

## CURRICULUM VITAE

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### **Jackson B. Crews, Ph.D.**

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Desert Research Institute  
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### **PROFESSIONAL PREPARATION**

California Polytechnic State University	Physics, Mathematics Minor	B.S., 2000-2004
University of Arizona	Physics, High-Energy Theory	M.S., 2005-2007
University of Nevada, Reno	Hydrogeology	Ph.D., 2011-2014

### **APPOINTMENTS**

2016 – Present	Assistant Research Professor, Desert Research Institute, Division of Hydrologic Sciences, Reno, NV
2016 – Present	Faculty member, Graduate Program of Hydrologic Sciences, University of Nevada, Reno
2014 – 2016	Postdoctoral Fellow, Desert Research Institute, Division of Hydrologic Sciences, Reno, NV
2011 – 2014	Graduate Research Assistant, Desert Research Institute, Division of Hydrologic Sciences, Reno, NV
2010 – 2011	Upper School Mathematics & Physics Instructor, Sage Ridge School, Reno, NV
2008 – 2010	Upper School Mathematics, Physics, & Chemistry Instructor, Green Fields Country Day School, Tucson, AZ

### **WORKSHOPS AND SHORT COURSES**

Borehole Geophysical Logging for Water Resources/Water Supply Applications – Two-day Short Course, Nevada Water Resources Association (NWRA), June 2017, Reno, NV

National Groundwater Association Conference on Hydrogeophysics & Deep Groundwater, March 2017, Denver, CO

Lithium Brine Workshop, October 2016, NWRA

Near-Surface Geophysics for Hydrology, CUAHSI short course, 2014, Tucson, AZ

Well Design, Construction, & Rehab Workshop, 2013, NWRA

Water Rights in Nevada, 2013, NWRA

Advanced Water Rights in Nevada, 2013, NWRA

### **PUBLICATIONS**

Harpold, A. A., S. Rajagopal, J. B. Crews, T. Winchell, and R. Schumer, 2017, Relative Humidity Has Uneven Effects on Shifts from Snow to Rain Over the Western U.S., *Geophysical Research Letters*, doi: 10.1002/2017GL075046

Crews, J. B. and S. Rybarski, 2017, The role of seismically initiated CO<sub>2</sub> gas bubble growth in groundwater as a mechanism for remotely triggered seismicity – USGS Final Technical Report, [https://earthquake.usgs.gov/cfusion/external\\_grants/reports/G15AP00058.pdf](https://earthquake.usgs.gov/cfusion/external_grants/reports/G15AP00058.pdf)

- Crews, J. B., 2017, Geophysics is Usually Worth a Shot, but Not Always, *NWRA Water Spot* (1), <http://www.kelmanonline.com/httpdocs/files/NWEA/thewaterspot2017-issue1/index.html#>
- Greg Pohll, Rina Schumer, Susie Rybarski, Jackson Crews & Chris Pearson, April 25, 2016, Assessment of Drought Resiliency in Rural Northern Nevada, Presented to Nevada Division of Emergency Management.
- Crews, J. B. and C. A. Cooper, 2014, Experimental evidence for seismically initiated gas bubble nucleation and growth in groundwater as a mechanism for coseismic borehole water level rise and remotely triggered seismicity, *Journal of Geophysical Research – Solid Earth*, 119(9), 7079-7091, doi: 10.1002/2014JB011398.
- Crews, J. B. and C. A. Cooper, 2014, Transient pore pressure response to confining stress excursions in Berea sandstone flooded with an aqueous solution of CO<sub>2</sub>, *Water Resources Research*, 50, doi: 10.1002/2014WR015305.
- Cooper, C. A., J. B. Crews, Schumer, R., Breitmeyer, R. J., Voepel, H., and D. L. Decker, 2014, Experimental investigation of thermal convection in porous media, *Transport in Porous Media*, doi: 10.1007/s11242-014-0337-0.
- Rogers, P. H., Michel, E., Bauer, C. A., Vanderet, S., Hanson, D., Roberts, B. K., Calvez, A., Crews, J. B.; Lau, K. O., Wood, A., Pine, D. J., Schwartz, P. V., 2005, Selective, Controllable, and Reversible Aggregation of Polystyrene Latex Microspheres via DNA Hybridization, *Langmuir*, 21(12), 5,233-5,646.

#### **CONFERENCE PROCEEDINGS**

- Crews, J. B., Harpold, A., Rajagopal, S., Schumer, R., Petersky, R., Winchell, T., 2016: *Humidity affects shifts from snow to rain in the Western U.S.*, AGU Fall Meeting: San Francisco, H23F-1645
- Agnan, Y., Crews, J., Hedge, C., Pearson, C., Hoberg, J., and Obrist, D., *Canopy influence on metal dynamics in snowfall, snowpack, and snowmelt*, ICHMET, 2016.
- Crews, J. B., 2015, *Acoustic monitoring of co-seismic changes in gas bubble rupture rate in a hydrothermal reservoir: a possible precursor and mechanism for remote seismic triggering*, Proceedings of the American Geophysical Union Fall Conference, San Francisco, CA, S12A-05.
- Crews, J. B., 2015, *Carbon dioxide gas bubble growth in groundwater: A mechanism for remote earthquake triggering*, USGS National Earthquake Hazards Reduction seminar series, Menlo Park, CA, June 10, 2015.
- Schumer, R. and J. B. Crews, 2015, *Calibration of single-borehole groundwater flow speed measurement using an electrolyte antenna*, Proceedings of the American Geophysical Union Fall Conference, San Francisco, CA, H13E-1583.
- Crews, J. B. and C. A. Cooper, 2014, *Experimental investigation of remote seismic triggering by gas bubble growth in groundwater*, Proceedings of the American Geophysical Union Fall Conference, San Francisco, CA, S51A-4396.
- Crews, J. and C. A. Cooper, 2012, *Bubble Nucleation in Groundwater by Seismic Stimulation: A Laboratory Study*. Proceedings of the 46<sup>th</sup> Annual Rock Mechanics/Geomechanics Symposium. Chicago, IL. AMRA 12-170.
- Crews, J. and C. A. Cooper, 2012, *Seismically triggered gas bubble nucleation in groundwater*. Proceedings of the Student World Water Forum, University of Nevada-Reno.
- Crews, J. and C. A. Cooper, 2011, *Seismically Driven Outgassing of CO<sub>2</sub> from Water in Laboratory Porous Media*. Proceedings of the American Geophysical Union Fall Conference, San Francisco, CA, H51G-1266.

#### **PROFESSIONAL SOCIETY AFFILIATIONS**

- American Geophysical Union, member since 2011  
 Nevada Water Resources Association, member since 2014  
 American Physical Society, member since 2014

Geological Society of America, member since 2014  
National Ground Water Association, member since 2014

### **AWARDS**

Outstanding Doctor of Philosophy Student Award, UNR, GPHS, 2013-2014  
3<sup>rd</sup> Place, Three Minute Dissertation Competition, UNR, 2014  
George Burke Maxey Award in Water Resources Research, DRI, 2014  
Outstanding Graduate Student Scholarship Award, UNR, GSA, 2013-2014  
GDL Foundation Structural Diagenesis Fellowship, 2012  
Lambert Hydrologic Sciences Scholarship, UNR, GPHS, 2012  
Desert Research Institute George Burke Maxey Fellowship Award, DRI, 2012  
Desert Research Institute Colin Warden Award, DRI, 2012  
3<sup>rd</sup> Place Graduate Student Poster – DRI, 2012  
Outstanding Teaching Assistant Award, Amer. Assn. of Physics Teachers, 2007

### **OTHER RELEVANT ACTIVITIES**

Reviewer for NSF, *Scientific Reports*, *Physics of Fluids*, *Journal of Geology and Geophysics*, & *Greenhouse Gases*  
Editorial board member of *Scientific Pages of Soil and Water Science*  
Instructor for GEOL 783 in Spring semesters of even years, University of Nevada Reno  
Extra-class amateur radio licensee KF7DDK