

# Andrew Joros

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## SUMMARY

**Solutions-driven big data programmer** with a six-year track record of commended performance in data visualization and big data object-oriented programming. Well-versed in research and development with a strong working knowledge of statistical algorithms and various data structures. Proven success creating customized solutions for private and public sector needs.

## EXPERIENCE

### **Staff Scientist Programmer, Desert Research Institute**

Reno, NV — 2013-2015

Led and developed big data software for various hydro-meteorological research projects while additionally providing meteorological data visualization and scientific input support.

- Utilized and collaborated with Google using their Earth Engine JavaScript API to programmatically access and analyze vast amounts of geospatial data.
- Contributed to the development of the Climate and Integrated Earth Monitoring Engine dashboard web app utilizing Google Earth Engine.
- Cloud computed Landsat imagery and gridded weather data for evaluating groundwater dependent ecosystems in Nevada.
- Evaluated the performance of multiple model, satellite, and radar-derived precipitation data to 400+ Texas-wide weather stations to improve irrigation water use estimates.

### **Research Assistant, Desert Research Institute**

Reno, NV — 2009-2013

Completed a Master's in Atmospheric Science while providing data visualization and statistical analyses on various federal and state funded meteorological projects.

- Statistically and dynamically investigated monsoonal surges into the Northern Great Basin.
- Conditioned gridded weather datasets from NASA and NCEP to improve their representation of well watered environments associated with irrigated agriculture.
- Collaborated with the Program for Climate, Ecosystem, and Fire Applications (CEFA) to create a RAWS network nationwide density plot to improve land manager's decision-making.

### **Web Developer, Desert Research Institute**

Reno, NV — 2009-2010

- Created web framework and infrastructure for a NOAA funded drought monitoring project and design framework for an El Nino climate risk project.

### **Statistical Analyst, Atmospheric Systems Corporation**

Valencia, CA — Summer 2009

- Statistical QA/QC quality of output data from Sonic Detection and Ranging systems.

### **Intern, Student Career Experience Program, National Weather Service**

Monterey, CA — 2008-2009

- Communicate meteorological and forecasted events to the public and media.
- QA/QC observational data around the Bay Area and monitor climate databases.

## EDUCATION

### University of Nevada, Reno, NV

M.S. Atmospheric Science — 2009-2011

### San Jose State University, San Jose, CA

B.S. Meteorology -- 2006-2009

## SKILLS

- **Operating Systems:**  
Windows, Linux (Ubuntu/Redhat), Unix
- **Languages/Software:**  
Python, MATLAB, ArcGIS, JavaScript, C/C++
- **Web Design (Frontend):**  
HTML5, CSS, Adobe Creative Suite, JQuery
- **Web Design (Backend):**  
PHP, MySQL, XAMPP, Apache

## PUBLICATIONS AND REPORTS

Joros, A., J. Abatzoglou, N. Nauslar, B. Hatchett, M. Kaplan, (2015) Extratropical Control of Monsoonal Surges in the Great Basin. *Monthly Weather Review (In Progress)*

Joros, A., M. Kaplan, J. Abatzoglou (2011) Extratropical Control of Monsoonal Surges in the Great Basin. (*Master's Thesis*)

Joros, A., J. Abatzoglou (2009) Analysis of Monsoonal Surges into Southern California Deserts. (*Senior Thesis*)

## CONFERENCE PAPERS/PRESENTATIONS

Huntington, J. L., Morton, C. G., McGwire, K. C., Allen, R., Gorelick, N., Thau, D., **Joros, A. N.** (2014). Monitoring Groundwater Dependent Ecosystems in the Great Basin from Space and Clouds, American Water Resources Association Summer Specialty Conference: Reno, NV, May 31, 0014-July 2, 2014

Huntington, J. L., Morton, C. G., McGwire, K. C., **Joros, A. N.**, Peterson, S., Gorelick, N., Thau, D., Allen, R. (2014). Cloud Computing of Landsat Imagery and Gridded Weather Data for Evaluating Groundwater Dependent Ecosystems in Nevada, Nevada Water Resources Association Annual Conference: Las Vegas, NV, February 2, 2014-February 2, 2014

Huntington, J. L., Morton, C. G., McGwire, K. C., **Joros, A. N.**, Peterson, S., Gorelick, N., Thau, D., Allen, R., 2013: Utilizing Cloud Computing of Landsat Imagery and Gridded Weather Data for Evaluating Groundwater Dependent Ecosystems in Nevada. Nevada Water Resources Association Annual Conference, Las Vegas, NV, 3-6 February 2014

Richard G. Allen, University of Idaho, Kimberly, ID; and J. L. Huntington, A. Kilic, H. Debruin, and **A. Joros**, (2013):\_Conditioning of NLDAS, NARR and arid weather station data to improve their representation of well-watered (reference) environments associated with irrigated agriculture. 93rd AMS Annual Meeting, 27<sup>th</sup> Conference on Hydrology, Austin, TX, 5-10 January 2013

Kelly T. Redmond, DRI, Reno, NV; and J.T. Abatzoglou, D. McEvoy, **A. Joros**, D. VanSant, and L. M. Edward, (2013): The WestWide Drought Tracker: Drought Monitoring at Fine Spatial Scales 93<sup>rd</sup> AMS Annual Meeting, Austin, TX, 5-10 January 2013

Nauslar, Nick, J. Abatzoglou, **A. Joros** (2011): Development of an objective methodology for diagnosing Santa Ana winds. Ninth Symposium on Fire and Forest Meteorology, Palm Springs, CA, 18-20 October 2011

**Joros, A.**, J. F. Mejia (2011): Impact of Eastern and Central Pacific ENSO events over the Continental United States. AMS Applied Climatology Conference 2011, Asheville, North Carolina, 18–20 July 2011

King, K. C., M. L. Kaplan, **A. Joros**, M. Liddle and E. Uher, (2011): Evaluation of the Operational

Multi-scale Environment model with Grid Adaptivity (OMEGA) for use in Wind Energy Potential Assessment in the Great Basin of Nevada. Weather, Climate, and the New Energy Economy - Observations, Modeling, and Data for the Energy Sector. 91st AMS Annual Meeting, Seattle WA, 23-27 January 2010.

Abatzoglou, J.T., K.T. Redmond, L.M. Edwards and **A. Joros** (2011): Monitoring of drought in the western United States: metrics suitable for tracking drought historically and throughout the 21st century. 91st AMS Annual Meeting, Seattle WA, 23-27 January 2010.

**Joros, A.**, J. Abatzoglou, J. Favors, B. Tan, M. Kaplan (2010): Extratropical Control of Monsoonal Surges into the Great Basin. AMS Mountain Meteorology Conference, Lake Tahoe, CA, 30 August – 3 September 2010.

Tan, B., **A. Joros**, and M. L. Kaplan, (2010): The Role of Midlatitude Circulations in Triggering Extratropical Convection during the 2004 North American Monsoon. 90th AMS Annual Meeting, Atlanta, GA, 17-22 January 2010.

King, K.C., M. Kaplan, **A. Joros**, M. Liddle, E. Uher (2010): Evaluation of the Operation Multiscale Model with Grid Adaptivity (OMEGA) for use in Wind Energy Potential Assessment in the Great Basin of Nevada. AMS Mountain Meteorology Conference, Lake Tahoe, CA, 30 August – 3 September 2010.

Uher, Erich, M. Kaplan, **A. Joros**, D. Decker (2010) Air Pollution Dispersion Forecasting: A Climatological Study of Cape Canaveral Tropospheric Wind Patterns. 90th AMS Annual Meeting, Atlanta, GA, 17-22 January 2010.

## **SYNERGISTIC AND EDUCATIONAL ACTIVITIES**

Co-founder of Powdiction.com – Specialized Reno-Tahoe Winter Forecasting (2011-Present)

AMS Annual meeting – DRI Graduate Student Recruitment Campaign (2009-2011)

DRI – Division of Atmospheric Sciences Graduate Student Representative (2009-2010)

SJSU AMS Chapter Vice President (2007-2008) & Treasurer (2008-2009)

Volunteer Assistant for 2 years at Annual AMS Conferences (2008-2009)

## **REFERENCES**

Available upon request.