Ben Zaitchik

Department of Earth and Planetary Sciences
Johns Hopkins University
Baltimore, MD 21218
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zaitchik@jhu.edu

Current Employment

Assistant Professor 2008-
Dep't of Earth and Planetary Sciences, Johns Hopkins University
Research: Hydrological modeling, regional climate modeling, remote sensing

Previous Employment

AAAS Diplomacy Fellow 2008-2010
Office of Global Change, U.S. Department of State
Description: Foreign Affairs Officer for climate change issues

Research Associate 2006-2008
NASA GSFC Hydrological Sciences Branch / University of Maryland
Research: Data assimilation for hydrological applications, basin-scale water balance analysis
Supervisor: Matt Rodell

Education

PhD: Regional drivers of aridity in the Middle East and beyond 2006
Yale University, Department of Geology and Geophysics
Elias Loomis Prize for excellence in studies in the physics of the Earth
Primary advisor: Ron Smith

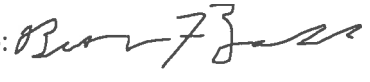
MS: Managing landslide risk in Central Honduras 2001
Cornell University, Department of Crop and Soil Sciences
NSF Graduate Student Fellowship
Primary advisor: Harold van Es.

AB: Department of Biology, Harvard University 1998
Undergraduate thesis: Phylogenic and ontogenetic studies of tribe *Andropogoneae* (Poaceae).
Summa cum laude, Hoopes Prize for excellence in undergraduate research
Primary advisor: Elizabeth Kellogg

Courses Taught

Remote Sensing of Environment: Advanced undergraduate / graduate student course in the physical foundations and practical applications of satellite remote sensing of Earth.

Present and Future Climate: Introductory graduate level course on climate processes and current research challenges.

CV confirmed accurate as of 10 June 2016: 

Modeling the Hydrological Cycle: Graduate level course on the use of physically-based computational tools and statistical analysis to study the movement of water from watershed to continental scales.

The Water, Energy, Food Nexus: Graduate level course on interdisciplinary science and policy issues, taught at the JHU School for Advanced International Studies (SAIS).

Regional Climate Analysis: Graduate research seminar

Topics in African Climate: Graduate research seminar

Climate Science and Policy: Interdisciplinary course on theory, history, and current directions in climate policy

Capstone Research in Water, Climate and Health: Field course held on the Chesapeake Bay and in the Blue Nile Highlands (Ethiopia)

Advanced Remote Sensing: Graduate research seminar

Competitively Funded Research

PI: *NILE-NEXUS: Opportunities for a sustainable food-energy-water future in the Blue Nile Mountains of Ethiopia*. Belmont Forum. 2016-2019

PI: *Keeping up with GRACE: Model Improvements to Support GRACE Data Assimilation in an Age of Freshwater Appropriation*. NASA Earth Sciences. 2016-2018

PI: *CNH: Agroecosystem-based Climate Resilience Strategies in the Blue Nile Headwaters of Ethiopia*. NSF Coupled Natural and Human Systems Program. 2012-2016

PI: *Food Energy Water Supplemental Award for CNH*. NSF. 2015-2016

PI: *Project Nile: Distributed Hydrological Information for Water Management in the Nile Basin*. NASA Applied Sciences Program. 2009-2014

PI: *Development of a Detection and Early Warning System for Malaria Risk in the Amazon*. NASA Applied Sciences Program. 2011-2013

Co-I: *In Hot Water and Harm's Way: Modeling to Promote Regional Resilience to Repeated Heat Waves and Hurricanes*. NSF HazSEES. 2013-2018

Co-I: *Seasonal Prediction of Hydro-Climatic Extremes in the Greater Horn of Africa under Evolving Climate Conditions to Support Adaptation Strategies*. NASA IDS. 2013-2016

Co-I: *Integrating GRACE and GRACE Follow On Data into Flood and Drought Forecasts for the Continental U.S.* NASA Applied Sciences Program. 2015-2019

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Co-I: *Predicting Middle Eastern and African Seasonal Water Deficits using NASA Data and Models.* NASA Applied Sciences Program. 2015-2019

Co-I: *An Early Warning System for Vector-borne disease risk in the Amazon.* NASA Applied Sciences Program. 2015-2018

Co-I: *Environmental exposures across urban and rural communities in the Deep South.* NIH NIEHS. 2015-2019

Co-I: *Downscaling of GRACE Terrestrial Water Storage Observations and Application to Global Drought Monitoring.* NASA Terrestrial Hydrology Program. 2014-2016

Co-I: *Integrated Modeling at Satellite Resolved Scales.* NASA MAP. 2010-2014

Co-I: *Extreme Heat Events – Evolving Risk Patterns in Urban and Rural Communities.* NIH Climate & Health. 2011-2013

Co-I: *IGERT: Water, Climate, and Health.* NSF. 2011-2016

Co-I: *Multisensor snow data assimilation.* NASA Terra/Aqua Program. 2011-2014

Co-I: *Modeling the Effects of Climate Change on the Global Food System.* JHU Discovery Award. 2015-2016

Lead US Partner: *Transboundary water management adaptation in the Amudarya basin to climate change uncertainties.* USAID PEER. 2015-2018

Articles in Refereed Journals

Regonda SK, BF Zaitchik, HS Badr and M Rodell (2016) Using Climate Regionalization to Understand Climate Forecast System Version 2 (CFSv2) Precipitation Performance for the Conterminous United States (CONUS). Geophysical Research Letters. DOI: 10.1002/2016GL069150.

Shortridge J, S Guikema, and B Zaitchik (2016) Empirical streamflow simulation for water resource management in data-scarce seasonal watersheds. Hydrology and Earth System Sciences. *Accepted for publication.*

Zaitchik BF, MH Hayden, DAM Villela, CC Lord, UD Kitron, JJ Carvajal, DCP Câmara, and IC dos Reis (2016) Climate information for arbovirus risk monitoring: opportunities and challenges. Bull. Amer. Meteor. Soc. doi:10.1175/BAMS-D-16-0016.1, in press.

Kumar SV, BF Zaitchik, CD Peters-Lidard, M Rodell, RH Reichle, B Li, M Jasinski, D Mocko, A Getirana, G De Lannoy, M Cosh, CR Hain, M Anderson, KR Arsenault, Y Xia, and M Ek (2016) Assimilation of gridded GRACE terrestrial water storage estimates in the North American Land Data Assimilation System. Journal of Hydrometeorology. DOI: http://dx.doi.org/10.1175/JHM-D-15-0157.1

CV confirmed accurate as of 10 June 2016: 

Simane B, BF Zaitchik and JD Foltz (2016) Agroecosystem specific climate vulnerability analysis: application of the livelihood vulnerability index to a tropical highland region. Mitig Adapt Strateg Glob Change. 21(1):39-65, DOI 10.1007/s11027-014-9568-1

Berhane F*, BF Zaitchik, and HS Badr (2015) The Madden-Julian Oscillation's influence on Spring Rainy Season Precipitation over Equatorial West Africa. Journal of Climate 28(22):8653-8672, doi: http://dx.doi.org/10.1175/JCLI-D-14-00510.1

Urquhart EA*, BF Zaitchik, SD Guikema, BJ Haley, E Taviani, A Chen, ME Brown, A Huq and RR Colwell (2015) Use of Environmental Parameters to Model Pathogenic Vibrios in Chesapeake Bay. Journal of Environmental Informatics, doi:10.3808/jei.201500307

Satti S*, BF Zaitchik, and S Siddiqui (2015) The question of Sudan: a hydroeconomic optimization model for the Sudanese Blue Nile. Hydrol. & Earth System Sci. 19:2257–2293, doi:10.5194/hess-19-2275-2015

Badr HS*, BF Zaitchik and AK Dezfuli (2015) A tool for hierarchical climate regionalization. Earth Science Informatics 8(4):949-958, DOI 10.1007/s12145-015-0221-7

Shortridge JE*, SM Falconi, BF Zaitchik and SD Guikema (2015) Climate, agriculture, and hunger: statistical prediction of undernourishment using nonlinear regression and data-mining techniques. Journal of Applied Statistics 42(11): 2367-2390, DOI:10.1080/02664763.2015.1032216

Bhattacharjee P and BF Zaitchik (2015) Perspectives on CMIP5 model performance in the Nile River headwaters regions. International Journal of Climatology 35(14):4262-4275 DOI: 10.1002/joc.4284

Peters-Lidard, CD, EM Kemp, T Matsui, JA Santanello, Jr., SV Kumar, J Jacob, T Clune, W-K Tao, M Chin, A Hou, JL Case, D Kim, KM Kim, W Lau, Y Liu, J-J Shi, D Starr, Q Tan, Z Tao, B Zaitchik, B Zavodsky, S Zhang, M Zupanski (2015) Integrated Modeling of Aerosol, Cloud, Precipitation and Land Processes at Satellite-Resolved Scales with a Unified-Weather Research and Forecasting Model.Environmental Modelling & Software. doi: 10.1016/j.envsoft.2015.01.007.

Dezfuli AK, BF Zaitchik, A Gnanadesikan (2015) Regional atmospheric circulation and rainfall variability in South Equatorial Africa. Journal of Climate 28:809-818. doi: http://dx.doi.org/10.1175/JCLI-D-14-00333.1

Lawston PM, JA Santanello, BF Zaitchik, and M Rodell (2015) Impact of irrigation methods on land surface model spinup and initialization of WRF forecasts. Journal of Hydrometeorology. doi: http://dx.doi.org/10.1175/JHM-D-14-0203.1

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* JHU student as first author

CV confirmed accurate as of 10 June 2016: 

Barlow M, BF Zaitchik, S Paz, E Black, JP Evans, and A Hoell (2015) A Review of Drought in the Middle East and Southwest Asia. Journal of Climate. doi: http://dx.doi.org/10.1175/JCLI-D-13-00692.1

Tadesse T, T Haigh, N Wall, A Shiferaw, B Zaitchik, S Beyene, G Berhan, and J Petr (2015) Linking Seasonal Predictions into Decision-making and Disaster Management in the Greater Horn of Africa. Bulletin of the American Meteorological Society. doi: 10.1175/BAMS-D-15-00269.1

Soneja SI*, JM Tielsch, FC Curriero, B Zaitchik, SK Khatry, B Yan, SN Chillrud, and PN Breysse (2015) Determining Particulate Matter and Black Carbon Exfiltration Estimates For Traditional Cookstove Use In Rural Nepalese Village Households. Environmental Science & Technology. 49(9): 5555-5562.

Castanho CdT, CJ Lortie, B Zaitchik, and PI Prado (2015) A meta-analysis of plant facilitation in coastal dune systems: responses, regions, and research gaps. PeerJ 3:e768 http://dx.doi.org/10.7717/peerj.768

Anderson W*, S Guikema, B Zaitchik and W Pan (2014) Methods for Estimating Population Density in Data-Limited Areas: Evaluating Regression and Tree-Based Models in Peru. PLoS ONE 9(7): e100037. doi:10.1371/journal.pone.0100037

Berhane F* and BF Zaitchik (2014) Modulation of daily precipitation over East Africa by the Madden-Julian Oscillation. Journal of Climate 27(15): 6016-6034. doi: http://dx.doi.org/10.1175/JCLI-D-13-00693.1

Badr HS*, BF Zaitchik, and SD Guikema (2014) Application of Statistical Models to Prediction of Seasonal Rainfall Anomalies over Sahel. Journal of Applied Meteorology and Climatology. 53(3): 614-636, doi:10.1175/JAMC-D-13-0181.1

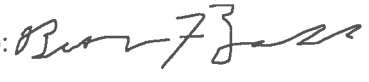
Urquhart EA*, BF Zaitchik, DW Waugh, SD Guikema, and CE Del Castillo (2014) Uncertainty in Model Predictions of Vibrio vulnificus Response to Climate Variability and Change: A Chesapeake Bay Case Study. PLoS ONE doi:10.1371/journal.pone.0098256

Simane B and BF Zaitchik (2014) The Sustainability of Community-Based Adaptation Projects in the Blue Nile Highlands of Ethiopia. Sustainability 6(7): 4308-4325. doi:10.3390/su6074308

Tadesse T, GB Demisse, BF Zaitchik, and T Dinku (2014) Satellite-based hybrid drought monitoring tool for prediction of vegetation condition in Eastern Africa: A case study for Ethiopia. Water Res. Res. 50: 2176-2190, doi:10.1002.2013WR014281.

Yilmaz, MT, MC Anderson, BF Zaitchik, CR Hain, WT Crow, M Ozdogan, JA Chun, and JP Evans (2014) Comparison of prognostic and diagnostic surface flux modeling approaches over the Nile River basin. Water Res. Res. 50: 386–408, doi:10.1002/2013WR014194.

Danysh H, RH Gilman, J Wells, W Pan, B Zaitchik, G Gonzalvez, M Alvarez and W Checkley (2014) El Nino adversely affected childhood stature and lean mass in northern Peru. Climate Change Responses 2014, 1:7

CV confirmed accurate as of 10 June 2016: 

Kent ST, LA McClure, BF Zaitchik, TT Smith, and JM Gohlke (2014) Heat Waves and Health Outcomes in Alabama (USA): The Importance of Heat Wave Definition. Environ Health Perspect. DOI:10.1289/ehp.1307262

Brown ME, AE Racoviteanu, DG Tarboton, A Sen Gupta, J Nigro, F Policelli, S Habib, M Tokay, MS Shrestha, S Bajracharya, P Hummel, M Grey, D Duda, B Zaitchik, V Mahat, G Artan, and S Tokar (2014) An integrated modeling system for estimating glacier and snow melt driven streamflow from remote sensing and earth system data products in the Himalayas. J Hydrology. 519B: 1859-1869. DOI: 10.1016/j.jhydrol.2014.09.050

Berhane F*, BF Zaitchik and A Dezfuli (2014) Sub-seasonal analysis of precipitation variability in the Blue Nile River basin. Journal of Climate. 27: 325-344. http://dx.doi.org/10.1175/JCLI-D-13-00094.1

Zaitchik BF and N Levin (2013) Understanding the dynamics of Tropical African climate [workshop report]. EOS, Transactions of the American Geophysical Union. 94(23): 209

Urquhart EA*, MJ Hoffman, RR Murphy and BF Zaitchik (2013) Geospatial Interpolation of MODIS-Derived Salinity and Temperature in the Chesapeake Bay. Remote Sensing of Environment. 135: 167-177

Zaitchik BF, JA Santanello, SV Kumar and CD Peters-Lidard (2013) Representation of soil moisture feedbacks during drought in NASA Unified WRF (NU-WRF). Journal of Hydrometeorology 14(1): 360-367; doi:10.1175/JHM-D-12-069.1

Brennan ME* and BF Zaitchik (2013) On the potential for alternative greenhouse gas equivalence metrics to influence sectoral mitigation patterns. Environ. Res. Lett. 8: 014033

Simane B, BF Zaitchik and M Ozdogan (2013) Agroecosystem analysis of the Choke Mountain watersheds, Ethiopia. Sustainability 5(2): 592-616; doi:10.3390/su5020592

Smith TT*, BF Zaitchik, and JM Gohlke (2013) Heat Waves in the United States: definitions, patterns and trends. Climatic Change. doi: 10.1007/s10584-012-0659-2

Valle D, B Zaitchik, B Feingold, K Spangler, and W Pan (2013) Abundance of water bodies is critical to guide mosquito larval control interventions and predict risk of mosquito-borne diseases. Parasites & vectors, 6(1): 179-180.

Kent, ST, LA McClure, BF Zaitchik, and JM Gohlke (2013) Area-level risk factors for adverse birth outcomes: trends in urban and rural settings. BMC Pregnancy & Childbirth 13:129; doi:10.1186/1471-2393-13-129

Cavieres, LA, RW Brooker, and 30 co-authors, including BF Zaitchik (2013) Facilitative plant interactions and climate simultaneously drive alpine plant diversity. Ecology Letters. doi: 10.1111/ele.12217

CV confirmed accurate as of 10 June 2016: 

Butterfield, BJ, LA Cavieres and 24 co-authors, including BF Zaitchik (2013) Alpine cushion plants inhibit the loss of phylogenetic diversity in severe environments. Ecology Letters. doi: 10.1111/ele.12070

Anderson WB*, BF Zaitchik, CR Hain, MC Anderson, MT Yilmaz, J Mecikalski, and L Schultz (2012) Towards an integrated soil moisture drought monitor for East Africa. Hydrology and Earth System Sciences 16: 2893-2913; doi:10.5194/hess-16-2893-2012

Zaitchik BF, B Simane, S Habib, MC Anderson, M Ozdogan, and JD Foltz (2012) Building Climate Resilience in the Blue Nile/Abay Highlands--A role for Earth System Sciences. Int. J. Env. Res. Pub. Health 9(2): 435-461; doi:10.3390/ijerph9020435

Simane B, BF Zaitchik and D Mesfin (2012) Building Climate Resilience in the Blue Nile/Abay Highlands--A framework for Action. Int. J. Env. Res. Pub. Health 9(2): 610-631; doi:10.3390/ijerph9020610

Urquhart E*, BF Zaitchik, M Hoffman, S Guikema, and EF Geiger (2012) Remotely Sensed Estimates of Surface Salinity in the Chesapeake Bay. Remote Sensing of Environment 123: 522-531.

Li B, M Rodell, BF Zaitchik, RH Reichle, R Koster, and TM van Dam (2012) Assimilation of GRACE Terrestrial Water Storage into a Land Surface Model: Evaluation and Potential Value for Drought Monitoring in Western and Central Europe. J. Hydrology: http://dx.doi.org/10.1016/j.jhydrol.2012.04.035

Houbourg R, M Rodell, B Li, RH Reichle, and BF Zaitchik (2012) Drought Indicators Based on Model Assimilated GRACE Terrestrial Water Storage Observations. Journal of Hydrometeorology 48, W07525, doi:10.1029/2011WR011291

Zeng N, A King, BF Zaitchik, SD Wullschlegger, J Gregg, S Wang, D Kirk-Davidoff (2012) Ecological carbon sequestration via wood harvest and storage: An assessment of its practical harvest potential. Climatic Change, doi:10.1007/s10584-012-0624-0

Shemesh H, B Zaitchik, T Acuna, and A Novoplansky (2012) Architectural plasticity in a Mediterranean winter annual. Plant Signaling and Behavior 7(4)

Zaitchik BF, M Rodell, and F Olivera (2010) Evaluation of the Global Land Data Assimilation System using global river discharge data and a Source-to-Sink routing scheme. Water Resources Research 46, W06507, doi:10.1029/2009WR007811.

Zaitchik BF and M Rodell (2009) Forward-looking assimilation of MODIS-derived Snow Covered Area into a Land Surface Model. Journal of Hydrometeorology 10(1): 130-148.

Evans JP and BF Zaitchik (2008) Modeling the large scale water balance impact of different irrigation systems. Water Resources Research 44, W08448, doi:10.1029/2007WR006671.

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Zaitchik BF, M Rodell, and RH Reichle (2008) Assimilation of GRACE terrestrial water storage data into a land surface model. Journal of Hydrometeorology 9:535-548

Zaitchik BF, JP Evans, and RB Smith (2007) Regional impact of an elevated heat source: the Zagros Plateau of Iran. Journal of Climate 20(16): 4133-4146

Zaitchik BF, JP Evans, RA Geerken, and RB Smith (2007) Climate and vegetation in the Middle East: inter-annual variability and drought feedbacks. Journal of Climate 20(15): 3924-3941

Hole F and BF Zaitchik (2007) Policies, plans, practices, and prospects: irrigation in northeastern Syria. Land Degradation and Development 18:DOI:10.1002/ldr.772

Zaitchik BF, AK Macalady, LR Bonneau, and RB Smith (2006) Europe's 2003 heatwave: a satellite view of impacts and land-atmosphere feedbacks. International Journal of Climatology 26:743-769

Geerken R, B Zaitchik, and JP Evans (2005) Classifying rangeland vegetation type and coverage from *NDVI* time series using Fourier Filtered Cycle Similarity. International Journal of Remote Sensing 26:5535-5554

Zaitchik BF, J Evans, and RB Smith (2005) MODIS-derived boundary conditions for MM5: application to irrigated agriculture in the Tigris-Euphrates Basin. Monthly Weather Review 133(6):1727-1743.

Zaitchik BF, HM van Es, and PJ Sullivan (2003) Modeling slope stability in Honduras: parameter sensitivity and scale of aggregation. Soil Science Society of America Journal 267:268-278.

Zaitchik BF and HM van Es (2003) Applying a GIS slope stability model to site-specific landslide prevention in Honduras. Journal of Soil and Water Conservation 58(1):45-53.

Zaitchik BF, LG LeRoux, and EA Kellogg (2000) Development of Male Flowers in *Zizania aquatica* (North American Wild-Rice; Gramineae). International Journal of Plant Sciences 161(3):345-351.

Spangler R, B Zaitchik, E Russo, and E Kellogg (1999) Andropogoneae evolution and generic limits in *Sorghum* (Poaceae) using *ndh*F sequences. Systematic Botany 24:267-281.

Book Chapters, Conference Papers & Popular Articles

Zaitchik BF, K O'Meara, K Baja, A Scott, D Waugh, and M McCormack (2016) B'more Cool: Monitoring the Urban Heat Island at High Density for Health and Urban Design. Earthzine. February 23, 2016: http://earthzine.org/2016/02/23/bmore-cool-monitoring-the-urban-heat-island-at-high-density-for-health-and-urban-design/

Zaitchik BF, BJ Feingold, D Valle, and WK Pan (2014) Integrating Earth Observations to Support Malaria Risk Monitoring in the Amazon. Earthzine. April 14, 2014: http://www.earthzine.org/2014/04/14/integrating-earth-observations-to-support-malaria-risk-monitoring-in-the-amazon/

CV confirmed accurate as of 10 June 2016: 

Pan W, O Branch, and B Zaitchik (2014) Impact of Climate Change on Vector-Borne Disease in the Amazon, In: Global Climate Change and Public Health, Ed. KE Pinkerton and WN Rom. Springer, New York, pp. 193-210. [Peer Reviewed]

Foltz J, J Gars, M Özdoğan, B Simane and B Zaitchik (2013) Weather and Welfare in Ethiopia, In 2013 Annual Meeting, August 4-6, 2013, Washington, DC, No. 150298, Agricultural and Applied Economics Association. [Peer Reviewed]

Kempler S, GG Leptoukh, RK Kiang, RP Soebiyanto, DQ Tong, P Ceccato, S Maxwell, RG Rommel, GM Jacquez, KK Benedict, SA Morain, P Yang, Q Huang, ML Golden, RS Chen, JE Pinzon, B Zaitchik, D Irwin, S Estes, J Luvall, M WImberly, X Xiao, KM Charland, RP STumpf, Z Deng, CE Tilburg, Y Liu, L McClure, and A Huff (2013) Data discovery, access and retrieval, In: Environmental Tracking for Public Health Surveilliance, Ed. SA Morain and AM Budge. Taylor & Francis Group, London, pp. 229-291. [Peer Reviewed]

Reichle RH, MG Bosilovich, WT Crow, RD Koster, SV Kumar, SPP Mahanama, and BF Zaitchik (2009) Recent Advances in Land Data Assimilation at the NASA Global Modeling and Assimilation Office, In: Data Assimilation for Atmospheric Oceanic and Hydrologic Applications, Ed. SK Park and X Liang, Springer, Heidelberg, pp. 407-428. [Peer Reviewed]

Popular Talks and Interviews

PopTech 2012: http://poptech.org/popcasts/benjamin_zaitchiks_climate_science

People Behind the Science, 2015: http://www.peoplebehindthescience.com/dr-ben-zaitchik/

Recent Presentations

Zaitchik BF (2015) Towards actionable vector-borne and waterborne disease forecasts (Invited). American Geophysical Union Fall Meeting. December 14-18. San Francisco, CA

Zaitchik BF, F Berhane and A Gnanadesikan (2015). An MJO-Mediated Mechanism to Explain ENSO and IOD Impacts on East African Short Rains. American Geophysical Union Fall Meeting. December 14-18. San Francisco, CA

Zaitchik BF (2015) Climate data for arbovirus monitoring and prediction (Invited). NIH - Fiocruz Arbovirus Seminar: Global Health Challenges and Collaborative Opportunities in Arbovirus Research. November 30 – December 3. Manaus, Brazil

Zaitchik BF (2015) Understanding and misunderstanding of hydroclimate in the Nile basin (Invited seminar). Stonybrook University. October 28.

Zaitchik BF (2015) Understanding and misunderstanding of hydroclimate in the Nile basin (Invited seminar). George Mason University. November 11.

Zaitchik BF (2015) Opportunities in Climate and Health Modeling (Invited). NCAR/CDC Workshop on Climate and Health. July 13-16. Boulder, CO

CV confirmed accurate as of 10 June 2016: 

Zaitchik BF (2015) Public Health & Ecological Forecasting (Invited). NASA GPM Applications Workshop. June 9-10.College Park, MD

Zaitchik BF, D Ghatak, et al. (2014) Towards a South Asia Land Data Assimilation System (Invited). December 15-19. San Francisco, CA

Tadesse T, BF Zaitchik, et al. (2014) Seasonal Prediction of Hydro-Climatic Extremes in the Greater Horn of Africa Under Evolving Climate Conditions to Support Adaptation Strategies. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA

Dezfuli AK, BF Zaitchik, et al. (2014) Dynamical downscaling with WRF for the Middle-East and North Africa. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA

Badr HS*, BF Zaitchik, and AK Dezfuli (2014) Climate Regionalization through Hierarchical Clustering: Options and Recommendations for Africa. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA

Smith TT*, BF Zaitchik, and JA Santanello (2014) The Role of Land-Atmosphere Interactions During the CONUS 2012 Summertime Heat Wave. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA

Rodell M, B Li, H Beaudoing, BF Zaitchik, and J Famiglietti (2014) Application of Assimilated GRACE Data for Drought Monitoring. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA

Bernknopf R, Y Kuwayama, D Brookshire, M Macauley, B Zaitchik, S Pesko, and P Vail (2014) Measuring the Value of Earth Observation Information with the Gravity Research and Climate Experiment (GRACE) Satellite. American Geophysical Union Fall Meeting. December 15-19. San Francisco, CA

Zaitchik BF (2014) Emerging datasets, models, and applications (Invited). Modeling the Health Risks of Climate Change, a National Academies of Science workshop. November 3-4. Washington DC

Zaitchik BF (2014) Causes and Consequences of Climate Variability in the Nile Basin (Invited seminar). University of Pennsylvania. November 14.

Zaitchik BF (2014) Causes and Consequences of Climate Variability in the Nile Basin (Invited seminar). Stanford University. October 17.

Zaitchik BF et al., (2013) Satellite-based water balance of the Nile River basin: a multisensor approach. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Zaitchik BF et al., (2013) Advances in the GRACE Data Assimilation System (Invited). American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

CV confirmed accurate as of 10 June 2016: 

Dezfuli AK, BF Zaitchik and A Gnanadesikan, (2013) A south equatorial African precipitation dipole and the associated atmospheric circulation. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Lawston P, JA Santanello, BF Zaitchik, and H Beaudoing (2013) Impact of irrigation methods on LSM spinup and initialization of WRF forecasts. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Kuwayama Y, R Bernknopf, M Macauley, D Brookshire, BF Zaitchik, and M Rodell (2013) The value of information from a GRACE-enhanced drought severity index. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Bader HS*, BF Zaitchik, AK Dezfuli (2013) Regionalization of Africa based on Interannual Variability of Precipitation: an improved approach and a new validation index. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Molina J* and BF Zaitchik (2013) Precipitation prediction in North Africa based on statistical downscaling. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Satti S*, BF Zaitchik and S Siddiqui (2013) Determining the effect of climate change and development of water resources management in the Sudan. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Bedasso ZK, N Levin, BF Zaitchik and D Shanko (2013) Temporal and spatial variability of water isotopes in Ethiopian rainfall and its implication for moisture sources. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Bhattacharjee P and BF Zaitchik (2013) Understanding the influence of global scale climate modes on inter-annual variability of African precipitation using CMIP5 simulations. American Geophysical Union Fall Meeting. December 9-13. San Francisco, CA

Zaitchik BF et al., (2013) Satellite-informed malaria risk modeling in the Amazon. MEDGEO 2013. August 24-30. Alexandria, VA

Zaitchik BF et al., (2013) A malaria detection and early warning system for the Peruvian Amazon. American Met. Soc. Annual Meeting. January 6-10. Austin, TX

Badr HS*, BF Zaitchik, and S Guikema (2013) Seasonal predictions of Sahel precipitation. American Met. Soc. Annual Meeting. January 6-10. Austin, TX

Badr HS*, BF Zaitchik, and A Dezfuli (2013) Objective regionalization of African precipitation zones. American Met. Soc. Annual Meeting. January 6-10. Austin, TX

Berhane F*, BF Zaitchik, and A Dezfuli (2013) Sub-seasonal drivers of precipitation in the Blue Nile basin. American Met. Soc. Annual Meeting. January 6-10. Austin, TX

CV confirmed accurate as of 10 June 2016:

Smith TT*, BF Zaitchik, and JM Gohlke (2013) Patterns and trends in extreme heat events in the United States. American Met. Soc. Annual Meeting. January 6-10. Austin, TX

Urquhart E*, BF Zaitchik et al. (2012) Geostatistical interpolation of satellite-derived temperature and salinity estimates. American Geophysical Union Fall Meeting. December 3-7. San Francisco, CA

BF Zaitchik (2012) The Joseph Complex: waiting for perfect predictions in the Nile and everywhere else. PopTech Annual Conference. October 18-20. Camden, ME

Zaitchik, B.F. et al., (2011) Influence of seasonal soil moisture memory on land-atmosphere interactions: a coupled mesoscale modeling study of the 2006 Southern Great Plains drought. AGU Fall Meeting. December 5-9. San Francisco, CA

Zaitchik, B.F. and B. Simane (2011) Climate resilience in the Blue Nile Highlands: defining a role for Earth System Sciences (Invited). AGU Fall Meeting. December 5-9. San Francisco, CA

Zaitchik, B.F. et al. (2011) The GRACE Data Assimilation System (Invited). 3rd Annual workshop of International Geoscience Programme Project 565: Supporting water resource management with improved Earth observations. November 2011. Johannesburg, SA

Zaitchik, B.F. (2011) Climate Negotiations and Actionable Information (Invited). The GAIA Climate, Climate Change and Public Health Conference. April 12-14. Baltimore, MD

Zaitchik, B.F. (2011) MENA Water Information System Platform (WISP) drought activities (Invited). NASA Global Drought Monitoring Workshop. April 11-12. Silver Spring, MD

Zaitchik, B.F. (2011) ET applications in the Middle East and North Africa (Invited). NASA/USDA Workshop on "Evapotranspiration: An Essential Observation for Climate Understanding and Efficient Water Management." April 5-7. Silver Spring, MD

Zaitchik, B.F., M. Rodell, R.H. Reichle, B. Li, R. Houborg, J.D. Bolten (2010) Realizing the potential of the GRACE Data Assimilation System (Invited). AGU Fall Meeting. December 13-17. San Fransisco, CA

Zaitchik, B.F. et al., (2010) A Land Data Assimilation System for hydrologic studies in countries of the Nile basin, 8th International Conference of the African Association of Remote Sensing for the Environment, Addis Ababa, Ethiopia

Zaitchik, B.F. (2009) A methodological framework for calculating lifecycle greenhouse gas emissions from biofuels (Invited). Global Bioenergy Partnership review of sustainable bioenergy. 15th Conference of the Parties of the UNFCCC, December 7-18. Copenhagen, Denmark

National & International Committee Membership

United States Representative to the GEWEX Hydroclimatology Panel (HCP) 2015-

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National Research Council (NRC) Committee to Review the Draft Interagency Report on the Impacts of Climate Change on Human Health in the United States	2015
Expert Panel on Future Gravity Satellite Missions , IUGG	2013-2015

Awards and Honors

PopTech Science Fellow	2012
NCAR Early Career Scientist Symposium Invited Participant	2011
Superior Honor Award U.S. State Department	2010
Meritorious Service Award U.S. State Department	2009
Peer award for outstanding Research Associate NASA Goddard Space Flight Center	2007
DISCCRS III (Dissertation Initiative for the Advancement of Climate Change Research) – invited participant	2007
NCAR Climate and Global Change Post-doctoral Fellowship (fellowship was declined in favor of other opportunities)	2006
Elias Loomis Prize for excellence in studies of physics of the earth Yale University	2004
Outstanding Student Paper Award in Hydrology American Geophysical Union	2003
NSF Graduate Student Fellowship	1999
Hoopes Prize for Outstanding Undergraduate Research Thesis, Harvard University	1998

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