamic Model Simulations, Western States Water Council Workshop on Sub-Seasonal and Seasonal Precipitation Forecasting, San Diego, CA, USA, May 27-29, 2015.

27. **Amir AghaKouchak**, Invited lectures on Integrated Water Cycle Analysis, 3rd Workshop on Water Resources in Developing Countries: Planning and Management in Face of Hydroclimatological Extremes and Variability, International Centre for Theoretical Physics (ICTP), Trieste, Italy, April 27-30, 2015.

26. **Amir AghaKouchak**, Water Scarcity Iran: Challenges and Opportunities, US-Iran Symposium on Climate Change: Impacts and Mitigation, Beckman Center of the National Academies of Sciences and Engineering, March 30 - April 1, 2015.

25. **AghaKouchak A.**, Farahmand A., Drought Monitoring Using NASA Atmospheric Infrared Sounder (AIRS) Data, NASA Jet Propulsion Laboratory (JPL), Pasadena, California, USA, March 25, 2015.

24. **Amir AghaKouchak**, Drought and Water Stress Assessment, Transforming Stormwater into a Resource: Design, Risks, and Benefits, New Delhi, India, March 16-17, 2015.

23. **Amir AghaKouchak**, Advancing Drought Onset Detection and Seasonal Prediction Using a Composite of NASA Model and Satellite Data, NASA Applied Sciences Program, Water Resources Meeting, College Park, Maryland, USA, March 3-4, 2015.

22. **Amir AghaKouchak**, Global Integrated Drought Monitoring and Prediction System (GIDMaPS), An International Global Drought Information System Workshop: Next Steps, California Institute of Technology, Pasadena, CA, USA, December 11-13, 2014.

21. **Amir AghaKouchak**, Monitoring Endangered Ecosystems from Space, Eighth Annual Meeting of the US-China EcoPartnership on Wetlands, Beckman Center of the National Academies of Sciences and Engineering, December 8, 2014.

20. **Amir AghaKouchak**, Remote Sensing Applications for Drought Monitoring, International Expert Symposium "Building a Community of Practice on Drought Management Tools", Santiago, Chile, November 19-21, 2014.

19. **AghaKouchak A.**, The 2014 California Drought: Opportunities for Drought-Proofing California, Civil and Environmental Engineering Fall Quarterly Meeting, UCI University Club, November 7, 2014.

18. **AghaKouchak A.**, IAHS Summer School Copulas for Hydrology and Climate, Jul 28 - Aug 1, 2014, University of California, Irvine, USA.

17. **AghaKouchak A.**, California Drought: How Bad is It?, UC Drought Summit, Sacramento, California, April 25, 2014.

16. **AghaKouchak A.**, Farahmand A., Nakhjiri N., Advancing Global Drought Monitoring and Prediction Using GPM Data, NASA's Global Precipitation Mission Land Surface Working Group, March 7, 2014.

15. **AghaKouchak A.**, Advancing Global Drought Monitoring and Prediction: Introducing GIDMaPS, NASA Jet Propulsion Laboratory (JPL), Pasadena, California, USA, January 29, 2014.

14. **AghaKouchak A.**, Mehran A., Global Terrestrial Hydrologic Modeling: Roadblocks, Challenges and Opportunities, AGU Fall Meeting, San Francisco, California, USA, December 9-13, 2013.

13. **AghaKouchak A.**, Monitoring Extremes, Southern California Society for Risk Analysis, October 21, 2013, Irvine, California, USA.

12. **Amir AghaKouchak**, Advancing Global Drought Monitoring and Prediction: An Overview of GIDMaPS, University of Central Florida, Orlando, Florida, September 17, 2013.

11. **Amir AghaKouchak**, The Global Integrated Drought Monitoring and Prediction System (GIDMaPS), The Desert Research Workshop, Beckman Center of the National Academies of Sciences and Engineering, June 5, 2013.

10. **Amir AghaKouchak**, Invited lectures on Integrated Water Cycle Analysis, 2nd Workshop on Water Resources in Developing Countries: Planning and Management in a Climate Change Scenario, International Centre for Theoretical Physics (ICTP), Trieste, Italy, May 6-17, 2013.

9. **Amir AghaKouchak**, Zengchao Hao, Navid Nakhjiri, Multi-Index Drought Monitoring: A Prototype Global Drought GeoServer, American Geophysical Union (AGU) Meeting of the Americas, Cancun, Mexico, 14-17 May 2013.

8. **Amir AghaKouchak**, Middle East Hydroclimate Extremes, Groundwater and Climate Change in the Middle East, Beckman Center of the National Academies of Sciences and Engineering, November 9-11, 2012.

7. **Amir AghaKouchak**, A Nested Hydrological Model for Coupled Probabilistic and Deterministic Flood Forecasting, NOAA Center for Cooperative Remote Sensing Sciences and Technology(CREST), The City College of the City University of New York, New York, NY, September 19, 2011.

6. **Amir AghaKouchak**, Soroosh Sorooshian, Kuolin Hsu, Application of Remotely Sensed Precipitation Data in Monitoring and Analysis of Extremes: Challenges and Opportunities; In Drought Research Initiative Workshop on Weather and Climate Extremes over Canada: Science and Adaptation, Winnipeg, Canada, February 7-9, 2011

5. **Amir AghaKouchak**, Kuolin Hsu, Soroosh Sorooshian, Satellite Data Support for Hydrologic and Water Resource Planning and Management, Cooperative Institute for Climate and Satellites (CICS) Science Meeting, University of Maryland, College Park, September 8-9, 2010.

4. **Amir AghaKouchak**, Remote Sensing of Rainfall, UCI Extension Osher Lifelong Learning Institute fall class on Water Research at UCI, University of California Irvine, September 23, 2010.

3. **Amir AghaKouchak**, Verification of satellite-based extreme precipitation estimates, NASA Energy and Water cycle Study (NEWS) Extreme Drought and Flood Workshop, University of North Dakota, Grand Forks, ND, July 15-16, 2010.

2. **Amir AghaKouchak**, Kuolin Hsu, Analysis of Extreme Precipitation Events in a Changing Climate: Toward Capturing Nonstationarity, NOAA's National Climatic Data Center, Asheville, NC, April 6, 2010.

1. **Amir AghaKouchak**, Iran's Climate Change, Environmental and Water Resources Challenges, Samuel Jordan Center for Persian Studies, University of California, Irvine, November 8, 2010.

Conference Presentations and Abstracts

74. Cheng L., Ragno E., Xue Cui, **AghaKouchak A.**, International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards, Universidad de Cantabria, September 16-18, 2015, Santander, Spain.

73. Tarroja B., **AghaKouchak A.**, Samuelsen S., The Greenhouse Gas Intensity of Alternative Water Resources, ASME Power & Energy 2015, July 2, 2015, San Diego, CA, USA

72. **AghaKouchak A.**, Nonstationarity in Climate and Increased Flood Risk in a Changing Climate, ASCE WORLD Environmental & Water Resources Congress 2015, May 17-21, 2015, Austin, Texas, USA.

71. **AghaKouchak A.**, Drought Monitoring: Challenges & Opportunities to Enhance California's Resilience to Drought, AGU Chapman Conference on California Drought: Causes, Impacts, and Policy, Beckman Center of the National Academies of Sciences and Engineering, April 20-22, 2015, Irvine, California, USA.

70. **AghaKouchak A.**, Tourian M.J., Multi-Sensor Drought Monitoring, Prediction and Recovery Assessment Using Gravimetry Information, European Geosciences Union General Assembly 2015, April 12-17, 2015, Vienna, Austria.

69. **AghaKouchak A.**, Tourian M.J., A Drought Cyberinfrastructure System for Improving Water Resource Management and Policy Making, European Geosciences Union General Assembly 2015, April 12-17, 2015, Vienna, Austria.

68. Cheng L., Rajagopalan B., Bracken C., **AghaKouchak A.**, A Generalized Spatio-temporal Framework for Climate Informed Extreme Precipitation Analysis, AGU Hydrology Days, March 23-25, 2015, Boulder, Colorado, USA.

67. Chen Y., Norouzi H., **AghaKouchak A.**, BhambriM., Blake DR., Detection of Land Cover Change and Drought Trend Using Brightness Temperature and Microwave Emission, AMS Annual Meeting, January 4-8, 2015, Phoenix, Arizona, USA.

66. **AghaKouchak A.**, Feldman D., Grant S., Farahmand A., Nakhjiri N., Momtaz F., Toward a Drought Cyberinfrastructure System for Improving Water Resource Management and Policy Making, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

65. Mazdiyasni O., **AghaKouchak A.**, Changes in Concurrent Droughts and Heatwaves in the United States, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

64. Mehran A., **AghaKouchak A.**, Water Resources Vulnerability Assessment Accounting for Human Influence, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

63. Ragno E., **AghaKouchak A.**, Trends and Patterns of Change in Temperature and Evaporation, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

62. Farahmand A., **AghaKouchak A.**, Improving early drought detection using satellite-based relative humidity data, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

61. **AghaKouchak A.**, Nakhjiri N., Habib E., An Educational Model for Hands-On Hydrology Education, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

60. Cheng L., **AghaKouchak A.**, An Empirical Bayes Framework for Assessing Changes in the Hydrological Cycle, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

59. Nguyen P., Thorstensen A., Hsu K., **AghaKouchak A.**, Sanders B., Sorooshian S., Simulation of the 2008 Iowa Flood using HiResFlood-UCI Model with Remote Sensing Data, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

58. Luke A., Schubert S., Cheng L., **AghaKouchak A.**, Sanders B., Predicting Flood Hazards in Systems with Multiple Flooding Mechanisms, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

57. Chen Y., Bhambri M., Norouzi H., **AghaKouchak A.**, Potential of Using Microwave Emission in Global Analysis of Land Cover and Drought State, AGU Fall Meeting, December 15-19, 2014, San Francisco, California, USA.

56. **AghaKouchak A.**, Cheng L., Introducing the Non-stationary Extreme Value Analysis (NEVA), IAHS STAHY2014 Workshop, November 10-11, 2014, Abu-Dhabi.

55. **AghaKouchak A.**, A Multi-Index Framework for Global Drought Monitoring and Prediction, IAHS STAHY2014 Workshop, November 10-11, 2014, Abu-Dhabi.

54. **AghaKouchak A.**, Improving Early Drought Detection Using AIRS Satellite Observations, 2015 EUMETSAT Meteorological Satellite Conference, September 21-25, 2015, Geneva Switzerland.

53. **AghaKouchak A.**, A Copula-Based Multi-Index Approach for Global Drought Monitoring and Prediction, Spatial Copula Workshop, September 22-23, 2014, University of Munster, Germany.

52. Nguyen P., Thorstensen A., Hsu K., **AghaKouchak A.**, Sanders B., Sorooshian S., Developing a Global High-Resolution Flash Flood Forecasting System Using Multiple Sources of Precipitation Data, AGS Symposium, April 15, 2014, Irvine, California, USA.

51. **AghaKouchak A.**, Hao Z., Farahmand A., Nakhjiri A., The Global Integrated Drought Monitoring and Prediction System (GIDMaPS): Overview and Capabilities, AGU Fall Meeting, December 9-13, 2013, San Francisco, California, USA.

50. Cheng L., Gilleland E., **AghaKouchak A.**, Nonstationary Extreme Value Analysis in a Changing Climate: A Software Package, AGU Fall Meeting, December 9-13, 2013, San Francisco, California, USA.

49. Hao Z., **AghaKouchak A.**, Predicting the 2012 U.S. Summer Drought Using a Persistence Method, AGU Fall Meeting, December 9-13, 2013, San Francisco, California, USA.

48. Mehran A., **AghaKouchak A.**, Phillips T.J., Performance Metrics for Climate Model Evaluation: Application to CMIP5 Precipitation Simulations, AGU Fall Meeting, December 9-13, 2013, San Francisco, California, USA.

47. Liu Z., Mehran A., Phillips T.J., **AghaKouchak A.**, Seasonal and Regional Biases in CMIP5 Precipitation Simulation, AGU Fall Meeting, December 9-13, 2013, San Francisco, California, USA.

46. Norouzi H., **AghaKouchak A.**, Madani K., Mirchi A., Farahmand F., Conway C., Monitoring Changes in Water Resources Systems Using High Resolution Satellite Observations: Application to Lake Urmia, AGU Fall Meeting, December 9-13, 2013, San Francisco, California, USA.

45. Nguyen P., Sorooshian S., Hsu K., **AghaKouchak A.**, Sanders B., Evaluating the Performance of a Coupled Distributed Hydrologic-Hydraulic Model for Flash Flood Modeling Using Multiple Precipitation Data Sources, December 9-13, 2013, San Francisco, California, USA.

44. Hao Z., **AghaKouchak A.**, Global Drought Monitoring and Prediction Data Products, Next Generation Climate Data Products Workshop, National Center for Atmospheric Research, July 15-19, 2013, Boulder, Colorado, USA.

43. Nguyen P., Sorooshian S., Hsu K., **AghaKouchak A.**, ArcGIS for a Coupled Hydrologic-Hydraulic Modeling, Esri International User Conference, July 8-12, 2013, San Diego, California, USA.

42. Nguyen P., Sorooshian S., Hsu K., **AghaKouchak A.**, Sanders B., Modeling the Upper Little Missouri River 2010 Flash Flood Using a Coupled Distributed Hydrologic and Hydraulic Model, Community Surface Dynamics Modeling System (CSDMS) 2013 Annual Meeting, March 23-25, Boulder, Colorado, USA.

41. **AghaKouchak A.**, A Multivariate Multi-Index Drought Monitoring and Prediction Framework, NOAA Drought Task Force, Webinar Series Drought I (Understanding and Monitoring), February 12, 2013, USA.

40. **AghaKouchak A.**, Hao Z., Multi-Index Drought Monitoring Using NASA MERRA Data, International Union of Geodesy and Geophysics (IUGG) Geophysical Risk and Sustainability (GeoRisk) Conference on Extreme Natural Hazards and their Impacts. December 8-11, 2012, Chapman University, Orange, California, USA.

39. Nguyen P., Sorooshian S., Hsu K., **AghaKouchak A.**, Sanders B., A Coupled Distributed Hydrologic and Hydraulic Model for Flash Flood Modeling, International Union of Geodesy and Geophysics (IUGG) Geophysical Risk and Sustainability (GeoRisk) Conference on Extreme Natural Hazards and their Impacts. December 8-11, 2012, Chapman University, Orange, California, USA.

38. **AghaKouchak A.**, Hao Z., Climate Change Impacts on Droughts Severity-Area-Duration across the Southwest United States, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

37. Farahmand A., **AghaKouchak A.**, A Quasi-Global Landslide Model Using Remote Sensing Data, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

36. Mehran A., Nakhjiri N., **AghaKouchak A.**, A Nested Global-Local Hydrological Model for Large Scale Flood Forecasting Using Satellite Data, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

35. Hao Z., **AghaKouchak A.**, A multivariate approach for drought monitoring across the continental United States, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

34. Cheng L., **AghaKouchak A.**, Deriving Climate Response from CMIP5 Ensemble Climate Projections: Application to Analysis of Temperature and Precipitation Extremes, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

33. Damberg L., **AghaKouchak A.**, Changes in the Patterns and Trends of Droughts across Land and Ocean, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

32. Nguyen P., Sorooshian S., Hsu K., **AghaKouchak A.**, Sanders B., Smith M.B., Koren V., Improving flash flood forecasting through coupling of a distributed hydrologic rainfall-runoff model (HL-RDHM) with a hydraulic model (BreZo), AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

31. Li J., Hsu K., **AghaKouchak A.**, Sorooshian S., Evaluation of satellite-based precipitation estimates in winter season using an object-based approach, AGU Fall Meeting, December 3-7, 2012, San Francisco, California, USA.

30. **AghaKouchak A.**, Mehran A., Nakhjiri N., 2012, A nested global-local hydrological model for large scale flood forecasting using remote sensing satellite data: a contribution to monitoring global environmental change, Proceedings of the SPIE - The International Society for Optical Engineering, 29 October - 1 November 2012, SPIE Asia-Pacific Remote Sensing, Kyoto, Japan.

29. **AghaKouchak A.**, Hao Z., A Multi-Index Standardized Drought Monitoring and Prediction Framework, NOAA's 37th Climate Diagnostics and Prediction Workshop, 22-25 October 2012. Fort Collins, Colorado, USA.

28. **AghaKouchak A.**, Hao Z., A Multi-Index multivariate Drought Monitoring Framework: Application to Climate Change Impact Assessment, International Conference on Climate, Water and Policy (ICCWP), 11-13 September 2012, Busan, South Korea.

27. **AghaKouchak A.**, Cheng L., Tracking and Nowcasting of Hurricanes: a Data Fusion Approach, 3rd World Meteorological Organization (WMO) International Symposium on Nowcasting (WSN12), 6-10 August 2012, Rio de Janeiro, Brazil.

26. David C. Goodrich, Eyal Amitai, Wade T. Crow, Kuolin Hsu, Jingfeng Wang, **AghaKouchak A.**, Rafael Bras, David Gochis, Soroosh Sorooshian, Xubin Zeng, Carl Unkrich, Emad Habib, Bryson Thill, In-situ Verification of TRMM Radar Rainfall Intensity Estimates and a Strategy for GPM Ground Validations in the Southwest, 5th International Workshop for GPM Ground Validation, 10-12 July 12, 2012, Toronto, Canada.

25. **AghaKouchak A.**, A Drought GeoServer for Real-Time Drought Monitoring and Analysis, World Climate Research Programme (WCRP) Global Drought Information System Workshop, Frascati, Italy, 11-13 April 2012, Frascati, Italy.

24. **AghaKouchak A.**, Sorooshian, S., 2012, Application of Satellite Data to Drought Monitoring and Analysis, Satellites for Better Water and Environment Management: A Training Session Hosted Jointly by The World Bank and U.S. Government Agencies Working in Remote Sensing, February 29, 2012, Washington, DC.

23. **AghaKouchak A.**, A Nested Probabilistic and Deterministic Flood Forecasting Model: Toward an Early Warning System, AGU Fall Meeting, December 5-9, 2011, San Francisco, California, USA.

22. Li J., Hsu K., **AghaKouchak A.**, Sorooshian S., A hybrid framework for verification of satellite precipitation products, AGU Fall Meeting, December 5-9, 2011, San Francisco, California, USA.

21. David C Goodrich, Efrat Morin, Eyal Amitai, Carl Unkrich, Timothy Keefer, Jeffry Stone, Mike Schaffner, Kuo-lin Hsu, Shayesteh E Mahani, Wade T Crow, Jingfeng Wang, **Amir AghaKouchak**, David J Gochis, Soroosh Sorooshian, Rafael L Bras, Xubin Zeng, Pit

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American Meteorological Society (AMS)

European Geosciences Union (EGU)

International Association of Hydrological Sciences (IAHS)

International Association of Hydro-Environment Engineering and Research (IAHR)

American Society of Civil Engineers (ASCE)

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