

## CURRICULUM VITAE

**Jennifer Guohong Duan, Ph.D., P.E., D.WRE**

Professor, Hydraulics and Water Resource Engineering

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### EDUCATION

- Ph.D. 1998 Computational Hydrosience and Engineering, University of Mississippi  
Dissertation: Numerical Simulation of Meandering Migration Processes  
with an Enhanced Two Dimensional Model  
Advisor: Prof. Sam S. Y. Wang
- M.S. 1992 Hydraulic Engineering, Tsinghua University  
Thesis: Bed Forms and Flow Resistance of Light Weighted Bed Material  
Advisor: Prof. Guixian Wang
- B.C.E. 1989 Hydraulics and River Mechanics, Wuhan University

### CERTIFICATION

Professional Engineer (PE) Arizona No: Civil 54391 (active); Nevada, No: Civil 015263 (no-active).

Diplomat, American Academy of Water Resource Engineers, 2003-present.

### EMPLOYMENT HISTORY

05/2018 – present Professor, Department of Civil Engineering and Engineering Mechanics, the University of Arizona, Tucson, Arizona.

08/2015 – 05/2018 Joint Associate Professor, Department of Biosystem Engineering, the University of Arizona, Tucson, Arizona.

08/2014 – 05/2017 Delbert R. Lewis Distinguished Professor, Department of Civil Engineering and Engineering Mechanics, the University of Arizona, Tucson, Arizona.

06/2011 – 05/2018 Associate Professor, Department of Civil Engineering and Engineering Mechanics, the University of Arizona, Tucson, Arizona.

08/2006 – 05/2011 Joint Assistant Professor, Department of Hydrology and Water Resource, the University of Arizona, Tucson, Arizona.

08/2006 – 04/2011 Assistant Professor, Department of Civil Engineering and Engineering

Mechanics, the University of Arizona, Tucson, Arizona.

07/2005 – 08/2006 Associate Research Professor, Division of Hydrologic Sciences, Desert Research Institute, Nevada Higher Education System, Nevada.

07/2005 – 12/2005 Visiting Associate Professor, National Center for Earth Surface Dynamics, St. Anthony Falls Lab., University of Minnesota.

01/1999 – 07/2005 Assistant Research Professor, Division of Hydrologic Sciences, Desert Research Institute, University and Community College System of Nevada, Nevada.

01/1994 – 12/1998 Research Assistant, Center for Computational Hydro-science and Engineering, University of Mississippi, Mississippi.

04/1992 – 12/1993 Research Associate, Department of Hydraulic Engineering, Tsinghua University, Beijing, P.R. China.

### **AWARD and HONOR**

Delbert R. Lewis Distinguished Professor, Department of Civil Engineering and Engineering Mechanics, University of Arizona, Tucson, AZ 85721.

Diplomat, American Academy of Water Resource Engineers, American Society of Civil Engineers since 2006.

NSF CAREER Award: Hydrologic Science Program, 2009-2014.

Award for Excellence at the Student Interface Award: College of Engineering, University of Arizona, 2007.

Associate Editor, Journal of Hydrology, 2015-present.

Panelist, Geoscience Panel, NSF Graduate Research Fellowship, 2009.

Panelist, Civil Engineering Panel, Department of Defense, SMART Scholarship Program, 2009.

Panelist, Civil and Environmental Engineering Panel, NSF Graduate Research Fellowship, 2010.

Panelist, NASA Post-doc fellowship Program, 2015.

Panelist, Department of Defense, National Defense Science and Engineering Graduate Fellowship (NDSEG), 2015.

Panelist, NSF Graduate Research Fellowship, 2014.

Panelist, NSF PREEVENTS program, 2016.

Panelist, NSF Geomorphology and Land Surface Dynamics Program, 2017.

Panelist, NCHRP Bridge Scour Program, 2018.

Panelist, National Academy of Science, Gulf Research Program, 2020.

Panelist, NSF Smart and Connected Community Program, 2020.

Panelist, USGS 104G Grant, 2020.

## **TEACHING EXPERIENCE**

CE 218: Fluid Mechanics, University of Arizona

CE 422/522: Open Channel Flow, University of Arizona

CE 429/529: Special Topics: Computational Hydraulics, University of Arizona

CE 622: Sediment Transport Engineering, University of Arizona

Training Course: Flow Simulation Using HEC-RAS 5.0 (2D Model).

## **INVITED SEMINARS**

“Experimental Study of Bed Load Particle Velocity Using Particle Tracking”, State Key Laboratory of Water Resources and Hydropower Engineering Science, Wuhan University, Wuhan, P.R. China, June 2019.

“Experimental and Theoretical Study of Bed Load Particle Velocity”, State-Key Laboratory of Hydraulic Engineering, Tsinghua University, Beijing, P.R. China, Oct 2018.

“Hydrodynamic Simulation of Surface Flow and Sediment Transport Processes”, Coastal and Hydraulics Laboratory, Engineering Research and Development Center, Army Corps of Engineers, Vicksburg, Mississippi, Dec 2017.

“Urban Flood Simulation Using CHRE2D”, Keynote Speaker, 21th Cross Strait Conference in Nanchang, Jiangxi Province, P.R. China, Oct 2017.

“Flow Resistance in Vegetated Channel and Vision of Hydraulic Research”, Bureau of Reclamation, Denver Federal Research Center, Denver, CO, March 2015.

“Advanced Computational Modeling of Unsteady Flow and Sediment Transport Processes”, State-Key Laboratory of Hydroinformatics, Tianjin University, China, June 2014.

“Simulation of Meandering Channel Processes and Bank Erosion”, State-Key Laboratory of Hydraulic Engineering, Tsinghua Univ., China, June 2012.

“Simulation of Erosion and Sedimentation in Irrigation Furrows”, USDA-ARS, Arid Land Agricultural Research Center, Maricopa, Arizona, April 2010.

- “Turbulence Bursts around Experimental Spur Dikes and Numerical Simulations of Dam Break Flow using Finite Volume Method”, National Center for Hydroscience and Engineering, the University of Mississippi, July 2009.
- “Evaluation of Sediment Transport Models for the Rillito River, Tucson”, Pima County Regional Flood Control District, Tucson, Arizona, Oct 2008.
- “Computational Simulation of Meandering River Meandering Processes”, Maricopa Regional Flood Control District, Phoenix, Arizona, March 2008.
- “Numerical Simulation of Meandering Evolution Processes”, USDA-ARS, Arid Land Agricultural Research Center, Maricopa, Arizona, Feb. 2008.
- “Computational Simulation of Meandering River Meandering Processes”, Department of Agriculture and Biosystem Engineering, Univ. of Arizona, Tucson, Sept 2007.
- “Computational Simulation of Meandering River Meandering Processes”, Department of Mathematics, Univ. of Arizona, Tucson, April 2007.
- “Computational Simulation of Meandering River Meandering Processes”, Department of Hydrology and Water Resource, Univ. of Arizona, Tucson, March 2007.
- “Application of EnSed2D to Stream Restorations”, Department of Geography, Arizona State University, Phoenix, Nov., 2006.
- “Development and Application of EnSed2D to Stream Restorations”, Department of Air, Land, and Water, University of California, Davis, April, 2006.
- “Development and Application of EnSed2D to Stream Restorations”, National Center for Earth Surface Dynamics, University of Minnesota, Sept., 2005.
- “Computational Modeling of Gravel Transport in a Mountain River”, National Center for Computational Hydrosciences and Engineering, University of Mississippi, Feb. 2005.
- “Numerical Simulation of Meandering Evolution”, Iowa Institute of Hydraulic Research, University of Iowa, Iowa City, Oct. 2003.
- “Computational Simulation of Suspended Sediment Concentration Field in a Spur-dike Field”, Colorado State University, Feb. 2002.
- “Numerical Simulation of Flow and Mass Dispersion in Meandering Streams”, Swiss Federal Institute of Hydraulic Research, Lausanne, Switzerland, Jan. 2001.

## **TEACHING AND MENTORING GRANTS**

*At the University of Arizona (Aug. 2006- Present)*  
*(One Teaching Grant \$38,550, Several Mentoring Grants \$19,000)*

NASA Space Grant for Undergraduate Student Internship: 2014-2015, amount \$4,000.  
This grant aims to involve undergraduate students into PI's research. Mr. Jonathan Schimdt from Civil Engineering and Engineering Mechanics Department was chosen as the intern.

DOD High School Apprentices Program (HSAP), Department of the Army – Material Command, single PI, June 2012- Aug 2012, \$9,090, Project title: Upgrading an Experimental Flume of Hydraulic Engineering Education and Research – High School Apprentices Program Supplement.

DOD High School Apprentices Program (HSAP), Department of the Army – Material Command, single PI, June 2011- Aug 2011, \$9,060, Project title: Training of High School Apprentices in Hydraulic Engineering.

State of Arizona, TRIF, Anyplace Access for Arizonans Initiative, single PI, April 2009 -July 2010, \$38,550. Project title: Distance Learning Course: Sediment Transport Analysis.

Faculty and Student Interaction Grant: Fall 2007 for CE 422 class, amount: \$600  
This grant program is to support the interactions between faculty and students. The PI uses this grant for an engineering field trip for CE 422 class.

NASA Space Grant for Undergraduate Student Internship: 2007-2008, amount \$4,000.  
This grant aims to involve undergraduate students into PI's research. Mr. Sam Akisa from Mechanical Engineering Department was chosen as the intern.

NASA Space Grant for Undergraduate Student Internship: 2008-2009, amount \$4,000.  
This grant aims to involve undergraduate students into PI's research. Mr. Ramsey Coronado from Environmental Engineering Department was chosen as the intern.

#### ***At the Desert Research Institute (1999-2006)***

NSF-Nevada ESPCOR Graduate Student Fellowship, from June 2005 - Dec 2005, amount: \$6,900. This NSF funded fellowship is to support one graduate student to participate a research project proposed by the PI.

#### **RESEARCH GRANTS**

#### ***At the University of Arizona (Aug. 2006- now)*** ***(22 Projects, over \$3.5 million funded grants)***

**US Geological Survey, PI (100%), from Jan 2020 to June 2021, *Flow Discharge Measurements Using Small Unmanned Aerial Systems*. \$15,000, Tucson, Arizona.**

**Arizona Department of Agriculture, PI (50%), Dr. Chuck Gerba (co-PI), from Sept 2019 to Dec 2021. Canal Sediments as Reservoirs of Pathogenic Bacteria In Irrigation Systems, \$66,171, Tucson, Arizona.**

**US Department of Agriculture, Food Safety Program, co-PI (50%), Dr. Chuck Gerba (PI), from Jan 2019 to Dec 2021. Development of a Model to predict the Impact of Sediments on Microbial Irrigation Water Quality, \$146,019, Tucson, Arizona.**

**US Department of Transportation, National Transportation Center Program**, investigator, National Institute of Transportation and Community, from 2017 to 2022, \$25,000,000 in collaboration with Portland State Univ. (Lead), University of Oregon, Oregon Institute of Technology, University of Utah, University of Texas at Arlington.

**Pima County Regional Flood Control District**, PI (100%), from Jan 2017– Jan 2018, amount \$85,000. Title: Sediment Transport and Erosion Study at the Alta Valley, Tucson, Arizona.

**Arizona Board of Regents**, PI, Jennifer G Duan (50%), Co-PI, Hongki Jo (50%), June 2016 – June 2017, \$60,000. Project Title: Bridge Scour Assessment and Infrastructure Reliability Analysis.

**Pima County Regional Flood Control District**, PI (100%), from June 2014– Oct 2016, amount \$90,000. Title: Sediment Transport and Stream Monitoring of the Lower Santa Cruz River, Tucson

**Arizona Department of Agricultural**, PI, Chuck Gerba, Co-PI, Jennifer G. Duan (50%), Nov. 2014 – Oct 2015, \$50,000. Project Title: Pathogen Transport in Irrigation Canals.

**US Department of Defense**, PI (100% effort), Sept 2014 – Sept 2017, \$300,000. Project title: Watershed Erosion and Sedimentation Assessment of BMGR West.

**National Science Foundation**, Sensors, Dynamic and Controls Program, Division of Engineering, PI, Co-PI: Hongki Jo, 55% effort, amount \$310,000, 01/01/2015 – 12/31/2017. Project Title: Flood Induced Bridge Scour Prediction Using Bio-inspired Smart Sensor Network.

**Pima County Department of Transportation (subcontract from Parsons Brinckerhoff, Inc)**, PI, from Dec 2013– Dec 2015, amount \$114,000. Title: Bridge Scour and Sediment Transport Analysis at the Proposed Sunset Bridge Site, Tucson

**Pima County Regional Flood Control District**, PI, from July 2012– June 2014, amount \$84,000. Title: Sediment Transport Models for the Lower Santa Cruz River, Tucson

**US Bureau of Reclamation**, Department of Interior, PI (100% effort), Sept 2012– Oct 2013, \$75,000. Project title: Simulating Dam-break Flow and Fluvial Processes in the Elwha River Basin.

**US Department of Defense, Army Research Office**, Department of Defense Research Instrument Program (DURIP), single PI (100% effort), May 2011 – June 2012, \$50,000. Project title: Upgrading an Experimental Flume for Hydraulic Engineering Education and Research.

**National Science Foundation**, Division of Environmental Biology, Ecosystem Studies, PI: Thomas Meixner, Co-PIs: Francina Dominguez, Guohong Duan, Thomas Maddock, David A. Plane, 15% effort, amount \$636,455, 01/01/2011 – 12/31/2013. Project Title: Collaborative Research: WSC-Category 3 - Climate and population change and thresholds of peak ecological water: integrated synthesis for dryland rivers.

**State of Arizona, Water Sustainability Program**, single PI (100% effort), Jan 2011- June 2011, amount \$31,476. Title: “Experimental and Numerical Modeling Study of Sediment Transport in Unsteady Flow”.

**NSF CAREER Award**, NSF Hydrology Science, single PI (100% effort), amount \$415,000 from Dec 2008 – Nov. 2013. Project Title: Integrated experimental and numerical study of non-uniform sediment transport in meandering channels.

**US Department of Defense, Army Research Office**, Department of Defense Research Instrument Program (DURIP), single PI (100% effort), May 2009 – Dec 2010, \$149,520. Project title: Upgrading an Experimental Flume for Hydraulic Engineering Education and Research.

**US Department of Defense, Army Research Office**, Terrestrial Science Program, Research Grant, single PI (100% effort), May 2007 – June 2010, \$233,589. Project title: Impact of dike structures on alluvial rivers.

**US Department of Agriculture**, Agricultural Research Service, Cooperative Research Agreement, single-PI (100% effort), from Oct 2008 to Sept 2010, \$72,355. Project Title: Erosion and sediment transport model for the winSRFR software.

**National Science Foundation**, Hydrological Science Program, single PI (100% effort), from Dec 2006 – March 2008, amount \$28,339. Project Title: Experimental Study of bed load sorting around spur dikes

**Department of Defense**, Army Corps of Engineers, Engineering Research and Development Center, Research Project, single PI (100% effort), from Dec 2006 to May 2007, \$10,939. Title: Mechanism of Bed Load Transport in the Las Vegas Wash.

**Pima County Regional Flood Control District**, research project, single PI (100% effort), from July 2007 – June 2008, amount \$51,190. Title: Evaluation of Sediment Transport Models for the Rillito River, Tucson

**National Science Foundation**, Hydrological Science Program, single PI (100% effort), from March 2008 – Feb 2010, amount \$79,613. Project Title: Preliminary investigation of non-uniform sediment transport in meandering channels.

***At the Desert Research Institute (Jan. 1999-Aug. 2006)***

Principal Investigator (20% effort), co-PIs: Don Sada, Douglas Boyle, Mike Young, Tom Bullard, Ken Adams. “Urban Flood Demonstration Program in Arid and Semi-Arid Region”, funded by the US Army Corps of Engineers, Engineering Research and Development Center, total \$1,200,000. From Sept. 2006 to Oct.2007.

Principal Investigator (100% effort), “Urban Flood Demonstration Program in Arid and Semi-Arid Region: Hydraulic Modeling of Flow and Sediment Transport in the Rio Grande River

and the Salt River”, funded by the US Army Corps of Engineers, Engineering Research and Development Center, total \$300,000. From Sept. 2005 to Oct.2006.

Principal Investigator (100% effort), “Urban Flood Demonstration program in the Las Vegas Valley – Sediment Transport, Bank Erosion and Supercritical Flow Channel (Phase II)”, funded by the US Army Corps of Engineers, Engineering Research and Development Center, total \$135,000. From April 1, 2004 to Dec. 2004.

Principal Investigator (70% effort) and Co-PI: Richard French , “Investigation and Simulation of Streambank Erosion Processes in the Upper Jordan River” funded by Department of Defense, Army Research Office, EPSCoR program, total \$316,800. From June 2000 to Dec 2004.

Principal Investigator (100% effort), “Modeling Flow and Sediment Transport with an Enhanced Two-dimensional Model in Kankakee River, Illinois”, funded by the Corps of Engineers, Rock Island District and DRI ARI, total \$92,778. From Nov. 2001 to Dec. 2002.

Principal Investigator, (100% effort) “Upper Spanish Creek Watershed Assessment and Restoration Strategy”, funded by CALFED Bay-Delta Watershed Program, total \$170,000. From Jan 2004 to Dec 2005.

Principal Investigator, (100% effort) “Experimental Study of Bed Load Sediment Sorting Around Spur Dikes”, funded by the NSF Science and Technology Center, National Center of Earth Surface Dynamics at the University of Minnesota. Total NSF funding: \$30,000. From Feb. 2005 to August 2005.

Investigator (20% effort), PI: Mike Young, “Quantify Bed Load Transport from the Las Vegas Wash to Lake Mead”, funded by Bureau of Reclamation, total \$138,000. From Oct. 2004 to March 2006.

Principal Investigator (20% effort), Shawn Benner (co-PI), Douglas Boyle (Co-PI), “Developing Scopes for DRI and COE Urban Flooding and Urban Channel Restoration Program”, funded by the Engineers Research and Development Center, the US Army Corps of Engineers, \$184,721. From March 1<sup>st</sup>, 2003 to July 30<sup>th</sup>, 2003.

Principal Investigator (100% effort), “Urban Flood Demonstration program in the Las Vegas Valley – Sediment Transport, Bank Erosion and Supercritical Flow Channel (Phase I)”, funded by the Engineers Research and Development Center, the US Army Corps of Engineers, \$140,000. From July 1<sup>st</sup>, 2003 to March 30<sup>th</sup>, 2004.

Principal contractor (100% effort), host “Urban Flooding and Channel Restoration” workshop and assist the development of Urban Flooding and Channel Restoration R&D program for U.S. Army Corps of Engineers (USACE), Engineering Research and Development Center (ERDC), Waterways Experiment Station (WES), funded by WES-ERDC, total \$2,400.

Investigator (20% effort), “Water Quality Assessment and GIS-Based Watershed Modeling and Assessment within the California Portions of the Truckee River Basin” by McKay, Alan W., Duan, Jennifer G., Minor Tim, Bullard, Thomas F., Mihevc, Todd M., and McGraw, David, funded by the EPA California Regional Office. Total \$134,000 in which \$30,000 was budgeted for Dr. Duan’s modeling study. From March 2000 to April 2002.

## **PROFESSIONAL AFFILIATIONS AND ACTIVITIES**

### Editorial Board:

- Associate Editor, *Journal of Hydrology* (2015-present)

### Memberships:

- Member of American Society of Civil Engineering (ASCE)
- Member of the International Association of Hydraulic Research (IAHR).
- Member of American Geophysical Union.

### *Local/Community*

- Member, Reviving Santa Cruz River Technical Committee, Pima County Regional Flood Control District, Tucson, Arizona.

### University, College, Department

- Member, Committee on Academic Freedom and Tenure (CAFT), General Faculty Standing Committee, University of Arizona, Faculty Center, 1216 East Mabel, Tucson, Arizona, 2016-2019.
- Director, Graduate Program Committee, Department of Civil Engineering and Engineering Mechanics, July 2014-present.
- College of Engineering, Graduate Studies Advisory Committee, Sept. 2013-Aug. 2014
- University of Arizona Research Computing Governance Committee, Sept 2012-Aug.2013.
- Faculty Advisor, Women in Civil Engineering Student organization, 2009-present.
- Member, Graduate Study Committee, CEEM, 2007-2013
- Sabbatical Leave Committee, College of Engineering, 2017-present.

### Committee Activities:

- Chair, ASCE Computational Modeling of Sediment Transport Processes Task Committee 2002-2009.
- Vice Chair, ASCE Technical Committee of Computational Hydraulics 2005-2007.
- Chair, ASCE Technical Committee of Computational Hydraulics since 2008-2010.
- Member, 3D Free Surface Flow Model Verification/Validation Monograph Task Committee since 2010-2015.
- Member, ASCE Sediment Technical Committee 2009-2017; Secretary, ASCE Sediment Technical Committee 2017-present.
- Chair, ASCE Sediment Transport Equation Task Committee, 2016-present.
- Board Member, Chinese American Water Resource Association, 2014-2017
- President-elect, Chinese American Water Resource Association, 2017-present.
- Member, International Association of Hydraulic Research (IAHR), 2017-present.

### DRI Committee Served:

- CWES Director search committee;
- Vice President-Academic Affair search committee;
- Surface Water Hydrologist search committee in 2000;
- CAVE interim director search committee;
- DHS post-doc search committee;
- Ecological Engineer search committee in 2005;
- Surface Water Hydrologist search committee in 2005.

Professional Service:

- Reviewer of NSF Hydrologic Sciences Program,
- Reviewer of NSF Geophysical Sciences Program.
- Reviewer of NSF ADVANCE Program.
- Reviewer of Terrestrial and Earth Science Program of Army Research Office of DOD.
- Reviewer of Journal of Hydraulic Engineering.
- Reviewer of Journal of Hydraulic Research.
- Reviewer of California Federal Program.

Conference Sponsored/Organized:

- Track Chair, Hydraulics and Waterways, ASCE-EWRI Congress 2009, Kansas City, Kansas.
- Chair, Urban Flooding and Channel Restoration Workshop, in collaboration with the Corps of Engineers, Engineering Research and Development Center, Las Vegas, April 15-16, 2001.
- Moderator, ASCE World Water and Environmental Congress, 2004 –present.

## GRADUATE STUDENTS ADVISEE

***Graduated with PHD degree:***

Kang Zhou, Ph.D. student, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in May 2019. Dissertation Title: Sediment Transport Research in Civil and Environmental Engineering. **Current Employment:** Research Associate, Tsinghua Univ Research Campus in Zhuhai, Guangzhou, China.

Jaeho Shim, Ph.D., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in Dec 2016. Dissertation Title: Experimental and Numerical Studies of Grain Scaled Bed Load Transport. **Current Employment:** Post-doc Researcher, University of Idaho, Boise, Idaho.

Khalid A Abdalrazaak al Asadi, Ph.D., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in Jan 2016. Dissertation Title: “Experimental Study and Numerical Simulation of Vegetated Alluvial Channels.” Outstanding Graduate Student Award. **Current Employment:** Assistant Professor, Department of Civil Engineering, University of Basrah, Basrah, Iraq.

Bai Yang, **Ph.D.**, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in May 2014 (start Aug 2009). Dissertation Title: “1D Numerical Model of Unsteady Flow and Sediment Transport in Vegetated Channel”. **Current Employment:** Senior

Project Manager, Bi Gui Yuan Corporation, Guang Zhou, China.

Chunshui Yu, Ph.D., Department of Hydrology and Water Resource, Univ. of Arizona, graduated in July 2013 (Start Aug. 2007). Dissertation Title “Two Dimensional Simulation of Unsteady Flow and Sediment Transport”. **Current Employment:** Post-doc Research Associate, University of Arizona, Arizona.

Ari Posner, Ph.D., Department of Hydrology and Water Resource, Univ. of Arizona, graduated in Dec 2011 (Start Aug 2007) . Dissertation Title: “River Hydrodynamic and Sediment Modeling, Restoration, and Uncertainty”. **Current Employment:** Physicist GS-12, Bureau of Reclamation, Albuquerque, New Mexico.

Shiyan Zhang, Ph.D., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in July 2011. Start Jan 2007, Dissertation Title: “Numerical Study of Sediment Transport under Unsteady Flow”. **Current Employment:** Associate Professor, Institute of Geoscience and Geographer, Chinese Academy of Science, Beijing, China.

Anu Acharya, Ph.D., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in Jan 2011. Start Aug. 2006, Dissertation Title: “Experimental Study and Numerical Simulations of Flow and Sediment Transport around a Series of Spur Dikes”, **Current employment:** Senior Project Manager, Civil Works Branch, US Army Corps of Engineers, Sacramento, California.

Dong Chen, Ph.D. Hydrologic Science Program, University of Nevada Reno, August 2000-May 2005. Dissertation: “Computational Simulation of Meandering Evolution and Width Adjustments”. **Current position:** Professor, Institute of Geoscience, Chinese Academy of Science, Beijing China.

### **Graduated with MS Degrees**

Yejiang Wang, MS student, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, August 2017- Dec 2018. Current: PhD student, Hong Kong Polytechnic University, Hong Kong, China.

Michael Poteuck, MS student, Department of Civil Engineering and Engineering Mechanics, Thesis “ Simulating Watershed Erosion Using AGWA Tool in Arid Region”, Univ. of Arizona, August 2013-July 2016. Current: Hydraulic Engineer, Maricopa County Regional Flood Control District, Phoenix, AZ.

Ross Morgan, MS, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in Dec 2015(Start August 2014). Non-Thesis option.

Charles Basham, MS, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in May 2013 (Start August 2011). Non-Thesis option.

Francisco Barrios, MS., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in July 2010. Thesis “Application of Flo-2D Model for Flood Analysis in the Delgado Wash, Sahuarita, Arizona”.**Current:** Hydraulic Engineer, Tetra Tech, Inc.

Ryan Hummel, MS., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in Dec 2010. Thesis “Sediment Transport Study for the Pantano Wash, Tucson, AZ”. **Current:** Hydraulic Engineer, Wetland Concept Inc, Denver, Colorado.

Mary Yaeger, MS, Department of Hydrology and Water Resource, Univ. of Arizona, graduated in May 2009. Thesis: “Experimental Study of Turbulence Flow Field around Dike”. **Current:** Ph.D. student at University of Illinois, Urbana-Champaign.

Monica Salguero, MS., Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, graduated in July 2008. Thesis: “Simulating Sediment Transport in the Rillito River Using HEC-6 Model”. **Current:** Hydraulic Engineer, Tetra Tech, Inc.

Jen Weller, MS. Hydrologic Science Program, University of Nevada Reno, Nov 2005. Thesis: “Predicting Bed Load Transport in the Upper Spanish Creek”

***In progress:***

Erfan Tousi, PHD student, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, in progress.

Kun Qi, PHD student, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, in progress.

Ammon Cadogan, MS student, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, in progress.

Anil Shweta, MS student, Department of Civil Engineering and Engineering Mechanics, Univ. of Arizona, in progress.

**PUBLICATIONS**

***Book/Book Chapter***

Duan, J.G. (2001) Chapter 13: Simulation of Streambank Erosion Processes with a Two-dimensional Numerical Model. Landscape Erosion and Evolution Modeling, RS Harmon and WW Doe, III, eds. Kluwer Academic/Plenum Publishers, New York, 535p, 389-427.

***Referred Journals***

**Web of Science Citation Search:**

**AUTHOR:** (Duan, Jennifer, or Duan, JG, or Duan, G.H., or Duan, J., or Duan, Jennifer G.)  
**AND ADDRESS:** (Arizona OR Nevada) **AND DOCUMENT TYPES:** (ARTICLE )

**Web of Science Citation Report: (July 2020)**

Total Publications = 54

Sum of the Times Cited =682

Sum of Times cited without self-citation = 628

Citing Articles=571

Citing Articles without self-citation = 544

Average citation per item: 14.20  
h-index=15

**Google Scholar Citation Report: (current)**

**Search Key Word: Author: (Jennifer Guohong Duan)**

Sum of citations = 1600+

h-index=20

i10-index=34

Duan, J. G. , Liu, Lei, Zhong, Deyu, Zhang, Hongwu “1D Model for Simulating Flood Flow from Landslide Dam Failure”, *Journal of Hydraulic Engineering*, in review.

Shim, J. and Duan, J. G. “Application of SPH model to simulate Pier Scour in Laboratory Dam Break Flow”, *International Journal of Sediment Research*, in review.

Duan, J.G, Zhou, Kang, Yu, Chunshui, Potueck, Michael, Rosenberg, Abigail, and Tousi, Erfan Ghasemi, “Application of KINEROS2 model to Assess Sediment Yield from Arid Watershed”, *Hydrologic Science Journal*, in review.

Asadi K. and Duan, Jennifer G. “Experimental study of bed resistance and bed load transport in vegetated Channel”, *Journal of Hydraulic Engineering*, in revision.

Yu, C. and Duan, Jennifer G. “A well-balanced numerical scheme for solving the variable-density shallow water equations”, *Journal of Hydroinformatics*, in revision.

Touhid Ahamed, Jaeho Shim, Jong-Hyun Jeong, Hongki Jo and Jennifer Duan, (2020) “An efficient outlier removal algorithm for sonar-based bridge scour monitoring”. *Flow Measurement and Instrumentation*, <https://doi.org/10.1080/15732479.2020.1815226>.

Sassi, Hannah, Floris van Ogtrop, Christina M Morrison, Kang Zhou, Jennifer G Duan, Charles Gerba (2020) “Sediment re-suspension as a potential mechanism for viral and bacterial contaminants”. *Journal of Environmental Science and Health, Part A*, DOI:10.1080/10934529.2020.1796118.

Kang Zhou, Duan, J. G., and Bombardelli, F.A. (2020) “Experimental and theoretical study of local scour around three-pier group”, *Journal of Hydraulic Engineering*, Vol. 146, No. 10, doi:10.1061/(ASCE)HY.1943-7900.0001794.

Shim, J. and Duan, J. G. (2019) “Experimental and theoretical study of bed load particle velocity”, *Journal of Hydraulic Research*, 57(1), 62-74. DOI: 10.1080/00221686.2018.1434837.

Zhang, LiGuo, Fu, XuDong, Duan, J. G. (2017) “A surface-based hiding function linking flume and field data”, *Science China Technological Sciences*, Vol. 60, No.10, 1560-1569.

Al-Asadi, K. and Duan, J. G. (2017) “Assessing methods for estimating roughness coefficient in a vegetated marsh area using Delft3D”, *Journal of Hydroinformatics*, Vol.19, No.5, 766-783. Doi:10.2166/hydro.2017.064.

Duan, J. G., Bai, Y, Dominguez, F., Rivera, E., Meixner, T. (2017) “Framework for incorporating climate change on flood magnitude and frequency analysis in the upper Santa Cruz River”, *Journal of Hydrology*, 549, 194-207. <http://dx.doi.org/10.1016/j.jhydrol.2017.03.042>.

Yu, C. and Duan, J. G. (2017), “Simulation of surface runoff using hydrodynamic model”, *Journal of Hydrologic Engineering*, Vol. 22, No. 6, article No: 04017006, doi:10.1061/(ASCE)HE.1943-5584.0001497.

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