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PROFESSIONAL PREPARATION

Ph.D., Mathematics, University of Reading, Reading, UK, March 2020

M.S., Atmospheric and Oceanic Sciences, Graduated Summa Cum Laude (4.0 GPA), University of Wisconsin-Madison, Madison, Wisconsin, USA, May 2003

B.S., Meteorology, Graduated Summa Cum Laude (3.97 GPA), St. Cloud State University, St. Cloud, Minnesota, USA, May 2000

PROFESSIONAL EXPERIENCE

Associate Research Professor, July 2023 – Present, Space Science and Engineering Center, University of Wisconsin-Madison, USA

Associate Scientist, October 2015 – June 2023, Space Science and Engineering Center, University of Wisconsin-Madison, USA

Assistant Scientist, September 2013 – September 2015, Space Science and Engineering Center, University of Wisconsin-Madison, USA

Researcher, January 2010 – August 2013, Space Science and Engineering Center, University of Wisconsin-Madison, USA

Associate Researcher, July 2006 – December 2009, Space Science and Engineering Center, University of Wisconsin-Madison, USA

Assistant Researcher, July 2004 – June 2006, Space Science and Engineering Center, University of Wisconsin-Madison, USA

Research Intern, May 2003 – June 2004, Space Science and Engineering Center, University of Wisconsin-Madison, USA

HONORS AND AWARDS

University of Reading International Research Studentship, University of Reading, UK, 2015 (awarded to only 6 international students each year)

Lettau Award for Outstanding Master's Thesis, University of Wisconsin-Madison, 2003

Schwerdtfeger Award for Academic Excellence as a First Year Graduate Student, University of Wisconsin-Madison, 2001

American Meteorological Society's Ethan and Allan Murphy Memorial Scholarship, 2000

St. Cloud State University Award for Excellence in Leadership, 2000 (awarded to only 25 students each year that have demonstrated outstanding leadership abilities)

STUDENT ADVISEES AND PHD COMMITTEES

Undergraduate mentoring:	Douglas Schumacher (2019-2020)
	Tanish Nahata (2022-2023)
Graduate mentoring:	Caitlin Birdsong (2023-2024)
PhD advisor:	Doreen Mwara (2022-current)
Postdoctoral advisor:	Lena Heuscher-Steward (2023-2024)
	Cameron Bertossa (2025)
External committee member:	Jon Madden (M.S. candidate, Texas Tech University, 2017-2029)
	Jordan Christian (PhD candidate, U. Oklahoma, 2017-2020)

PROFESSIONAL SERVICE

Committee Memberships

Member of the Developmental Testbed Science Advisory Board, 2025 – 2028

Member of the NASA Hydrosphere Drought Working Group for the next Decadal Survey, 2026

Co-chair of the Next Generation Global Prediction System Strategic Implementation Plan Verification and Validation working group tasked with compiling the verification metrics and techniques used to assess the accuracy of the next generation of operational numerical weather prediction models in the U.S. (2018 – 2025)

Member of the National Integrated Drought Information System (NIDIS) Flash Drought Technical Advisory Group that is formulating flash drought research priorities and hosted a workshop with researchers and various stakeholder groups. (2020 – 2024)

Member of the NOAA Modeling, Analysis, Predictions, and Projections (MAPP) Drought Task Force. (2014 – 2017)

Conference Organizing Committees

Member of the scientific organizing committee for the National Integrated Drought Information System (NIDIS) Flash Drought Workshop, held virtually in 2020.

Member of the organizing committee for the 2021 Developmental Testbed Unified Forecast System Evaluation Metrics Workshop, held virtually in 2021.

Co-organized the "Improvements to the Analysis and Prediction of Flash Drought and Long-Term Drought" session at the *34th Conference on Hydrology* in Boston, MA in 2020.

Co-organized the "Drought Timescales and Impacts: Prediction, Risk Assessment, and Resilience" session at the *2020 AGU Fall Meeting*. (virtual, 2020)

Co-organized the "Advances in Monitoring, Analysis, and Prediction of Flash Drought and Related Heatwaves" session at the *35th Conference on Hydrology*. (virtual, 2021)

Co-organized the "Advancements in the Analysis and Prediction of Drought" session at the *36th Conference on Hydrology*. (virtual, 2022)

Co-organized the "Compounding and Cascading Causes and Effects of Flash Drought" session at the *37th Conference on Hydrology* in Denver, CO in 2023.

Co-organized the "Flash Drought Monitoring, Predictability, and Impacts in a Changing Climate" session at the *38th Conference on Hydrology* in Baltimore, MD in 2024.

Co-organized the "Advancements in Analysis and Prediction of Drought" session at the *38th Conference on Hydrology* in Baltimore, MD in 2024.

Co-organized the "Flash Drought Monitoring, Predictability, and Impacts in a Changing Climate" session at the *39th Conference on Hydrology* in New Orleans, LA in 2025.

Co-organized the "Advancements in Analysis and Prediction of Drought" session at the *39th Conference on Hydrology* in New Orleans, LA in 2025.

Co-organized the "25 Years of the U.S. Drought Monitor: A Look Back and A Look Forward" session at the *29th Conference on Applied Climatology* in New Orleans, LA in 2025.

Co-organized the "Advancements in Drought Monitoring and Analysis" session at the *40th Conference on Hydrology* in Houston, TX in 2026.

Member of the scientific organizing committee for the 2nd National Flash Drought Workshop in Boulder, CO in 2023.

Served as a session chair during numerous conferences.

PROPOSALS FUNDED

I have a strong record of writing successful proposals and have served as the Principal Investigator or Co-Principal Investigator on more than 30 completed research projects, four visiting scientist projects, and four supercomputing projects. These projects have covered a diverse range of topics that have enhanced our understanding of the causes and characteristics of flash droughts and their impacts on farmers and ranchers, enhanced numerical weather prediction model forecast accuracy through improved assimilation of satellite observations and the development of innovative model verification methods, used satellite observations to detect wildfires, and assisted efforts to prepare for the next generation of advanced satellite sensors through generation of proxy satellite datasets used to test and develop satellite retrieval algorithms and processing systems.

PUBLICATIONS (h-index: 44)

I have a strong publication record in which I have authored or co-authored more than 110 peer-reviewed journal articles covering diverse topics. These studies have focused on using satellite observations to monitor soil moisture and drought conditions, evaluate the accuracy of numerical weather prediction models, improve the accuracy of numerical weather prediction model forecasts through ensemble data assimilation, validate remotely sensed atmospheric parameters, detect fires, and prepare for the launch of the next generation of satellites. I have also co-authored two book chapters and three technical reports.

Ma, F., X. Yuan, and **J. A. Otkin**, 2026: Hot drought increased the occurrence probability of the 2025 Los Angeles destructive wildfires. *Adv. Atmos. Sci.*, **43**, 723-735.

Rudlosky, S. D., J. Patton, D. Zhang, T. Noiplab, R. Jin, L. Heuscher-Stewart, and **J. A. Otkin**, 2025: Characterizing the relation between lightning and wildfires in the western United States. *J. Appl. Meteor. Climatol.*, **64**, 2021–2036, https://doi.org/10.1175/JAMC-D-25-0032.1.

Losos, D., S. Ranjbar, S. Hoffman, R. Abernathey, A. R. Desai, **J. A. Otkin**, H. Zhang, Y. Ryu, and P. C. Stoy, 2025: Rapid changes in terrestrial carbon dioxide uptake captured in near-real time from a geostationary satellite: the ALIVE framework. *Rem. Sens. Environ.* **324**, 114759, https://doi.org/10.1016/j.rse.2025.114759.

Lisonbee, J., B. Parker, E. Fleishman, T. Ford, R. K. Bocinsky, G. Follingstad, A. G. Frazier, Z. H. Hoylman, A. R. Hudson, J. W. Nielsen-Gammon, N. A. Umphlett, E. Wickham, A. Bamzai-Dodson, R. Fontenot, B. Fuchs, J. Hammond, J. E. Herrick, M. Hobbins, A. Hoell, J.

Jones, E. Lane, Z. Leasor, Y. Liu, **J. A. Otkin**, A. Sheffield, D. Todey, and R. Pulwarty, 2025: Prioritization of research on drought assessment in a changing climate. *Earth's Future*, 13, e2024EF005276, https://doi.org/10.1029/2024EF005276.

Otkin, J. A., Y. Zhong, T. W. Ford, M. C. Anderson, C. Hain, A. Hoell, M. Svoboda, and H. Wang, 2024: Multivariate evaluation of flash drought across the United States. *Water Resour. Res.*, **60**, e2024WR037333. https://doi.org/10.1029/2024WR037333

Başakın, E. E., P. C. Stoy, M. C. Demirel, M. Ozdogan, and **J. A. Otkin**, 2024: Improved agricultural drought index using a high-resolution distributed hydrological model and explainable AI techniques. *Rem. Sensing*., 16, 3799. https://doi.org/10.3390/rs16203799

Osman, M., B. Zaitchik, **J. Otkin**, and M. Anderson, 2024: A global flash drought inventory based on soil moisture volatility. *Sci. Data,* **11**, 965. https://doi.org/10.1038/s41597-024-03809-9

Lorenz, D. J., **J. A. Otkin**, B. F. Zaitchik, C. Hain, T. Holmes, and M. C. Anderson, 2024: Improving subseasonal soil moisture and evaporative stress index forecasts through machine learning: The role of initial land state versus dynamical model output. *J. Hydrometeor.*, **25**, 1147-1163. https://doi.org/10.1175/JHM-D-23-0074.1

Corak, N. K., **J. A. Otkin**, T. W. Ford, and L. E. Lowman, 2024: Unraveling phenological responses to extreme drought and implications on the water and carbon budgets. *Hydrol. Earth Syst. Sci*., 28, 1827–1851, https://doi.org/10.5194/hess-28-1827-2024.

Anderson, M. C., W. P. Kustas, J. M. Norman; G. T. Diak, C. R. Hain, F. Gao, Y. Yang, K. R. Knipper, J. Xue, Y. Yang, W. T. Crow, T. R. H. Holmes, H. Nieto, R. Guzinski, **J. A. Otkin**, J. R. Mecikalski, C. Cammalleri, A. T. Torres-Ruan, X. Zhan, L. Fang, P. D. Colaizzi, and N. Agam, 2024: A brief history of the thermal IR-based Two-Source Energy Balance (TSEB) model – diagnosing water and energy fluxes from plant to global scales. *Agr. Forest Meteorol*., **350**, 109951, https://doi.org/10.1016/j.agrformet.2024.109951.

Christian, J., M. Hobbins, A. Hoell, **J. A. Otkin**, T. Ford, A. Cravens, K. Powlen, H. Wang, and V. Mishra, 2024: Flash drought: A state of the science review. *WIREs Water*, e1714. https://doi.org/10.1002/wat2.1714

Griffin, S. M., and **J. A. Otkin**, 2024: Validating HRRR simulated cloud properties for different weather phenomena using satellite and radar observations. *Wea. Forecasting*, **39**, 97–120, https://doi.org/10.1175/WAF-D-23-0109.1.

Ford, T. W., J. A. Otkin, S. M. Quiring, J. Lisonbee, M. Woloszyn, J. Wang, and Y. Zhong, 2023: Flash drought indicator intercomparison in the United States. *J. Appl. Meteor. Climatol.*, **62**, 1713–1730, https://doi.org/10.1175/JAMC-D-23-0081.1.

Pierce, R. B, M. Harkey, A. Lenzen, L. Cronce, **J. A. Otkin**, J. L. Case, D. S. Henderson, Z. Adelman, T. Nergui, and C. Hain, 2023: High-resolution air quality simulations of ozone

exceedance events during the Lake Michigan Ozone Study. *Atmos. Chem. Phys.*, **23**, 9613-9635, https://doi.org/10.5194/acp-23-9613-2023.

Otkin, J. A., L. Cronce, J. Case, R. Pierce, M. Harkey, A. Lenzen, D. Henderson, Z. Adelman, T. Nergui, G. Good, D. Bizot, and C. R. Hain, 2023: Evaluation of high-resolution model simulations in the Lake Michigan region. *Atmos. Chem. Phys*, 23, 7935–7954, https://doi.org/10.5194/acp-23-7935-2023.

Christian, J. I., E. R. Martin, J. B. Basara, J. C. Furtado, **J. A. Otkin**, L. E. Lowman, E. D. Hunt, V. Mishra, and X. Xiao, 2022: Global projections of flash drought in a warming climate. *Commun. Earth Environ.,* **4**, 165. https://doi.org/10.1038/s43247-023-00826-1.

Nguyen, H., M. C. Wheeler, **J. A. Otkin**, T. Nguyen-Huy, and T. Cowan, 2022: Climatology and history of flash drought over Australia. *J. Hydrometeor.*, *J. Hydrometeor.*, **24**, 1087-1101.

Yuan, X., Y. Wang, P. Ji, J. Sheffield, and **J. A. Otkin**, 2022: A global transition to flash droughts under climate change. *Science*, **380**, 187-191. https://doi.org/10.1126/science.abn6301

Edris, S., J. B. Basara, J. I. Christian, E. D. Hunt, **J. A. Otkin**, S. T. Salesky, and B. G. Illston, 2022: Decomposing the critical components of flash drought using the standardized evaporative stress ratio. *Agr. Forest Meteorol*., **330**, 109288, https://doi.org/10.1016/j.agrformet.2022.109288.

Otkin, J. A., M. Woloszyn, H. Wang, M. Svoboda, M. Skumanich, R. Pulwarty, J. Lisonbee, A. Hoell, M. Hobbins, T. Haigh, and A. Cravens, 2022: Getting ahead of flash drought: From early warning to early action. *Bull. Am. Meteorol. Soc*, **103**, E2188-E2202. https://doi.org/10.1175/BAMS-D-21-0288.1

Ahmad, S. K., S. V. Kumar, T. M. Lahmers, S. Wang, P.-W. Liu, M. L. Wrzesien, R. Bindlish, A. Getirana, K. A. Locke, T. R. Holmes, and **J. A. Otkin**, 2022: Flash drought onset and development mechanisms captured with soil moisture and vegetation data assimilation. *Water Resour. Res.*, **58**, e2022WR032894. https://doi.org/10.1029/2022WR032894.

Lisonbee, J., J. Ribbe, **J. A. Otkin**, and C. Pudmensky 2022: Wet season rainfall onset and flash drought: The case of the northern Australian wet season. *Int. J. Climatol*, **42**, 6499–6514.

Henderson, D. S., **J. A. Otkin**, and J. R. Mecikalski, 2022: Examining the role of the land surface on convection using high-resolution model forecasts over the southeastern United States. *J. Geophys. Res. Atmos.*, 127, e2022JD036563. https://doi.org/10.1029/2022JD036563.

Haigh, T., **J. A. Otkin**, M. Woloszyn, D. Todey, and C. Felkley, 2022: Meeting the climate information needs of Midwest perennial specialty crop production. *J. Appl. Meteor. Climatol*., **61**, 839-855.

Hoover, B. T., **J. A. Otkin**, E. M. Petrescu, and E. Niebuhr, 2022: A high-resolution quantitative precipitation estimates over Alaska through kriging-based merging of rain gauges and short-range regional precipitation forecasts. *J. Atmos. Ocean. Technol*., **39**, 739-753.

Zhang, M. X. Yuan, **J. A. Otkin**, and P. Ji, 2022: Climate warming outweighs vegetation greening in intensifying flash droughts over China. *Environ. Res. Lett.*, **17,** 054041, https://doi.org/10.1088/1748-9326/ac69fb.

Li, X., J. R. Mecikalski, **J. A. Otkin**, D. Henderson, and J. Srikishen, 2022: A polarimetric radar operator and application for convective storm simulation. *Atmosphere*, 13, 645, https://doi.org/10.3390/atmos13050645.

Khan, A. M., P. C. Stoy, J. Joiner, D. Baldocchi, J. Verfaillie, M. Chen, and **J. A. Otkin**, 2022: The diurnal dynamics of gross primary productivity (GPP) using observations from the Geostationary Operational Environmental Satellites-R Series (GOES-R) at an oak savanna ecosystem. *J. Geophys. Res. Biogeosci.*, **127**, e2021JG006701. https://doi.org/10.1029/2021JG006701.

Osman, M., B. Zaitchik, H. Badr, **J. A. Otkin**, Y. Zhong, D. Lorenz, M. C. Anderson, T. F. Keenan, D. L. Miller, C. Hain, and T. Holmes, 2022: Diagnostic classification of flash drought events reveals distinct classes of forcings and impacts. *J. Hydrometeor.*, **23**, 275-289.

Chandramouli, K., X. Wang, A. Johnson, and **J. A. Otkin**, 2022: Online nonlinear bias correction in ensemble Kalman filter to assimilate GOES-R all-sky radiances for the analysis and prediction of rapidly developing supercells. *J. Adv. Model. Earth Syst.*, **14**, e2021MS002711. https://doi.org/10.1029/2021MS002711.

Griffin, S. M., and **J. A. Otkin**, 2022: Evaluating the impact of planetary boundary layer, land surface model, and microphysics parameterization schemes on simulated GOES-16 water vapor brightness temperatures. *Atmosphere*, 13, 366, https://doi.org/10.3390/atmos13030366.

Li, J., A. J. Geer, K. Okamoto, **J. A. Otkin**, Z. Liu, W. Han, and P. Wang, 2022: Satellite all-sky infrared radiance assimilation: Recent progress and future perspectives. *Adv. Atmos. Sci.*, **39**, 9−21, https://doi.org/10.1007/s00376-021-1088-9.

Lorenz, D. J., **J. A. Otkin**, B. Zaitchik, M. C. Anderson, and C. R. Hain, 2021: Predicting rapid changes in evaporative stress index (ESI) and soil moisture anomalies over the continental United States. *J. Hydrometeor.*, **22**, 3017-3036.

Christian, J. I., J. B. Basara, E. D. Hunt, **J. A. Otkin**, J. C. Furtado, V. Mishra, X. Xiao, and R. M. Randall, 2021: Global distribution, trends, and drivers of flash drought occurrence. *Nat. Commun.,* **12,** 6330, https://doi.org/10.1038/s41467-021-26692-z.

Hoell, A., T. W. Ford, M. Woloszyn, **J. A. Otkin**, and J. Eischeid, 2021: Characteristics and predictability of Midwestern United States drought. *J. Hydrometeor*, **22**, 3087-3105.

Hunt, E. D., F. Femia, C. Werrell, J. Christian, J. Basara, **J. A. Otkin**, R. Randall, T. White, C. Hain, M. C. Anderson, and K. McGauhgey, 2021: Agricultural and food security impacts from the 2010 Russia flash drought. *Weather Clim. Extremes*, **34**, 100383, https://doi.org/10.1016/j.wace.2021.100383.

Griffin, S. M., **J. A. Otkin**, S. E. Nebuda, T. L. Jensen, P. Skinner, E. Gilleland, T. A. Supinie, and M. Xue, 2021: Evaluating the impact of planetary boundary layer, land surface model, and microphysics parameterization schemes on upper-level cloud objects in simulated GOES-16 brightness temperatures. *J. Geophys. Res. Atmos*, **126**, e2021JD034709. https://doi.org/10.1029/2021JD034709.

Khan, A., P. C. Stoy, J. T. Douglas, M. C. Anderson, G. Diak, **J. A. Otkin**, E. M. Rehbein, and J. McCorkel, 2021: Reviews and syntheses: Ongoing and emerging opportunities to improve environmental science using geostationary satellite observations. *Biogeosciences*, **18**, 4117-4141, https://doi.org/10.5194/bg-18-4117-2021.

Otkin, J. A., Y. Zhong, E. D. Hunt, J. I. Christian, J. B. Basara, H. Nguyen, M. C. Wheeler, T. W. Ford, A. Hoell, M. Svoboda, and M. C. Anderson, 2021: Development of a flash drought intensity index. *Atmosphere*, **12**, 741, http://dx.doi.org/10.3390/atmos12060741.

Yang, Y., M. C. Anderson, F. Gao, Y. Yang, L. Sun, W. Dulaney, C. Hain, **J. A. Otkin**, J. Prueger, T. Meyers, and C. Bernacchi, 2021: Remote sensing of a field-scale ET-based stress indicator for crop yield forecasting: An application across the U.S. Corn Belt. *Rem. Sens. Env.*, **257**, 112337.

Thompson, G., J. Berner, M. Frediani, **J. A. Otkin**, and S. M. Griffin, 2021: A stochastic parameter perturbation method to represent uncertainty in a microphysics scheme. *Mon. Wea. Rev.,* **149**, 1481-1497.

Nguyen, H., M. C. Wheeler, H. H. Hendon, E.-P. Lim, and **J. A. Otkin**, 2021: The 2019 flash droughts in subtropical eastern Australia and their association with large-scale climate drivers. *Weather Clim. Extremes,* 32, 100321, https://doi.org/10.1016/j.wace.2021.100321.

Henderson, D. S., **J. A. Otkin**, and J. R. Mecikalski, 2021: Evaluating convective initiation in high-resolution numerical weather prediction models using GOES-16 infrared brightness temperatures. *Mon. Wea. Rev*, **149**, 1153-1172.

Osman, M., B. F. Zaitchik, H. S. Badr, J. Christian, T. Tadesse, **J. A. Otkin**, and M. C. Anderson, 2021: Flash droughts over the contiguous United States: Sensitivity of inventories and trends to quantitative definitions. *Hydrol. Earth Syst. Sci.*, **25**, 565–581.

Otkin, J. A., and R. E. Potthast, 2021: Nonlinear conditional bias estimation for data assimilation. *SIAM J. Applied Dynamical Systems*, 299-332.

Hunt, E. D., J. I. Christian, J. B. Basara, L. Lowman, **J. A. Otkin**, J. Bell, K. Jarecke, R. A. Wakefield, and R. M. Randall, 2020: The flash drought of 1936. *J. Appl. Serv. Climatol.*, http://www.doi.org/10.46275/JOASC.2020.11.001.

Zhang, M., X. Yuan, and **J. A. Otkin**, 2020: Remote sensing of the impact of flash drought events on terrestrial carbon dynamics over China. *Carbon Balance Manage.*, **15**, 20, https://doi.org/10.1186/s13021-020-00156-1.

Nguyen, H., **J. A. Otkin**, M. C. Wheeler, P. Hope, B. Trewin, and C. Pudmenzky, 2020: Climatology and variability of the Evaporative Stress Index and its suitability as a tool to monitor Australian drought. *J. Hydrometeor.*, **21**, 2309-2324.

Christian, J. I., J. B. Basara, E. D. Hunt, **J. A. Otkin**, and X. Xiao, 2020: Flash drought development and cascading impacts associated with the 2010 Russian heatwave. *Environ. Res. Lett.*, **15**, 094078.

Griffin, S. M., **J. A. Otkin**, G. Thompson, M. Frediani, and J. Berner, 2020: Assessing the impact of stochastic cloud microphysics using GOES-16 infrared brightness temperatures. *Mon. Wea. Rev.*, **148**, 3111-3137.

Lewis, W., T. J. Wagner, **J. A. Otkin**, and T. A. Jones, 2020: Impact of AERI temperature and moisture retrievals on the simulation of a central plains severe convective weather event. *Atmosphere*, **11**, 729, https://doi.org/10.3390/atmos1107079.

Liu, Y., Y. Zhu, L. Ren, **J. A. Otkin**, E. D. Hunt, X. Yang, R. Yuan, and S. Jian, 2020: Two different methods for flash drought identification: Comparison of their strengths and limitations. *J. Hydrometeor*, **24**, 691-704.

Zhong, Y., **J. A. Otkin**, M. C. Anderson, and C. R. Hain, 2020: Observational assessment of the relationship between the Evaporative Stress Index and soil moisture and temperature across the United States. *J. Hydrometeor*, **21**, 1469-1484.

Christian, J. I., J. B. Basara, J. A. Otkin, and E. D. Hunt, 2019: Regional characteristics of flash droughts across the United States. *Environ. Res. Commun*., 1, 125004.

Haigh, T. R., **J. A. Otkin**, and A. Mucia, M. Hayes, M. Burbach, 2019: When do livestock producers' take action during drought?: How environmental cues, climate information resources, and adaptive capacity shape response. *Adv. Meteorol.*, DOI: https://doi.org/10.1155/2019/9461513.

Basara, J. B., J. I. Christian, R. A. Wakefield, **J. A. Otkin**, E. Hunt, and D. Brown, 2019: The evolution, propagation, and spread of flash drought in the central United States during 2012. *Environ. Res. Lett.*, **14**, DOI: https://doi.org/10.1088/1748-9326/ab2cc0.

Nguyen, H., M. C. Wheeler, **J. A. Otkin**, A. Frost, R. Stone, and T. Cowan, 2019: Using the evaporative stress index to monitor flash drought in Australia. *Environ. Res. Lett.*, **14**, DOI: https://doi.org/10.1088/1748-9326/ab2103.

Christian, J. I., J. B. Basara, **J. A. Otkin**, E. D. Hunt, R. A. Wakefield, P. X. Flanagan, and X. Xiao, 2019: A methodology for flash drought identification in gridded datasets: Application of flash drought frequency across the United States. *J. Hydrometeor.*, **20**, 833-846.

Otkin, J. A., Y. Zhong, and E. E. Hunt, 2019: Assessing the evolution of soil moisture and vegetation conditions during a flash drought - flash recovery sequence over the south-central United States. *J. Hydrometeor.*, **20**, 549-562.

Otkin, J. A., and R. Potthast, 2019: Assimilation of all-sky SEVIRI infrared brightness temperatures with nonlinear bias corrections in a regional-scale ensemble data assimilation system. *Mon. Wea. Rev*., **147**, 4481-4509.

Li, Z., J. Li, T. J. Schmit, P. Wang, A. Lim, J. Li, F. Nagle, W. Bai, **J. A. Otkin**, R. Atlas, R. Hoffman, S. Boukabara, W. Blackwell, and T. Pagano, 2019: The alternative of CubeSat based advanced infrared and microwave sounders for high impact weather forecasting. *Atmospheric and Oceanic Science Letters*, DOI: 10.1080/16742834.2019.1568816.

Otkin, J. A., Y. Zhong, D. Lorenz, M. C. Anderson, and C. Hain, 2018: Exploring seasonal and regional relationships between the Evaporative Stress Index and surface weather and soil moisture anomalies across the United States. *Hydrol. Earth Syst. Sci.,* **22**, 5373–5386.

Otkin, J. A., T. Haigh, A. Mucia, M. C. Anderson, and C. R. Hain, 2018: Comparison of agricultural stakeholder survey results and drought monitoring datasets during the 2016 U.S. Northern Plains flash drought. *Wea. Climate Soc.*, **10**, 867-883.

Lorenz, D. J., **J. A. Otkin**, M. Svoboda, C. R. Hain, and Y. Zhong, 2018: Forecasting rapid drought intensification using the Climate Forecast System (CFS). *J. Geophys. Res*., **123**, 8365–8373. https://doi.org/10.1029/ 2018JD028880.

Otkin, J. A., M. Svoboda, E. D. Hunt, T. W. Ford, M. C. Anderson, C. Hain, and J. B. Basara, 2018: Flash droughts: A review and assessment of the challenges imposed by rapid onset droughts in the United States. *Bull. Am. Meteorol. Soc.*, **99**, 911-919.

Yang, Y., M. C. Anderson, G. Gao, B. Wardlow, C. R. Hain, **J. A. Otkin**, J. Alfieri, Y. Yang, L. Sun, and W. Dulaney, 2018: Field-scale mapping of evaporative stress indicators of crop yield: An application over Mead, NE, USA. *Rem. Sens. Env.*, **210**, 387-402.

Kurzrock, F., S. Cros, F. Chane-Ming, **J. A. Otkin**, L. Linguet, A. Hutt, G. Lajoie, and R. Potthast, 2018: The assimilation of geostationary meteorological satellite observations in regional NWP for cloudiness forecasting. *Meteorol. Z.*, **27**, 277-298.

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