

# Jae Ryu, Ph.D., P.E.

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242 Idaho Water Center, Dept. of Bio & Ag Engineering, College of Agriculture and Life Sciences,  
University of Idaho, Boise, Idaho 83702

• 208-332-4402 (o) • 208-724-0531 (c) • Email: [jryu@uidaho.edu](mailto:jryu@uidaho.edu)

April 5, 2016

## EDUCATION

### **Doctor of Philosophy in Civil and Environmental Engineering, 2006**

University of Washington, Seattle, WA, USA

Dissertation: The management of water resources using a mid-range climate forecast model

Advisor: Richard N. Palmer (Supervisor), Stephen J. Burges

Validation: <http://sdb.admin.washington.edu/sisDegreeValidation/Public/default.aspx>

### **Master of Science in Civil and Environmental Engineering, 2001**

University of Washington, Seattle, WA, USA

### **Bachelor of Science in Agricultural Engineering, 1996**

Konkuk University, Seoul, Republic of Korea

## HONORS AND AWARDS

2016: US Air Force Summer Faculty Fellow

2015: PAWEES Reviewer Award

2015: US Air Force Summer Faculty Fellow

2013: NASA research award for water supply monitoring and forecasting using NASA satellite data

2013: NSF IGERT award to promote water research program at University of Idaho

2012: UI Young Investigator Award for climate change adaptation in Idaho

2007: NOAA SARP research award for drought decision support in the Great Plains

## PROFESSIONAL LICENSES

**Professional Engineer**, Water Resources Engineer since 2004

The State of Washington, Registration No. 41416

Validation: <https://fortress.wa.gov/dol/dolprod/bpdLicenseQuery/>

The State of Nebraska, Registration No. E-12894 since 2009

Validation: <http://www.ea.ne.gov/search/search.php>

The State of Idaho, Registration No. 15009 since 2012

Validation: <http://www.ipels.idaho.gov/rostersearch.cfm>

## PROFESSIONAL APPOINTMENT

4/2016 – **College of Agriculture and Life Sciences, University of Idaho, USA**

present *Associate Professor*, Water Resources Program

Current appointment: 80% research and 20% scholarly service

1/2010 – **College of Agriculture and Life Sciences, University of Idaho, USA**

2016 *Assistant Professor*, Dept. of Bio & Agricultural Engineering

Current appointment: 80% research and 20% scholarly service

- Hydrological modeling for drought impact assessment
- Climate impact mitigation and adaptation
- Sustainable water resources planning

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- Conflict resolution

5/2015 – **Department of Electrical and Computer Engineering, US Air Force Academy, USA**

7/2015 *Visiting Professor*, Academy Center for Unmanned Aircraft Systems (UAS)

- UAS-based drought monitoring system
- Drought index development
- Hyperspectral imaging processes

5/2006 – **School of Natural Resources, University of Nebraska-Lincoln, USA**

12/2009 *Hydrologist (Postdoctoral Research Associate)*, National Drought Mitigation Center

Current appointment: 70% research and 30% scholarly service.

- Develop computer-based decision-support systems for drought management
- Incorporate climate forecast information into hydrologic modeling
- Develop GIS-based web application for decision makers
- Write grant proposals and supervise graduate and undergraduate students.

### **INTERNATIONAL RESEARCH EXPERIENCE**

8/2012 – **Department of Biological and Agricultural Engineering, University of Idaho, USA**

8/2013 *Water Engineering Professor*

- Develop an integrated management technique and system for non-point source control and reduction, Korea Rural Institute, Seoul, Korea

10/2010 – **Department of Biological and Agricultural Engineering, University of Idaho, USA**

9/2011 *Water Engineering Professor*

- Develop a pilot drought information system for national drought disaster reduction, the Korea National Emergency Reduction

6/2007 – **School of Natural Resources, University of Nebraska, Lincoln, NE, USA**

5/2008 *Research Engineer*

- A study on improving water rights belong to irrigation, Rural Research Institute, Korea

6/2006 – **School of Natural Resources, University of Nebraska, Lincoln, NE, USA**

5/2007 *Research Engineer*

- Investigation on US water right system to establish water regulation and operation in watersheds in Korea.

8/2004 – **Department of Civil and Environmental Engineering, University of**

5/2006 **Washington, Seattle, USA**

*Research Engineer*

- Identify regional droughts using climate forecast system in the Geum River basin, Korea
- Illustrate climatologic facts to stakeholders for better decision making processes
- Evaluate a mid-range of streamflow forecast (up to 3 months) on water resources management (revenue analysis, simulation and optimization, system reliability and sustainability)

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6/2001 – **Department of Civil and Environmental Engineering, University of  
7/2002 Washington, Seattle, USA**

*Research Engineer*

- Develop water quality simulation model for King Abdullah Canal, Jordan (EPA Qual2e, DHI Mike 11)
- Identify the source of eutrophication associated with agricultural activities
- Analyze engineering feasibility of management options based on economic analysis
- Evaluate management alternatives along with potential options

3/1999 – **Department of Agricultural Engineering, Konkuk University  
3/1995 Seoul, Republic of Korea**

*Research Engineer*

- Develop a constructed wetland system for rural wastewater treatment
- Simulate hydraulic and hydrologic behavior using a computer model
- Enhance water quality to meet the standard and recommend alternatives

### **PROFESSIONAL AND SCHOLARLY SERVICE**

1. American Society of Agricultural and Biological Engineers, Member, 2010- present
2. American Society of Civil Engineers, Committee, 2002-present, Environmental Water Resources System, World Environmental & Water Resources Congress
3. American Society of Civil Engineers, Committee, 2010-present, International Water Council, World Environmental & Water Resources Congress
4. American Water Resources Association (2002-Present), AWRA 2014 Summer Specialty Conference on IWRM Planning Committee, Chaired, Risk perception and community vulnerability, AWRA 2011 Spring Specialty Conference, Baltimore, April 18-19, MD
5. American Geophysics Union (2002-Present)
6. Korea Institute of Construction Technology (KICT), Technical Advisory Board-Water Resources, 2010-present
7. Korean-American Scientists and Engineers Association (KSEA), President of KSEA Boise Idaho Chapter (2011-present, 41-42nd admin); NMSC 2013-2014 local chair; KSEA, Chair of local chapters, 41-42nd admin; KSEA Nomination Committee, 41-42nd admin; KSEA Contest Committee, 42nd admin, Technical Group J Councilor (2014-2016), KSEA-Northwest Regional Conference (NWRC), Seattle, Washington, September 21-22, 2013, Technical Program Committee, Session Chair of Energy, Green, and Transportation; US-Korea Conference (2013-2014), Co-chair of Symposium J, Civil, Environmental, and Architectural (CEA) Technical Symposium: Sustainable and Resilient Civil Infrastructure
8. Associate Editor, Journal of Civil Engineering, Korean Society of Civil Engineers (2013-present)
9. Agriculture, Environment and Society (POD) Program of Distinction (POD), CALS
10. Department Promotion and Tenure Committee for Marvin Heimgartner, 2011, BAE, University of Idaho
11. Eastern Snake Hydrologic Modeling Committee (ESHMC), Idaho Department of Water Resources (2012-present)
12. Maquis Who's Who in America 2015 (69th Edition)

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### **TEACHING ACCOMPLISHMENTS**

Courses Taught: Hydrological Modeling and Application, BAE504, University of Idaho,  
Summer, 2012

Student Advised: Water Resources Engineering (as major professor)

Jung Jin Kim, Ph.D. Student, since Fall Semester 2011

David Hoekema, Ph.D. Student, since Fall Semester 2011

Logan Miller, M.S. Student, since Fall Semester 2012

Graduate Committee Served (and Serving) on:

Mohammad Sohrabi, Ph.D. Student, since Fall Semester 2010

Jacob Wolf, M.S. Department of Geography, 2012

Mark Cecchini Beaver, College of Law, 2010-2011

Postdoctoral Research Associate Advising and Mentoring:

Jinwon Seo, Ph.D., 2011-2012, currently at a state agency

Anil Acharya, Ph.D., 2011-2012, currently Assistant Professor at Alabama A&M University

Graduate Student s Oversea:

Christabel Jane Rubio, M.S. in Civil Engineering at Kongju National University, 2010

### **PEER-REVIEWED JOURNAL PAPER**

author, respectively

\*# Indicates a graduate student and postdoc co-

1. \*Hoekema, D., Ryu, J. H., 2016. "Characterizing Drought in Irrigated Agricultural Systems: The Surface Water Delivery Index (SWDI)", Journal of the American Water Resources Association, in press
- 2.\*Kim, J.J., Ryu, J.H. 2016. "A Heuristic Gap Filling Method for Daily Precipitation Series", Water Resources Management, in press
- 3.\*Sohrabi, M., Ryu, J. H., Abatzoglou, J., Tracy, J., 2016. "Closure to Discussion: Development of Soil Moisture Drought Index (SODI) to Characterize Hydrological Drought by Mohammad M. Sohrabi, Jae H. Ryu, John Abatzoglou and John Tracy, DOI:10.1061/(ASCE)HE.1943-5584.0001213 (in press)
- 4.\*Sohrabi, M., Ryu, J. H., Abatzoglou, J., Tracy, J., 2015. "Development of Soil Moisture Drought Index (SODI) to Characterize Hydrological Drought", Journal of Hydrological Engineering, 20(11), 0415025(1-15)
- 5.\*Kim, J.J., Ryu, J.H. 2015. "Quantifying a threshold of missing values for gap filling processes in daily precipitation series", Water Resources Management, 29(11),4173-4184

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6. Ryu, J. H., \*Sohrabi, M., #Acharya, A. 2014. "Toward mapping gridded drought indices to evaluate local drought in a rapidly changing global environment", *Water Resources Management*, 28(11), 3859-3869
7. \*Kim, J. J., Ryu, J. H., 2014. "A threshold of basin discretization levels for HSPF simulations with NEXRAD inputs", *Journal of Hydrological Engineering*, 19(7), 1401-1412
8. #Acharya A., Ryu, J. H. 2014. "Simple method for streamflow disaggregation", *Journal of Hydrological Engineering*, 19(3), 509-519
9. \*Sohrabi, M., Ryu, J. H., Alijani, B., 2013. "Spatial and temporal analysis of climatic extremes over the mountainous region of Iran", *The International Journal of Climate Change: Impacts and Responses*, 4(4), 19-37
10. \*Hoekema, D., Ryu, J. H., 2013. "Evaluating Economic Impacts of Water Conservation and Hydrological Forecasts in the Salmon Tract, Southern Idaho", *Transaction of the ASABE*, 56(4), 1-12
11. \*Sohrabi, M., Ryu, J. H., Abatzoglou, J., Tracy, J. 2013. "Climate extreme and its linkage to regional drought over Idaho, USA", *Natural Hazards*, 65:653-681
12. Ryu, J. H., Contor, B., Johnson, G., Allen, R., Tracy, J. 2012. "System Dynamics to Sustainable Water Resources Management in the Eastern Snake Plain Aquifer under Water Supply Uncertainty", *Journal of the American Water Resources Association*, 48(6), 1204-1220
13. Smith, M.B., Koren, V., Zhang, Z., Zhang, Y., Reed, S.M., Cui, Z., Moreda, F., Cosgrove, B.A., Mizukami, N., Anderson, E.A., DMIP 2 Participants (Ryu, J.H.), 2012. "Results of the DMIP 2 Oklahoma experiments", *Journal of Hydrology*, 418-419, 17-48
14. Ryu, J.H., Jeong, S., Park, S.K., Lee, J., Han, K., 2011. "The impacts of climate change on the local hydrology and drought (low flow) frequency", *Hydrological Processes*, 25(22), 3437-3447
15. Ryu, J.H., Svoboda, M.D., Lenters, J.D., Tadesse, T., Knutson, C. 2010. "Finding Potential Extents for ENSO-Driven Hydrologic Drought Forecasts in the United States", *Climatic Change*, 101(3), 575-597
16. Ryu, J.H., 2009. "The application of HSPF to Distributed Model Intercomparison Project (DMIP): Case Study", *ASCE Journal of Hydrologic Engineering*, 14(8), 847-857

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17. Ryu, J.H., Palmer, R.N., Jeong, S., Lee, J., Kim, Y.-O., 2009. "Sustainable Water Resources Management in the Conflict Resolution Framework", Journal of the American Water Resources Association, 45(2), 485-499
18. Ryu, J.H., Palmer, R.N., Wiley, M.W., Jeong, S., 2009. "Mid-Range Streamflow Forecasts Based on Climate Modeling-Statistical Correction and Evaluation", Journal of the American Water Resources Association, 45(2),355-368
19. Jeong, S., Lee, J., Ryu, J.H., Palmer, R.N., 2004. "An Application and Development of Drought Management System for Guem River Basin", Journal of the Korean Society of Civil Engineers, 24(3B), 201-208, 2004
20. Jeong, S., Ryu, J.H., Lee, J., Palmer, R.N., 2003. "Development of Shared Vision Model for Optimal Water Supply for Kum River Basin", Journal of the Korean Society of Civil Engineers, 23(3B), 191-199, 2003

**CONFERENCE PROCEEDINGS AND PRESENTATIONS** (O: Oral presentation, P: Poster presentation, F: Full paper, A: Abstract only): \*,# Indicates a graduate student and postdoc co-author, respectively

1. Ryu, J.H., 2015, "Water Resources Planning and Management to Mitigate Drought in a Changing Climate: Monitoring, Management, and Outlooks", The 1<sup>st</sup> Climate Change Symposium: Adaptation and Mitigation, Hilton Garden Inn, May 3-5, 2015, Chicago, Illinois
2. Ryu, J.H., 2014, "Hydro and Environmental Impact Mitigation for the Boise River Watershed, Idaho: Modeling and Alternatives Using LID" 2014 AWRA Annual Conference, Sheraton Premiere Hotel, November 3-6, Tysons Corner, Virginia
3. Ryu, J.H., 2014, "Water Resources Planning and Management to Mitigate Drought in a Changing Climate: Monitoring, Management, and Outlooks" 2014 ASABE/CSBE/SCGAB Annual International Meeting, July 13-16, Montreal, Quebec, Canada
4. Ryu, J.H., \*Kim, J.J., 2014, "Hydrologic modeling and pollution control using LID to mitigate impacts of urbanization," 2014 AWRA Summer Specialty Conference, John Ascuaga's Nugget, June 30 – July 2, Reno, Nevada
5. \*Kim, J.J., Ryu, J.H., 2014, "Analysis of runoff characteristic and nonpoint source pollution for land use change at Kyoung-An stream watershed, South Korea," 2014 AWRA Summer Specialty Conference, John Ascuaga's Nugget, June 30 – July 2, Reno, Nevada

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6. <sup>O,A\*</sup>Hoekema, D., Kim, J.J., Ryu, J.H., 2013, “Evaluating Drought in Managed System: Matters of Water Supply and Demand”, 2013 Annual Water Resources Conference, American Water Resources Association, Red Lion Hotel, November 4-7, Portland, Oregon
7. <sup>O,A</sup> Ryu, J.H., 2013, “Toward Visualizing Big Drought Data for Data-Intensive Decision Making”, ASCE World Environmental and Water Resources Congress, May 19-23, Cincinnati, Ohio
8. <sup>O,A</sup> Ryu, J.H., 2013, “Decision Support Tools for Conflict resolution and Sustainable Water Resources Planning and Management: After Pete’s approach”, ASCE World Environmental and Water Resources Congress, May 19-23, Cincinnati, Ohio
9. <sup>O,A\*</sup> Kim, Jungjin, M, Ryu, J.H., 2013, “Mapping Drought Vulnerability Driven by Future Climate Change and Variability in South Korea”, ASCE World Environmental and Water Resources Congress, May 19-23, Cincinnati, Ohio
10. <sup>O,A\*</sup> Sohrabi, M, Ryu, J.H., 2013, “Development of Multi Scalar-Soil Moisture Drought Index”, ASCE World Environmental and Water Resources Congress, May 19-23, Cincinnati, Ohio
11. <sup>P,A\*</sup> Kim, J.J., Hoekema, D., Ryu, J.H., 2013, “Validating Local Droughts to Enhance Climate-Resilient Agricultural Water Management in Idaho”, 2013 NSF EPSCoR Tri-State Meeting, University of Nevada at Las Vegas, March 27-28, Las Vegas, Nevada
12. <sup>O,A</sup> Ryu, J.H., 2012, “Decision Support Tools for Drought Monitoring Management and Forecasting in the State of Idaho”, 2012 Annual Water Resources Conference, American Water Resources Association, Hyatt Regency Jacksonville Riverfront, November 12-15, Jacksonville, Florida
13. <sup>P,A</sup>Ryu, J.H., 2012, “Toward Mapping Gridded Drought Indices to Mitigate Drought Impacts in a Rapid Changing Global Environment”, 3rd Annual Pacific Northwest Climate Science Conference, October 1-2, Boise Centre, Boise, Idaho
14. <sup>O,A</sup> Ryu, J.H., 2012, “Development of Sustainable Water Resources System Against Uncertain Future Climate and Drought for the Seomjin River System, Korea”, 18th Congress of the Asia and Pacific Division of the International Association for Hydro-Environment engineering and Research , August 19-23, Jeju Island, Korea
15. <sup>O,A\*</sup> Hoekema, D., Ryu, J.H., 2012, “Using Satellite Imagery to Estimate Aquifer Recharge from Irrigated Agriculture”, ESRI International User Conference, July 23-27, San Diego, California
16. <sup>O,A</sup> Ryu, J.H., 2012, “A Decision Support Systems to Mitigate Water Conflicts amongst Agriculture, Hydro, and Municipal Water Users”, Universities Council on Water Resources, July 17-19, Santa Fe, New Mexico

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17. <sup>P,A\*</sup> Sohrabi, M., Ryu, J., 2012, "Spatial and Temporal Analysis of Climatic Extremes in the Mountainous Regions of Iran", International Conference on Climate Change: Impacts and Responses, University of Washington, July 12-13, Seattle, Washington
18. <sup>O,A\*</sup> Hoekema, D., Ryu, J.H., 2012, "Calculator: Optimized Surface Water Allocation in Drought (OSWAD)", 93rd Annual Meeting of the AAAS Pacific Division, Boise Convention Center, June 24-27, Boise, Idaho
19. <sup>O,A#</sup> Acharya, A., Ryu, J.H., 2012, "Impacts of Climate Change on Hydrologic Drought in an Agriculture-dominated Watershed in the United States", ASCE World Environmental and Water Resources Congress, May 20-24, Albuquerque, New Mexico
20. <sup>O,A\*</sup> Hoekema, D., Ryu, J.H., 2012, "Investigating Economic Impacts of Agricultural Drought Using System Dynamics", ASCE World Environmental and Water Resources Congress, May 20-24, Albuquerque, New Mexico
21. <sup>O,A</sup> Ryu, J.H., 2012, "Drought Monitoring, Forecasting, and Management in the 21st Century: Issues and Challenges", ASCE World Environmental and Water Resources Congress, May 20-24, Albuquerque, New Mexico
22. <sup>P,A\*</sup> Sohrabi, M., Ryu, J., 2011, "Investigating drought using extreme climatic indices over Idaho, USA", AGU Fall meeting, Dec 5-9, San Francisco, California
23. <sup>O,A</sup> Ryu, J.H., Contor, B., Johnson, G., Allen, R., Tracy, J., 2011, "Application of System Dynamics to assess climate impacts on the Eastern Snake Plain Aquifer", Pacific Northwest Climate Science conference, September 12-14, Seattle, Washington
24. <sup>O,A</sup> Ryu, J.H., Contor, B., Johnson, G., Allen, R., Tracy, J., 2011, "Application of System Dynamics to Adaptive Management for the Eastern Snake Plain Aquifer", ASCE World Environmental and Water Resources Congress, May 22-26, Palm Springs, California
25. <sup>O,A</sup> Ryu, J.H., Contor, B., Johnson, G., Allen, R., 2011, "System Dynamics for Climate-Driven Socioeconomic Water Issues", AWRA Summer Specialty Conference-Managing Climate Change Impacts on Water Resources: Adaptation Issues, Options, and Strategies, April 18-20, Sheraton Inner Harbor Hotel, Baltimore, Maryland
26. <sup>P</sup> Ryu, J.H., Contor, B., Wiley, A., Johnson, G., Allen, R., 2010, "Climate-Driven Water Budget Analysis in the Eastern Snake Plain Aquifer", AGU Fall meeting, Dec 13-17, San Francisco, California
27. <sup>O,F</sup> Ryu, J.H., Park, S.K., Lee, K., 2010, "A Framework of hydroclimate modeling and decision support tools for sustainable water resources planning in a changing climate", 2010 ASCE World Environmental and Water Resources Congress, May 16-20, Providence, Rhode Island



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28. <sup>O,A</sup> Jeong, S., \*Rubio, C.J., Ryu, J.H., Oh, K., Park, M.J., 2010, “Hydrologic Drought in the Upper Nakdong River Basin”, 2010 ASCE World Environmental and Water Resources Congress, May 16-20, Providence, Rhode Island
29. Ryu, J.H., 2010, “Challenges and Issues in Collaborative Climate Change Research”, the 2nd Annual Tri State Consortium Meeting, April 6-8, Hyatt Regency Lake Tahoe, Incline Village, Nevada
30. <sup>O,A</sup> Ryu, J.H., Di Luzio, M., 2009, “Challenges and lessons learned from hydrologic simulations using HSPF and SWAT with NEXRAD rainfall inputs”, 2009 AWRA Annual Conference, November 9-12, Seattle, Washington
31. <sup>O,A</sup> Ryu et al, 2009, “Application of SWAT to climate-driven low flow (drought) frequency analysis”, 2009 5th International SWAT Conference, August 3-7, Boulder, Colorado
32. <sup>O,A</sup> Ryu, J.H., Park, S.K., 2009, “A framework of sustainable water resources management in a changing climate”, The Commission for Water Sustainability International Geographical Union (IGU), July 27-31, Torino, Italy
33. <sup>O,F</sup> Ryu, J.H., Svoboda, M., Okalebo, J. 2009, “Visualizing hydrologic drought information on the web using state-of-the-art geospatial mapping technology”, ASCE World Environmental and Water Resources Congress, May 17-21, Kansas City, Missouri
34. <sup>O,F</sup> Tadesse, T., Wardlow, B., and Ryu, J.H., 2009, “Discovering the spatial and temporal relationships between vegetation condition and climate in monitoring drought”, NOAA Climate Prediction Applications Science Workshop, March 23-25, Norman, Oklahoma
35. <sup>A</sup> Ryu, J.H., 2008, “Snowmelt and Rainfall-Runoff Modeling Using NEXRAD Precipitation Input”, AGU Fall meeting, Dec 15-19, San Francisco, California
36. <sup>F</sup> Ryu, J.H., Svoboda, M., Tadesse, T., Knutson, C., 2008. “Climate Impacts on Hydrology in the Central United States: Application to Forecast Capability in the Republican River Basin”, Proceeding of World Environmental and Water Resources Congress 2008, ASCE May 12-16, Honolulu, Hawaii
37. <sup>A</sup> Ryu, J.H., 2008. “Automatic Calibration of HSPF model with NEXRAD rainfall data for Distributed Model Intercomparison Project (DMIP)”-Abstract Only, EOS Trans. AGU, 89(23), Joint Assembly, May 27-30, Fort Lauderdale, Florida
38. <sup>O,F</sup> Tadesse, T., Wardlow, B., Ryu, J.H., 2008. “Identifying time-lag relationships between vegetation condition and climate to produce Vegetation Outlook maps and monitor drought”, Proceeding of the 88th American Meteorological Society Annual Meeting, New Orleans, LA
39. <sup>P</sup> Ryu, J.H., Svoboda, M.D., 2007. “A GIS Framework for Climate Change Studies in Nebraska”, Proceedings of the 7th International IWA Symposium on Systems Analysis and Integrated Assessment in Water Management, IWA, May 7-9, Washington, D.C. (<http://www.watermatex2007.org>)

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40. <sup>P</sup> Ryu, J.H., Svoboda, M.D., 2007. "El Niño-Southern Oscillation (ENSO) and Hydrologic Drought in the United States", 2007 Nebraska GIS Symposium, April 3-5, Qwest Center, Omaha, Nebraska (<http://www.symposium2007.org>)
41. <sup>O,F</sup> Ryu, J.H., Palmer, R.N., Willey, M.W., 2006. "Mid-Range Streamflow Prediction Using A Dynamic Climate Model", AWRA 2006 Summer Specialty Conference, Missoula, MT, USA
42. <sup>O,F</sup> Willey, M.W., Palmer, R.N., Ryu, J.H., 2006. "Climate Based Streamflow Forecasts for Water Resource Managers", AWRA 2006 Summer Specialty Conference, Missoula, MT, USA
43. <sup>O,F</sup> Ryu, J.H., Palmer, R.N., Jeong, S., Lee, J., 2004. "Drought Definitions and Forecasts for Water Resources Management", EWRI Congress 2004, ASCE, Salt Lake City, USA
44. <sup>O,A</sup> Ryu, J.H., Palmer, R.N., Jeong, S., Lee, J., 2003. "An Optimization Model to Mitigate Conflicts", EWRI Congress 2003, ASCE, Philadelphia, USA
45. <sup>O,A</sup> Lee, J., Ryu, J.H., Palmer, R.N., Jeong, S., 2003. "Development of Shared Vision Model for the Optimal Reservoir Operation", International Conference on Hydrology and Water Resources in Asia Pacific Region(APHW), Kyoto, Japan
46. <sup>O,F</sup> Ryu, J.H., Palmer, R.N., Jeong, S., Kim, Y.-O., 2002 An Application of Water Conflict Resolution in the Kum River Basin, Korea, EWRI, 2002 Conference on Water Resources Planning and Management, Roanoke, VA, 2002

**CONFERENCE PROCEEDINGS AND PRESENTATIONS** (O: Oral presentation, P: Poster presentation, F: Full paper, A: Abstract only): \*,# Indicates a graduate student and postdoc co-author, respectively

National:

1. Ryu, J.H., 2014, "Runoff and Nonpoint Sources Control using LID for the Boise River Watershed, Idaho", Northwest Regional Conference, KSEA 2014, University Place Hotel & Conference Center, Portland State University, Portland, Oregon, October 4-5, 2014
2. (Invited)\*Kim, J., Ryu, J.H., 2014, "Spatial and temporal analysis of hydrologic response for land use change at Kyoung-An stream watershed", UKC 2014: Forward Together, US-Korea Conference, Hyatt Regency San Francisco Airport, San Francisco, CA, August 6-9
3. Ryu, J.H., 2014, "Exploring water management alternatives to mitigate climate impacts for sustainable agriculture in Idaho." Idaho Climate Talk 2014, Boise Public Library, April 21, 2014, Boise, Idaho

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4. Ryu, J.H., 2014, “Advancing drought monitoring for climate-resilient water management in human and natural systems.” Engineering Colloquium 2014, May 1, 2014, Moscow, Idaho
5. <sup>O</sup> Ryu, J.H., 2013, “Water Resources Planning and Management to Mitigate Drought in a Changing Climate: Monitoring, Management, and Outlooks”, Water Resources Seminar Series, September 17, Idaho Water Center, Boise, Idaho
6. <sup>P\*</sup> Kim, J., Ryu, J.H., 2013, “Visualizing Local Drought to Enhance Climate-Resilient Agricultural Water Management in Idaho”, KSEA Northwest Regional Conference 2013, Alder Commons, University of Washington, September 21, 2013, Seattle, Washington
7. <sup>O,F</sup> Ryu, J.H., 2013, “Toward visualizing local droughts to enhance climate-resilient water management”, UKC 2013: Toward harmonious World with Science, Technology and entrepreneurship, US-Korea Conference, Sheraton Meadowlands Hotel & Conference Center, August 7-11, East Rutherford, New Jersey
8. <sup>O,F</sup> Kim, J., Ryu, J.H., 2013, “Characterizing Local Drought for Watershed Management in South Korea”, UKC 2013: Toward harmonious World with Science, Technology and entrepreneurship, US-Korea Conference, Sheraton Meadowlands Hotel & Conference Center, August 7-11, East Rutherford, New Jersey
9. <sup>O</sup> Ryu, J.H., 2013, “Visualizing local droughts to enhance climate-resilient agricultural water management for the Republican River Basin: Nebraska”, Drought and Water Management in the Republican River Basin, August 1, Alma, Nebraska
10. <sup>O</sup> Ryu, J.H., 2013, “Visualizing local droughts to enhance climate-resilient agricultural water management for the Republican River Basin: Kansas”, Drought and Water Management in the Republican River Basin, July 31, Oberlin, Kansas
11. <sup>P\*</sup> Kim, J., Ryu, J.H., 2012, “Comparison of Hydrological Simulation Performances Using HSPF at Different Basin Scales”, North-West Regional Conference, Korean-American Scientists and Engineers Association, November 2-3, Sacramento Marriott, Rancho Cordova, California
12. <sup>O,A</sup> Ryu, J.H., 2012, “Water Resources Challenges and Issues in the State of Idaho: Opportunities and Alternatives”, North-West Regional Conference, Korean-American Scientists and Engineers Association, November 2-3, Sacramento Marriott, Rancho Cordova, California

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13. <sup>O</sup> Ryu, J.H., 2012, “Advanced Integrated Water Resources Management, Eco-Living, and Disaster Prevention, International Brainstorming Workshop for Blue Water R&D, October 26, Kunsan National University, Kunsan, Korea
14. <sup>O,F</sup> Ryu, J.H., Lee, K., Kim, J. 2012, “Development of Decision Support Tools for Water Resources Planning and Management to Mitigate Future Climate Impacts”, UKC 2012: Creativity, Innovation, and Integration, US-Korea Conference, Hyatt Regency Orange County, August 8-11, Garden Grove, California
15. <sup>O,F#</sup> Seo, J., Ryu, J.H.. 2012, “Latest Trends in Environmental and Sustainable Management of Dams”, UKC 2012: Creativity, Innovation, and Integration, US-Korea Conference, Hyatt Regency Orange County, August 8-11, Garden Grove, California
16. <sup>P,F\*</sup> Kim, J., Ryu, J.H.. 2012, “Comparisons of Hydrological Simulation Performances Using HSPF at Different Basin Scales”, UKC 2012: Creativity, Innovation, and Integration, US-Korea Conference, Hyatt Regency Orange County, August 8-11, Garden Grove, California
17. <sup>O,A</sup> Ryu, J.H., 2012, “System Dynamics to Sustainable Water Resources Management in the Eastern Snake Plain Aquifer”, Inaugural Meeting of Columbia River Basin Water Systems Modeler, Idaho Water Center, Boise, July 30, 2012
18. <sup>O,A</sup> Ryu, J.H., 2012, “Mapping Gridded Drought Index to Mitigate Drought Impacts on the Mountain West”, Annual Workshop: Water Ways & Means, Hilton Garden Inn, Idaho Falls, May 15-16, 2012
19. <sup>P\*</sup>Hoekema D., Ryu, J.H., 2012, “Adaptation to Climatic Variability & Water Scarcity in the Salmon Tract, Idaho”, the 4th Annual Western Consortium Tri-State Meeting, Sun Valley Resort, Idaho 83353, April 2-5, 2012
20. <sup>P\*</sup>Kim, J., Ryu, J.H., 2012, “Comparison of Hydrological Simulation Performances using HSPF at Different Basin Scales”, the 4th Annual Western Consortium Tri-State Meeting, Sun Valley Resort, Idaho 83353, April 2-5, 2012
21. <sup>P\*</sup>Sohrabi, M., Ryu, J.H., 2012, “Drought Prediction with Developed SC-PDSI and GCM Datasets”, the 4th Annual Western Consortium Tri-State Meeting, Sun Valley Resort, Idaho 83353, April 2-5, 2012
22. <sup>P#</sup>Acharya, A., Ryu, J.H., 2012, “Streamflow Disaggregation for Regulated and Unregulated Waterways”, the 4th Annual Western Consortium Tri-State Meeting, Sun Valley Resort, Idaho 83353, April 2-5, 2012

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23. <sup>P#</sup>Seo, J., Ryu, J.H., 2012, “A Study on Conservation and Restoration of Fish Ecology Influenced by Regulated Flow of Multipurpose Dams in Korean”, the 4th Annual Western Consortium Tri-State Meeting, Sun Valley Resort, Idaho 83353, April 2-5, 2012
24. <sup>O, A</sup> Ryu, J.H., 2012, “Future Drought Outlook Induced by Climate Variability and Change over Republican River Basin”, The 4th Annual Western Consortium Tri-State Meeting, Sun Valley Resort, Idaho 83353, April 2-5, 2012
25. <sup>O, A</sup> Ryu, J.H., 2012, “Future Research to Sustainable Agriculture: Environmental Monitoring/Decision Support Tools for Food, Water, and Energy Nexus”, USDA/NIFA/AFRI Stakeholder Listening Session, February 22, Waterfront Center, Washington DC
26. <sup>O, A</sup> Ryu, J.H., 2011, “Water Resources Management under Uncertain Future Climate”, 2011 North-West Regional Conference, Korean-American Scientists and Engineers Association, November 18-20, San Jose, California
27. <sup>P</sup> Ryu, J.H., 2011, “Application of System Dynamics to Sustainable Water Resources Management for the Coupled Natural and Human Systems”, 2011 NSF CAREER Award Regional Forum, November 8-9, Baton Rouge, Louisiana State University, Louisiana
28. <sup>O, A</sup> Ryu, J.H., Contor, B., Johnson, G., Allen, R., Tracy, J., 2011, “Application of System Dynamics to assess climate impacts on the Eastern Snake Plain Aquifer”, The Water in the Columbia Basin conference, November 1-4, Stevenson, Washington
29. <sup>P\*</sup> Sohrabi, M., Ryu, J.H., Tracy, J., 2011, “Trend Analysis of Weather Extremes in Idaho”, the 3rd Annual Tri State Consortium Meeting, April 6-8, Hyatt Regency Tamaya Resort & Spa, Santa Ana Pueblo, New Mexico
30. <sup>O, A</sup> Ryu, J.H., 2010. “System Dynamics Modeling for the Eastern Snake Plain Aquifer”, Idaho Department of Water Resources, Idaho Water Center, Boise, ID, November 22
31. <sup>O, A</sup> Ryu, J.H., 2010. “Western Water Resources Research in a Changing Climate”, National Weather Service, NOAA, Boise, ID, October 21
32. <sup>O, A</sup> Ryu, J.H., 2010. “Western Watershed Research: The Challenges of Change”, USDA-ARS Northwest Watershed Research Center, Boise, May 13
33. <sup>O</sup> Ryu, J.H., 2010. “Research Background and Experiences and Vision for Water Research in Idaho”, Departmental Advisory Board, Department of Biological and Agricultural Engineering, Moscow, April 29

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34. <sup>O, A</sup> Ryu, J.H., 2010. “Challenges and issues in collaborative water research in a changing climate”, Department of Geosciences, Boise State University, Boise, April 12
35. <sup>O, A</sup> Ryu, J.H., 2010. “Challenges and issues in collaborative climate change research”, Collaborative and Interdisciplinary Climate Change Science, 2nd Annual Tri State Consortium Meeting, Hyatt Regency Lake Tahoe, April 6-8
36. <sup>O, A</sup> Ryu, J.H., 2010. “Water Research Activities: Past, Current, Future, and Beyond”, Civil Engineering Research Seminar, Center for Ecohydraulic Research Group, Boise, January 29

### International:

1. Ryu, J.H., 2015, “Toward Climate-Ready Ariul Community: Water Management, Eco-Living, and Vision Planning”, International Brainstorming Workshop for Innovative Application for Ariul Water Management April 16, 2015, Kunsan National University, Kunsan, Korea
2. Ryu, J.H., 2015, “Application of LID to Mitigate Impacts Driven by Urbanization and Land Use Change: Characterizing Local Hydrology and Water Quality in the Rural-Urban Interface, 7<sup>th</sup> World Water Forum 2015, April 12-17, Daegu, Korea
3. <sup>O, A</sup> Ryu, J.H., 2013, “Toward Advanced Water Resources Planning and Management to Mitigate Drought in a Changing Climate: Monitoring, Management, and Outlooks”, Water Resources Seminar, November 12, Dankook University, Yongin, Korea
4. <sup>O, A</sup> Ryu, J.H., 2013, “Toward Advanced Water Resources Planning and Management to Mitigate Drought in a Changing Climate: Monitoring, Management, and Outlooks”, Water Resources Seminar, November 7, Seoul National University, Seoul, Korea
5. <sup>O, A</sup> Ryu, J.H., 2013, “Using ‘Big Data’ to Advance Water Management for Climate-Resilient Human and Natural Systems”, International Brainstorming Workshop for Ariul R&D and Beyond, November 2, Pusan National University, Pusan, Korea
6. <sup>P</sup> Ryu, J.H., Contor, B., Wiley, A., Johnson, G., Allen, R., 2012. “Decision Support Tools to Manage Climate-Induced Drought in the Eastern Snake Plains Aquifer, Idaho”, USA Pavilion (NASA booth) at the 6th World Water Forum, Marseille, France, March 12-17
7. <sup>O, A</sup> Ryu, J.H., 2011. “Western Water Resources Research: Climate Change, Agriculture, and Environment”, Department of Environmental Engineering, Andong National University, Andong, Korea, December 6

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8. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Planning and Adaptive Management in a Changing Climate: Issues and Challenges to Domestic Applications”, Rural Research Institute, Ducksan Resort, Yesan, Korea, September 15
9. <sup>O, A</sup> Ryu, J.H., 2010. “Observatories for Ecohydraulics Research: Issues and Visions Within Environmental Science Community”, The 8th International Symposium on Ecohydraulics 2010, COEX, Seoul, Korea, September 12-16
10. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Planning and Management: Participatory Collaborative Modeling and Efforts”, Korea Environment Institute, Seoul, Korea, September 10
11. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Planning and Management: Hydroclimate Modeling and Decision Support Tools”, National Institute of Environmental Science, Incheon, Korea, September 10
12. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Planning and Management in a Changing Climate”, College of Life and Environmental Sciences, Konkuk University, Seoul, Korea, June 9
13. <sup>O, A</sup> Ryu, J.H., 2010. “Early Drought Warning System in the 21 Century”, Department of Civil and Environmental Engineering, Sejong University, Seoul, Korea, June 8
14. <sup>O, A</sup> Ryu, J.H., 2010. “National Disaster Prevention Under Uncertain Future Climate”, National Institute for Disaster Prevention, Seoul, Korea, June 8
15. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Management in a Changing Climate”, Department of Civil and Environmental Engineering, Hanyang University, Ansan, Korea, June 3
16. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Management in a Changing Climate”, Department of Environmental Engineering, Andong National University, Andong, Korea, June 3
17. <sup>O, A</sup> Ryu, J.H., 2010. “Sustainable Water Resources Planning and Management Under Uncertain Future Climate and its Variability”, School of Earth and Environmental Science, Seoul National University, Seoul, Korea, June 1
18. <sup>O, A</sup> Ryu, J.H., 2009. “Sustainable Water Management for the 21st Century in a Changing Climate”, Department of Environmental Science and Engineering, Ewha Womans University, Seoul, Korea, November 10

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19. <sup>O, A</sup> Ryu, J.H., 2009. "Sustainable Water Management for the 21st Century in a Changing Climate", School of Earth and Environmental Science, Seoul National University, Seoul, Korea, November 9
20. <sup>O, A</sup> Ryu, J.H., 2009. "Sustainable Water Management for the 21st Century in a Changing Climate", Department of Construction and Environmental Engineering, Kongju National University, Chonan, Korea, November 6
21. <sup>O, A</sup> Ryu, J.H., 2009. "My Academic Journey to Current and Emerging Research Challenge", Department of Environmental Science, Konkuk University, Seoul, Korea, November 5
22. <sup>O, A</sup> Ryu, J.H., 2009. "Sustainable Water Resources Management in a Changing Climate", Rural Research Institute, Korea Rural Community Corporation, Ansan, Korea, November

### **INVITED PRESENTATIONS (W/ Travel Expenses):**

1. \*Kim, J., Ryu, J.H., 2014, "Spatial and temporal analysis of hydrologic response for land use change at Kyoung-An stream watershed", UKC 2014: Forward Together, US-Korea Conference, Hyatt Regency San Francisco Airport, San Francisco, CA, August 6-9
2. <sup>O, A</sup> Ryu, J.H., 2012. "Toward Mapping Gridded Drought Indicators to Mitigate Drought Impacts in a Rapidly Changing Global Environment", Terrestrial Water Cycle Seminar Series, Goddard Space and Flight Center, Greenbelt, MD 20771, March 7, 2012
3. <sup>O, A</sup> Ryu, J.H., 2011. "Application of System Dynamics to Climate-Driven Water Budget Analysis in the Eastern Snake Plains Aquifer", Regional Approaches to Climate Change for Pacific Northwest Agriculture (REACCH PNA), Moscow, University of Idaho, May 8-10
4. <sup>O, A</sup> Ryu, J.H., 2009. "Drought Early Warning Systems for the 21st in the United States", National Emergency Management Agency, Seoul, November 11-13
5. <sup>O, A</sup> Ryu, J.H., 2009. "Sustainable Water Resources Planning and Management in a Changing Climate: Emerging Issues and Challenges in the State of Idaho", Idaho Water Center, University of Idaho, Boise, September 3
6. <sup>O, A</sup> Ryu, J.H., 2007. "Automatic Calibration of HSPF model with NEXRAD rainfall data for DMIP", National Weather Service, NOAA, Silver Spring, Maryland, September 10-12
7. <sup>O, A</sup> Ryu, J.H., 2006. "The Use of Mid-Range Climate Forecasts for Drought Management", The National Drought Mitigation Center, University of Nebraska-Lincoln, January 27



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### **OTHER PUBLICATIONS**

1. Walsh, O., Ryu, J., Fornshell, G., 2015. "Fish and Crops: Aquaponics", UI Extension Newsletter (in press)
2. Ryu, J.H., 2013. "Participant post-workshop essays", KSEA Letters,
3. Ryu, J.H., 2013. "KSEA Boise Idaho Chapter Inauguration (Nov.9, 2012)", KSEA Letters, February 2013, 41(2)
4. **Jae H. Ryu**, 2006. "The Management of Water Resources Using a Mid-Range Climate Forecast Model", Civil and Environmental Engineering, University of Washington (Ph.D Dissertation)
5. Richard N. Palmer, Michael T. Brett, **Jae H. Ryu**, 2002. "Water Quality Simulation Model for the King Abdullah Canal in Jordan", Prepared for the Center for Environmental Studies and Resource Management (CESAR), Norway (Project final report)

### **GRANAT AND PROPOSALS**

University of Idaho:

1. Ryu, J. "Toward advancing drought monitoring and water management for western agriculture using Unmanned Aerial System (UAS)" funded by American Society for Engineering Education (ASEE) and Air Force Summer Faculty Fellowship Program (SFFP).
2. Ryu, J. "Advancing drought monitoring to promote climate-resilient water management in the west" by USDA Hatch, 7/1/2014-6/30/2019, Role: PI, UI Budget#:BFH507, \$68,000
3. Ryu, J. "Enhancing water supply monitoring and forecasting using NASA satellite data products" by NASA Idaho NASA EPSCoR, 6/25/2013-6/24/2014, Role: Co-PI, \$25,000
4. "IGERT: Adaptation to change in water resources: Science to inform decision-making across disciplines, cultures, and scales, Collaborators: Jan Boll and many UI faculty, My Role: Faculty Participant, \$3M total, FY2012-FY2017
5. "Development of a RiverWare Water Management Model to Mitigate Climate Impacts in the Payette River Basin, Idaho" by USGS 104b grant, 3/1/2013-2/28/2014, Collaborators: John Tracy, My Role: Co-PI, University of Idaho, \$15,000 (my budget, but this was not in place due to federal sequestration)
6. "Development of LitteFe Linux Cluster for Big Data Analysis" by NSF Idaho EPSCoR, \$13,000, FY2013, My Role: PI,
7. "Validating local droughts to enhance climate-resilient agricultural water management in Idaho" by Office of Research and Economic Development, FY2014 Seed Grant Application Page, 7/1/2013-6/30/2013. Role: PI, University of Idaho, \$11,999

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8. “Development of integrated management technique and system for non-point source control and reduction” by Korea Rural Research Institute, Seoul, Korea, 5/1/2013-8/31/2014. Role: PI, \$8,912
9. “Development of integrated management technique and system for non-point source control and reduction” by Korea Rural Research Institute, Seoul, Korea, 8/31/2013-12/31/2013. Role: PI, \$9,225
10. “Development of integrated management technique and system for non-point source control and reduction” by Korea Rural Research Institute, Seoul, Korea, 3/31/2012-8/31/2013. Role: PI, \$8,707
11. “Application of an ecological health assessment for Reclamation managed reservoirs”– Submitted to BOR/S&T Program, Collaborators: Dmitri Vidergar (BOR), Jinwon Seo, 1/1/2013-3/31/2014, My Role: PI, \$15,000,
12. “Developing a Conjunctive Water Resources Planning and Management Model for the Eastern Snake River Plain” by USGS 104b grant, 3/1/2012-2/28/2013, Collaborators: John Tracy, My Role: Co-PI, University of Idaho, \$15,000 (my budget)  
Related publication:  
\*Kim J. J., Ryu, J. H., 2013. “A threshold of basin discretization levels for HSPF simulations with NEXRAD inputs”, Journal of Hydrological Engineering (in press)
13. “Developing an integrated modeling environment for Idaho’s climate change research” by EPSCoR, FY2012, My Role: PI, University of Idaho, \$42,733  
Related publication:  
#Acharya A., Ryu, J. H. 2013. “Streamflow disaggregation using a relatively simple method for regulated and unregulated waterways”, Journal of Hydrological Engineering (in press)
14. “Developing Seasonal Predictive Capability for Drought Mitigation Decision Support System” by NASA via University of Illinois, 10/1/2010-10/09/2012, Role: PI, University of Idaho, \$240,014  
Related publication:
  - \*Sohrabi, M., Ryu, J H., Abatzoglou, J., Tracy, J. 2013. “Climate extreme and its linkage to regional drought over Idaho, USA”, Natural Hazards, 65:653-681
  - \*Sohrabi, M., Ryu, J., 2011, “Investing drought using extreme climatic indices over Idaho, USA”, AGU Fall meeting, Dec 5-9, San Francisco, California
  - Ryu, J H., Contor, B., Johnson, G., Allen, R., Tracy, J. 2012. “System Dynamics to Sustainable Water Resources Management in the Eastern Snake Plain Aquifer under Water Supply Uncertainty”, Journal of the American Water Resources Association, 48(6), 1204-1220
15. “Development of a pilot drought information system for national drought disaster reduction” by the Korea National Emergency Reduction, 10/1/2009-9/30/2011, Role: PI, University of Idaho, \$13,524  
Related publication:

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- Ryu, J.H., Jeong, S., Park, S.K., Lee, J., Han, K., 2011. “The impacts of climate change on the local hydrology and drought (low flow) frequency”, Hydrological Processes, 25(22), 3437-3447,
  - Ryu, J.H., Contor, B., Johnson, G., Allen, R., 2011, “System Dynamics for Climate-Driven Socioeconomic Water Issues”, AWRA Summer Specialty Conference- Managing Climate Change Impacts on Water Resources: Adaptation Issues, Options, and Strategies, April 18-20, Sheraton Inner Harbor Hotel, Baltimore, Maryland
16. “Modeling Hydrologic and Socio-Economic Impacts of Alternative Water Management Responses to Climate Change” by USGS WaterSMART, \$169,699, My Role: Co-PI (0.5mo for FY2011, 1mo for FY2012 through in-kind service)

University of Nebraska:

1. Knutson, C., Svoboda, M., Ryu, J.H. (Role: Co-PI), “Development of a drought decision support portal for the Republican River Basin of Nebraska, Colorado, and Kansas” by NOAA/SARP, 8/1/2007-7/31/2009, Role: Co-PI, University of Nebraska, \$223,525

### **PEER-REVIEWING (Number of manuscript, 2006-present)**

1. Advances in Water Resources (3)
2. Asia-Pacific Journal of Atmospheric Sciences (2)
3. Bioprocess and Biosystems Engineering (1)
4. Environmental Modeling & Software (2)
5. Geophysical Research Letters (3), American Geophysics Union (AGU)
6. Hydrologic Science Journal (3)
7. International Journal of Climatology (2)
8. Journal of the American Water Resources Association (5)
9. Journal of Applied Meteorology and Climatology (2), American Meteorological Society (AMS)
10. Journal of Environmental Management (1)
11. Journal of Hydrology (5)
12. Journal of Hydrologic Engineering (5), American Society of Civil Engineers (ASCE)
13. Journal of Hydrometeorology (3), American Meteorological Society (AMS)
14. Journal of Water Resources Planning and Management (6), ASCE
15. Korean Society of Civil Engineers (2)
16. Natural Hazards (2)
17. Water Resources Research (5), American Geophysics Union (AGU)

### **PROJECT-REVIEWING (PROFESSIONAL ACTIVITIES)**

1. NOAA Sea Grant, Alabama-Mississippi FY16
2. Partner University Fund, France, FY16
3. National Environment Research Council, United Kingdom, FY14
4. Korea Institute of Construction and Technology (KICT), R&D Program, FY14
5. Small Business Innovation Research (SBIR), Phase II solicitation, FY10, NOAA
6. Sector Application Research Program (SARP), FY10, NOAA

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7. Engineer Research and Development Center (ERDC), FY09, The US Army Corps of Engineers
8. Member, National Integrated Drought Information System (NIDIS), GIS Team, 2006-present

### **PROFESSIONAL DEVELOPMENT**

1. Scientists and Engineers Early Career Development (SEECD) Workshop Program, Hilton San Francisco airport bayfront, San Francisco, CA, April 27-April 28, 2013
2. Inaugural Meeting of Columbia River Basin Water Systems Modelers: Jae Ryu(UI), David Hoekema (UI), Robert Jeffers (INL), Jacob Jacobson (ISU), Jennifer Adams (WSU), Kirti Rajagopalan (WSU), Alejandro Flores (BSU), Sridhar Venkataramana (BSU), Idaho Water Center, July 30, 2012, Boise, Idaho
3. The role of downscaling methods on climate impact modeling in complex terrain, Western Tri-State Consortium IWG proposal activity, Collaborators: John Abatzoglou, John Mejia (DRI), Sridhar Venkat (BSU), Von Walden, Xin Jin (BSU), Darko Koracin (DRI), Kristien King (UNO), Brandon Moor, Benjamin Hatchet (UNO), Phillip Duffy (Stanford), Kelly Redmond (DRI), Timothy Brown (DRI), Sun Valley, April 2-5, 2012
4. US-Korean Scientist Submit: Creativity, Innovation, and Integration, Hyatt Regency Orange County, August 8-11, Garden Grove, California, 2012
5. 2011 NSF CAREER Award Regional Forum, The Cook Hotel at Louisiana State University, November 8-9, Baton Rouge, Louisiana, 2011
6. 22nd National NSF EPSCoR Conference, The Coeur d'Alene, October 24-27, Coeur d'Alene, Idaho, 2011
7. 2011 Western States Remote Sensing of ET Workshop, Owyhee Plaza Hotel, October 12-13, Boise, Idaho, 2011
8. US-Korean Scientist Submit: Technology and Engineering for the 21st Century, The Canyons Resort, August 10-14, Park City, Utah, 2011
9. Multicore Programming at the University of Illinois, Urbana-Champaign, July 25-29, Urbana, Illinois, 2011
10. Introduction to Parallel Programming & Cluster Computing workshop, June 26- July 1, Pocatello, ISU, 2011
11. The 3rd Annual Tri-State Western Consortium Meeting: Collaborations Connecting Climate Change Science, Education and Policy, Tamaya Resort, April 6-8, Santa Ana Pueblo, New Mexico, 2011
12. New Faculty Leadership Program-Creating the Next Generation of Academic Leaders, Valles Caldera National Preserve Science and Education Center, January 4-6, Jemez Spring, New Mexico, 2011