CURRICULUM VITAE

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EDUCATION

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

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

APPOINTMENTS

UNIVERSITY OF ARIZONA — Tucson, AZ
2016 – Graduate Research Assistant
Department of Geosciences

US GEOLOGICAL SURVEY — Menlo Park, CA
2015 - 2016 Hydrologic Technician

DARTMOUTH COLLEGE — Hanover, NH
2013 - 2015 Research Assistant, Laboratory Teaching Assistant
Department of Chemistry

PUBLICATIONS

In Review

Tierney, J., Zhu, J., **King, J.**, Malevich, S., Hakim, G., Poulsen, C. (2019) Glacial cooling and climate sensitivity revisited, submitted to *Nature*.

Zhu, F., Emile-Geay, J., Hakim, G., **King, J.**, Anchukaitis, K. (2019) Resolving the differences in the simulated and reconstructed climate response to volcanism over the last millennium, submitted to *Geophysical Research Letters*.

King, J., Cole, J., Harrington, M., Drysdale, R., Woodhead, J., Edwards, R.L. Climate sensitive trace elements in a speleothem from Southern Arizona, submitted to *Geochimica et Cosmochimica Acta*.

In prep

King, J., Anchukaitis, K., Tierney, J., Hakim, G., Emile-Geay, J., Zhu, F., Wilson, R. A data assimilation approach to climate field reconstruction using a limited high-sensitivity proxy network. Part 1: Methods and uncertainty

King, J., Anchukaitis, K., Tierney, J., Hakim, G., Emile-Geay, J., Zhu, F., Wilson, R. A data assimilation approach to climate field reconstruction using a limited high-sensitivity proxy network. Part 2: High-latitude Northern Hemisphere Temperatures

Peer-Reviewed Papers

[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.

PRESENTATIONS

[13] Anchukaitis, K., **King, J.** (2020) Inference from the periphery: large-scale climate variability and Nile riverflow during the Common Era.

[12] 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*.

[11] 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*.

[10] **King, J.**, Anchukaitis, K., Tierney, J. (2019). Paleo data assimilation of temperature sensitive tree ring records. *University of Arizona Geodaze Symposium*, (talk).

[9] **King, J.**, Anchukaitis, K., Tierney, J. (2019). Paleo data assimilation and tree rings. *University of Arizona Earthweek Plenary Session*, (talk).

[8] **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).

[7] **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).

[6] **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).

[5] **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).

[4] **King, J.**, Hurwitz, S., Lowenstern, J. (2015). Delineating Spatial Patterns in the Yellowstone Hydrothermal System using Geothermometry. *American Geophysical Union Fall Meeting*, (poster).

[3] **King, J.**, Belbruno, J. (2015). Computational Analysis of Doped II-VI Nanoclusters. *Dartmouth College Department of Chemistry Thesis Presentation*, (talk).

[2] **King, J.**, Poggio, S., Belbruno J. (2015). Density Functional Theory and Doping Nanoclusters. *Karen E. Wetterhahn Science Symposium*, (poster).

[1] Faber, E., **King, J.**, Spaller, M. (2013). Solid Phase Peptide Synthesis and Molecular Cancer Therapies, *Karen E. Wetterhahn Science 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

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

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

Audiovisual Coordinator, *USGS Hubbert Quorum*, 2015.

AWARDS AND HONORS

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

Data Science and Digital Scholarship Fellowship, University of Arizona, 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, Java

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

Spanish: Conversationally proficient