

## JONATHAN M. KING

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Department of Geosciences  
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## EDUCATION

UNIVERSITY OF ARIZONA  
Ph.D., Geoscience (Paleoclimatology), **2018-2021** (*anticipated*)  
Advisors: Kevin Anchukaitis, Jessica Tierney  
Dissertation: *Paleo data assimilation over the Holocene using natural paleoclimate archives and proxy system modeling.*

UNIVERSITY OF ARIZONA  
MS, Geoscience (Paleoclimatology), **2016 - 2018**  
Advisor: Julia Cole  
Thesis: *Reconstructing paleo hydroclimate variability in the Southwest US using speleothem trace elements*

DARTMOUTH COLLEGE  
B.A., Chemistry (*cum Laude*), **2015**  
Minor: Applied Mathematics  
Honors Thesis: *Computational analysis of doped nanostructures*

UNIVERSITY OF ARIZONA  
2016 – Graduate Research Assistant  
Department of Geosciences

US GEOLOGICAL SURVEY  
2015 - 2016 Hydrologic Technician

DARTMOUTH COLLEGE  
**2013 - 2015** Research Assistant, Laboratory Teaching Assistant  
 Department of Chemistry

Hanover, NH

## PUBLICATIONS

*In Review*

**King, J.,** Anchukaitis, K., Tierney, J., Hakim, G., Emile-Geay, J., Zhu, F., Wilson, R. (2021) A data assimilation approach to climate field reconstruction using a limited high-sensitivity proxy network, in review at *Journal of Climate*.

Zhu, F., Emile-Geay, J., Anchukaitis, K., Hakim, G., Wittenberg, A., Morales, M., **Kin, J.** (2021) Volcanoes and ENSO: a re-appraisal with the Last Millennium Reanalysis, in review at *Nature Communications*.

### Peer-Reviewed Papers

- [5] Tierney, J., Zhu, J., **King, J.**, Malevich, S., Hakim, G., Poulsen, C. (2020) Glacial cooling and climate sensitivity revisited. *Nature*, 584(7822), 569-573.
- [4] Zhu, F., Emile-Geay, J., Hakim, G., **King, J.**, Anchukaitis, K. (2020) Resolving the differences in the simulated and reconstructed climate response to volcanism over the last millennium. *Geophysical Research Letters*, 47(8), e2019GL086908.
- [3] **King, J.**, Hurwitz, S., Lowenstern J., Nordstrom, D., McCleskey R. (2016) Multireaction equilibrium geothermometry: A sensitivity analysis using data from the Lower Geyser Basin, Yellowstone National Park, USA. *Journal of Volcanology and Geothermal Research*, 328, 105-114.
- [2] Burnin, A., Poggio, S., **King, J.**, Belbruno, J. (2016) Direct growth by arc discharge and computational study of zinc sulfide nanotubes. *Journal of Materials Science*, 51(21), 9716-9722.
- [1] Poggio, S., **King, J.**, Belbruno, J. (2015) Properties of transition metal doped cadmium sulfide hexamers and dodecamers. *Chemical Physics Letters*, 640, 106-111.

TEACHING      An introduction to Github for scientists and academic researchers. (2020) *University of Arizona*, (lead instructor).

## PRESENTATIONS

- [12] Zhu, F., Emile-Geay, J., Anchukaitis, K., Hakim, G., Wittenberg, A., Morales, M., **King, J.** (2021) Volcanoes and ENSO: a re-appraisal with the Last Millennium Reanalysis. *EGU21*.
- [11] Osman, M., Tierney, J., Tardif, R., Zhu, J., **King, J.**, Hakim, G., Poulsen, C. (2020) Reanalysis of global temperature variability during the last 24,000 years. *AGU Fall Meeting*.
- [10] Emile-Geay, J., Zhu, F., Anchukaitis, K., Hakim, G., **King, J.** (2020) Volcano-induced ENSO occurrences: an integrated assessment using paleoclimate data assimilation experiments. *AGU Fall Meeting*.
- [9] Anchukaitis, K., **King, J.** (2020) Inference from the periphery: large-scale climate variability and Nile riverflow during the Common Era.
- [8] Tierney, J., Zhu, J., **King, J.**, Li, M., Malevich, S., Poulsen, C., Ridgwell, A., Hakim, G., Tardif, R., Kump, L. (2019). A new view of the Eocene greenhouse world from paleoclimate data assimilation. *AGU Fall Meeting*.
- [7] Zhu, F., Emile-Geay, J., Hakim, G., Anchukaitis, K., **King, J.** (2019) The climate response to Common Era volcanism: insights from the Last Millennium Reanalysis. *AGU Fall Meeting*.
- [6] **King, J.**, Anchukaitis, K., Tierney, J. (2019). Paleo data assimilation of temperature sensitive tree ring records. *University of Arizona Geodaze Symposium*, (talk).
- [5] **King, J.**, Anchukaitis, K., Tierney, J. (2019). Paleo data assimilation and tree rings. *University of Arizona Earthweek Plenary Session*, (talk).
- [4] **King, J.**, Harrington, M., Cole, J., Drysdale, R., Woodhead, J., Edwards, R. (2018). Testing a speleothem trace element record for climate signals. *University of Arizona Geodaze Symposium*, (talk).
- [3] **King, J.**, Harrington, M., Cole, J., Drysdale, R., Woodhead, J., Fasullo, J., Stevenson, S., Otto-Bliesner, B., Overpeck, J., Edwards, R., Henderson, G. (2017). Southern Arizona hydroclimate over the last 3000 years: a comparison of speleothem elemental data and forced climate model results. *American Geophysical Union Fall Meeting*, (poster).
- [2] **King, J.**, Harrington, M., Cole, J., Drysdale, R., Woodhouse, J., Overpeck, J., Edwards, R., Henderson, G. (2017). North American moisture variability as revealed by speleothem trace elements. *The Karst Record VIII*, (poster).
- [1] **King, J.**, Harrington M., Cole, J., Drysdale R., Woodhouse, J., Overpeck, J., Edwards, R., Henderson, G. (2017). A speleothem trace element record to track precipitation and drought in the Southwestern US. *University of Arizona Geodaze Symposium*, (poster).

## WORKSHOPS

Data Assimilation Summer School (2019). Timisoara, Romania.

Third Annual LMR Workshop: Climate Dynamics with the Last Millennium Reanalysis (2017). Boulder, CO.

Community Earth System Model 2.0 Tutorial (2017). Boulder, CO.

## SERVICE

**Data Science Ambassador**, *University of Arizona College of Science*, 2020-2021.

**Correspondence Coordinator**, *University of Arizona Geodaze Symposium*, 2018.

**Audiovisual Coordinator**, *University of Arizona Geodaze Symposium*, 2017.

**Audiovisual Coordinator**, *USGS Hubbert Quorum*, 2015.

## HONORS, AWARDS, AND FELLOWSHIPS

Data Science and Digital Scholarship Fellowship, University of Arizona, 2020.

Galileo Circle Scholar, The University of Arizona College of Science, 2020.

Best Climate Presentation, Geodaze Symposium 2019.

Plenary Session Lightning Talk Competition, Second Place, University of Arizona Earthweek 2019

Chandler T. White 1916 Research Prize, Dartmouth Department of Chemistry, 2015.

James O. Freedman Presidential Scholar, Dartmouth College, 2015.

High Honors, Dartmouth College, 2015.

## FIELD

*Southwest National Park, Tasmania: Tree Sampling Campaign*, 2019.

*Kartchner Caverns Dripwater Monitoring Program*, 2016-2018.

*Lone Star Geyser Gravimetric Survey*, 2015-2016.

*Yellowstone National Park Thermal Fluid Sampling Campaign*, 2015.

## SKILLS

**Programming Languages:** MATLAB (preferred), Python

**Climate Modeling:** DASH, Community Earth System Model 2.0, Last Millennium Reanalysis

**Spanish:** Conversationally proficient