## **Curriculum Vitae**

(Updated 1/7/2022)

#### Weiming Wu, PhD

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### **Research Interests**

Fundamentals of sediment transport; hydro- and morphodynamics in river, estuarine, and coastal waters; free surface flow and sediment transport modeling; dam/levee breach and flood modeling; surge and wave attenuation by vegetation; interaction between surface and subsurface flows; water quality and aquatic ecosystem/ecotoxicology modeling

## Education

- January 1989 December 1991, Wuhan University of Hydraulic and Electric Engineering, China (now Wuhan University). Doctorate Degree in Engineering Science, Major in Hydraulics and River Dynamics.
- September 1986 December 1988, Wuhan University of Hydraulic and Electric Engineering, China. Degree of Master in Engineering Science, Major in Hydraulics and River Dynamics.
- September 1982 July 1986, Wuhan University of Hydraulic and Electric Engineering, China. Degree of Bachelor in Engineering Science, Major in River Engineering.

### **Professional Background**

- May 2017 present, James K. Edzwald Professor of Water Engineering, Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY, USA.
- July 2013 April 2017, Professor, Department of Civil and Environmental Engineering, Clarkson University, Potsdam, NY, USA.
- July 2006 June 2013, Research Associate Professor, National Center for Computational Hydroscience and Engineering, School of Engineering, The University of Mississippi, USA.
- July 2001 June 2006, Research Assistant Professor, National Center for Computational Hydroscience and Engineering, School of Engineering, The University of Mississippi, USA.

- March 1997 June 2001, Visiting Research Scientist/Research Scientist, National Center for Computational Hydroscience and Engineering, School of Engineering, The University of Mississippi, USA.
- June 1995 February 1997, Research Fellow of Alexander von Humboldt Foundation, Institute for Hydromechanics, University of Karlsruhe, Germany.
- December 1991 May 1995, Lecturer/Associate Professor, Wuhan University of Hydraulic and Electric Engineering, China.

## Affiliations

Fellow, American Society of Civil Engineers (ASCE) since 2015 (Member since 1999)

Member, International Association of Hydro-Environment Engineering and Research (IAHR) since 1999

Member, World Association for Sedimentation and Erosion Research (WASER) since 2005 Adjunct Professor at Zhejiang University, China (2016 - 2019)

## Awards

- 1995–1997, Research Fellowship of Alexander von Humboldt Foundation of Germany
- 2003, 2008 & 2011, Outstanding Performance Award, NCCHE, University of Mississippi
- 2007, Best Paper Award by World Association of Sedimentation and Erosion Research
- 2013, Excellent Paper Award by 12<sup>th</sup> International Symposium on River Sedimentation, Kyoto, Japan

# Services

Associate Editor, International Journal of Sediment Research (2008-2010)

Editorial Board Member, International Journal of Sediment Research (2010 – present)

Associate Editor, ASCE Journal of Hydraulic Engineering (Aug 2010 – Feb 2019)

Chair, ASCE/EWRI Committee on Computational Hydraulics (2011-2012)

Chair, ASCE/EWRI Task Committee on Dam/Levee Breaching (2009-2012)

Chair, ASCE/EWRI Committee on Sedimentation (2016-2018)

- Member, the Advisory Committee of the National Basic Research Program of China (973 Program) on "Risk Mitigation and Safety Control of Cascade Reservoirs" (2015-2017)
- Council Member, World Association for Sedimentation and Erosion Research (WASER), 2019-present
- Secretary, Hydraulics and Waterways Council, Environmental and Water Resources Institute of ASCE, 2018-present

Reviewer for journals:

Journal of Hydraulic Engineering (ASCE)

Journal of Hydraulic Research (IAHR)

Journal of Hydro-Environment Research

Journal of Environmental Engineering (ASCE)

Journal of Advances in Water Resources (Elsevier) Journal of Hydroinformatics (IAHR) Journal of Hydrodynamics Journal of American Water Resources Association Journal of Geophysical Research Journal of Coastal Research Journal of Ocean Engineering Journal of Engineering Mechanics (ASCE) Journal of Waterway, Port, Coastal, and Ocean Engineering (ASCE) Journal of Hydrological Processes Journal of Geomorphology Journal of Powder Technology Journal of Hydrology and Hydromechanics Journal of Environmental Fluid Mechanics Journal of Applied Ocean Research International Journal for Numerical Methods in Fluids International Journal of Computational Fluid Dynamics International Journal of Sediment Research **Coastal Engineering** Terrestrial, Atmospheric and Oceanic Sciences Natural Hazards Natural Hazards Review Hydrological Sciences Journal Water Resources Research (AGU) Acta Oceanologica Sinica Science China - Technological Sciences European Journal of Mechanics / B Fluids Reviewed papers for **USDA-ARS** National Sedimentation Laboratory **UM-Civil Engineering Department** ASCE Environmental and Water Resources Institutes International Conference on Hydroscience and Engineering, 2004 IAHR Euro Congress, 2016 Flood Control District of Maricopa County, Arizona. Reviewed research proposals for Natural Sciences and Engineering Research Council of Canada U.S. Bureau of Reclamation Louisiana Board of Regents Fund for Scientific Research, Belgium, 2013 Nanyang Technological University, Singapore, 2014

National Science Foundation of USA

New York State Water Resources Institute

Reviewed book proposals for Taylor & Francis, UK CRC Press, USA Conference Session/Track Chairs for

EWRI Congress 2008–2016

11th International Symposium on River Sedimentation, Sept. 2011, South Africa

River Flow 2012, San Jose, Costa Rica

35<sup>th</sup> IAHR Congress, Sept. 2013, Chengdu, China

12<sup>th</sup> International Symposium on River Sedimentation, Sept. 2013, Kyoto, Japan

13th International Symposium on River Sedimentation, September 19-22, 2016, Stuttgart, Germany

- 14th International Symposium on River Sedimentation, September 16-19, 2019, Chengdu, China
- 8th Int. Conf. on the Application of Physical Modeling in Coastal and Port Engineering and Science (COASTLAB20), Dec. 9-12, 2020, Zhoushan, China

Member of the Scientific Committee for

IAHR Euro Congress 2016, Belgium

IAHR Congress 2017, Malaysia

ICHE 2018, Chongqing, China

ICEC 2018, Caen, France

ISRS 2019, Chengdu, China

COASTLAB20, 2020, Zhoushan, China

ICEC 2021, Shanghai, China

HYDRO 2021 International, Surat, Gujarat, India

# Teaching

Undergraduate course: Fluid Mechanics, River Restoration.

Graduate courses: Computational River Dynamics, Fluvial Hydraulics, Sediment Transport, Sedimentation Engineering, and Water Quality Modeling.

# PhD Dissertations and MS Theses Directed

# <u>Completed</u> (9 PhD, 5 MS or ME)

- MS thesis (Co-Supervised), Nobuyuki Chiba, Civil Engineering, University of Mississippi, December 2002.
- PhD dissertation, Zhiguo He, National Center for Computational Hydroscience and Engineering (NCCHE), University of Mississippi, July 2007.

MS thesis, Qianrun Lin, NCCHE, University of Mississippi, May 2010.

PhD dissertation, Podjanee Inthasaro, NCCHE, University of Mississippi, July 2010.

PhD dissertation, Reza Marsooli, NCCHE, University of Mississippi, May 2013.

PhD dissertation, Alex Sanchez, NCCHE, University of Mississippi, July 2013.

MS project, Meng Wang, NCCHE, University of Mississippi, July 2013.

PhD dissertation, Qianrun Lin, NCCHE, University of Mississippi, Dec 2014.

ME project, Sai Ding, Clarkson University, July 2016.

PhD dissertation, Bahareh Forouzan, Clarkson University, July 2018.
PhD dissertation, Meng Wang, Clarkson University, August 2018.
PhD dissertation, Chamil Perera, Clarkson University, August 2019.
ME project, Lukas Patrizio, Clarkson University, August 2019.
PhD dissertation, Dilshan Amarasinghe, Clarkson University, May 2021.

#### Served Committee Member for

PhD dissertation, Dalmo Vieira, NCCHE, University of Mississippi, May 2004;

PhD dissertation, Tingting Zhu, NCCHE, University of Mississippi, December 2006;

MS thesis, Ying Chen, Department of Biology, University of Mississippi, July 2011;

- PhD dissertation, Malinda Wimalaratne, Department of Civil and Environmental Engineering, Clarkson University, "A model for ecological impact assessment from deepwater releases of hydrocarbons (methane)," completed, August 2014;
- PhD dissertation, Xin Zhao, Department of Civil and Environmental Engineering, Clarkson University, "Wave ice interaction in the Arctic Ocean", completed, November 2014.
- MS thesis, Chris Callinan, Department of Civil and Environmental Engineering, Clarkson University, "A laboratory study on hydraulics of large woody debris jams", completed, summer 2014.
- MS thesis, Brandon Teetsel, Department of Civil and Environmental Engineering, Clarkson University, "An experimental investigation of the effects of woody debris jams on channel hydraulics", completed, Fall 2015.
- PhD dissertation, Indrajith Nissanka, Department of Civil and Environmental Engineering, Clarkson University, completed in 2016.
- PhD dissertation, Pubudu Kumarage, Department of Civil and Environmental Engineering, Clarkson University, "simulating the transport of gases released from hydrothermal vents and their resulting ocean acidification," completed in 2016.
- PhD dissertation, Xin Liu, University of Ottawa, "Numerical Modeling of Shallow Water Flows over Mobil Beds," completed in 2016.
- PhD dissertation, Jiajia Pan, Department of Civil and Environmental Engineering, Clarkson University, "Numerical modeling of river ice and winter-time channel dynamics," May 2017.
- PhD dissertation, Lakshitha Premathilake, Department of Civil and Environmental Engineering, Clarkson University, completed in 2017.
- PhD dissertation, Sukung Cheng, Department of Civil and Environmental Engineering, Clarkson University, "Wave ice interaction in polar oceans," Completed in 2018.
- PhD dissertation, Ismail Rifai, University of Paris-EST, France and University of Liege, Belgium, "Overtopping Induced Fluvial Dike Failure", completed in 2018.
- PhD dissertation, Tanya M. Beck, University of South Florida, "Tracking Sediment Bypassing, Geomorphological Analysis, and Regional Sediment Management at Tidal Inlets," completed in 2019.

PhD dissertation, Rachitha Muthukumarana, Department of Civil and Environmental Engineering, Clarkson University, Completed in 2020.

## Postdoctoral Research Associates Advised and Visiting Scholars Hosted

- Zhiguo He, 2007-2009, Postdoc at National Center for Computational Hydroscience and Engineering (NCCHE), University of Mississippi; currently Professor at Zhejiang University, Hangzhou, China
- Mingliang Zhang, 2009-2011, Postdoc at NCCHE, University of Mississippi; currently Professor at Dalian Ocean University, Dalian, China.
- Yavuz Ozeren, 2009-2011, Postdoc at Biology Department, University of Mississippi; currently Research Assistant Professor at NCCHE, University of Mississippi.
- Jihong Xia, 2011-2012, Visiting Scholar at NCCHE, University of Mississippi; currently Professor at Hohai University, Nanjing, China.
- Qiming Zhong, 2013-2014, Visiting Scholar at Department of Civil and Environmental Engineering, Clarkson University; currently Senior Research Scientist, Nanjing Institute of Hydraulic Research, Nanjing, China.
- Jian Chen, 2018, Visiting Scholar at Department of Civil and Environmental Engineering, Clarkson University; currently Associate Professor, North China University of Water Resources and Electric Power, Zhengzhou, China
- Cui Du, May 2019-April 2020, Visiting Scholar at Department of Civil and Environmental Engineering, Clarkson University; currently Associate Professor, Henan University of Science and Technology, China.
- Chao Ma, July 2019-June 2020, Visiting Scholar at Department of Civil and Environmental Engineering, Clarkson University; currently Associate Professor, Beijing Forest University, China.
- Hongping Zhang, August 2019-July 2020, Visiting Scholar at Department of Civil and Environmental Engineering, Clarkson University; currently Professor, China Institute of Water Resources and Hydropower Research, Beijing, China.
- You Luo, Dec 2019-Nov 2020, Visiting Scholar at Department of Civil and Environmental Engineering, Clarkson University; currently Associate Professor, Yangzhou University, Jiangsu, China.

# **Research Projects**

- (1) 1994–1995, **PI**, "Mathematical Models of Water-Sediment Two-Phase Turbulent Flow," sponsored by the Natural Science Foundation of China.
- (2) 1995–1997, "3-D Calculations of Turbulent Flow and Sediment Transport in Rivers," sponsored by the Research Fellowship of Alexander von Humboldt Foundation of Germany, conducted at the University of Karlsruhe, Germany.
- (3) 1997–2013, Key Model Developer, "Improving Erosion and Sediment Transport Models and Development in Support of USDA Agencies," through a Specific Cooperative Agreement between the National Center for Computational Hydroscience and Engineering of the University of Mississippi and the USDA Agricultural Research Service (PI: Sam S.Y. Wang, about \$1M/yr). Significant achievements include: Empirical formulas for movable bed roughness and nonuniform sediment transport capacity; Nonequilibrium modeling theory and framework for nonuniform total-load sediment

transport; 1-D numerical modeling of flow and sediment transport in channel networks (CCHE1D); FVM-based CCHE2D model for flow and sediment transport in rivers; Numerical-empirical modeling of headcut migration; and a series of simplified, 1-D, 2-D and 3-D physically-based dam/levee breaching models.

- (4) 2005–2007, **PI**, "Development of Interdisciplinary Working Group on Water Resources/Water Quality/Aquatic Ecosystems," sponsored by University of Mississippi, \$20,000.
- (5) 2006, Co-Investigator, "Sediment Transport and Morphodynamics in Lower Paute River," sponsored by HydroPaute S.A., Cuenca, Ecuador, \$93,750.
- (6) 2006–2007, **Co-PI**, "River Mechanics Tools with National Center for Computational Hydroscience and Engineering," sponsored by Maricopa County Flood Control District, Arizona, \$96,000.
- (7) 2006–2007, Co-Investigator, "Incorporation of Advanced Numerical Modeling Techniques and Representation of Physical Processes in Coastal Inlets Research Program Predictive Technology," sponsored by ERDC, U.S. Army Corps of Engineers, about \$150,000 each year (PI: Sam Wang).
- (8) 2006–2007, Co-Investigator, "Basic Researches in Support of the Arkansas River Navigation Study and Arkansas/White River Studies," Sponsored by US Army Corps of Engineers, about \$125,000 (PI: Yafei Jia).
- (9) 2007–2009, Co-Investigator, "Implement and Application Study of NCCHE's River Migration Models," a subcontract to National Chiao Tung University, sponsored by Water Resources Planning Institute, Water Resources Agency, Taiwan, about \$135,000 annually (PI: Sam Wang).
- (10) 2008–2010, Co-PI, "Development of an Integrated Simulation Tool for Predicting Disastrous Flooding, Water Contamination, Sediment Transport and Their Impacts on Environment," sponsored by Southeast Region Research Initiative (SERRI), Department of Homeland Security, \$1,811,410 (PI: Yafei Jia).
- (11) 2008–2011, PI, "Implementation of Advanced Modeling Technologies in Coastal Inlets Research Program's CMS2D/3D Models," sponsored by ERDC, U.S. Army Corps of Engineers, \$507,000.
- (12) 2009–2012, PI, "Investigation of Surge and Wave Reduction by Vegetation (Phase I and II)," sponsored by Southeast Region Research Initiative (SERRI), Department of Homeland Security, \$1,490,774 (Phase I: \$994,451 and Phase II: \$496,323).
- (13) 2011–2013, PI, "Development of Advanced Sediment Transport Models for Coastal Inlets Research Program," sponsored by ERDC, U.S. Army Corps of Engineers, \$120,000.
- (14) 2014–2015, PI, "Laboratory Experiments on Erosion of Mixed Cohesive/Non-cohesive Sediments," sponsored by ERDC, U.S. Army Corps of Engineers, \$81,951 (90%; Co-PIs: Ian Knack and Khiem Tran).
- (15) 2015, PI, "Assessment of Sediment Properties in the Impoundment of an Aged Dam in the Hudson River Watershed," sponsored by New York State Water Resources Institute (WRI) at Cornell University and New York State Department of Environmental Conservation (DEC), Hudson River Estuary Program, \$10,000 (50%; Co-PI: Ian Knack).

- (16) 2015-2019, Co-PI (later PI), "Advanced Hybrid Simulation for Storm Surge Loads," U.S. National Science Foundation, \$276,466 (about 20%; PI: Narutoshi Nakata, left to Japan in 2016).
- (17) 2015-2018, **PI**, "Development and Application of Sediment Transport Formula in Taiwan's Rivers," a subcontract to National Chiao Tung University, sponsored by Water Resources Planning Institute, Water Resources Agency, Taiwan, \$66,000 (100%).
- (18) 2015-2017, PI, "Implementation of Physically-Based Simulation Algorithms for USACE's Next-Generation Dam/Levee/Barrier Breach Models," sponsored by ERDC, U.S. Army Corps of Engineers, \$127,854 (100%).
- (19) 2016, PI, "Prediction of Sediment Remobilized by Removal of an Aged Dam in the Hudson River Watershed," sponsored by New York State Water Resources Institute (WRI) at Cornell University and New York State Department of Environmental Conservation (DEC), Hudson River Estuary Program, \$10,000 (50%; Co-PI: Ian Knack).
- (20) 2018-2020, **Co-PI**, "CRISSP1D Transcritical Flow and Floodplain Enhancements," Sponsored by BC Hydro, \$206,000 (50%).

### Citations

2013: 89 2014: 120 2015: 156 2016: Papers (149 in SCI), Book (32 in Google Scholars) 2017: Papers (144 in SCI), Book (20 in Google Scholars) 2018: 233 in Scopus 2019: 274 2020: Papers (214 in SCI), Book (54 in Google Scholars)

### Books Published (and in Preparation)

- Weiming Wu (2007), *Computational River Dynamics*, Taylor & Francis, UK, 494 p. (This book includes 12 chapters)
- Abdul Khan and Weiming Wu (eds) (2013), *Sediment Transport: Monitoring, Modeling and Management*, Nova Science Publishers, NY, 390 p.
- Weiming Wu (2022), *Sediment Transport Dynamics*. (This book is in preparation and review; it includes 15 chapters and has been used as text materials of CE573 in the past years)

### Book Chapters Published (Note: Student co-authors are underlined)

- (1) Weiming Wu and Sam S.Y. Wang (2004). "Depth-averaged numerical modeling of flow and sediment transport in open channels with vegetation," *Riparian Vegetation and Fluvial Geomorphology*, edited by S. J. Bennett and A. Simon, AGU, pp. 253–265.
- (2) Weiming Wu (2013). "Non-equilibrium Sediment Transport Modeling Formulations and Closures," *Sediment Transport: Monitoring, Modeling and Management*, Abdul Khan and Weiming Wu (eds.), Nova Science Publishers, NY, USA, pp. 145–178.

- (3) Weiming Wu, <u>Zhiguo He</u>, <u>Qianru Lin</u>, <u>Alejandro Sanchez</u>, and <u>Reza Marsooli</u> (2013). "Non-equilibrium Sediment Transport Modeling — Extensions and Applications," *Sediment Transport: Monitoring, Modeling and Management*, Abdul Khan and Weiming Wu (eds.), Nova Science Publishers, NY, USA, pp. 179–212.
- (4) Qin Chen, Yavuz Ozeren, Guoping Zhang, Daniel Wren, Weiming Wu, Ranjit Jadhav, Kyle Parker, and Hem Pant (2013). "Laboratory and Field Investigations of Marsh Edge Erosion," *Sediment Transport: Monitoring, Modeling and Management*, Abdul Khan and Weiming Wu (eds.), Nova Science Publishers, NY, USA, pp. 311–338.
- (5) <u>Reza Marsooli</u> and Weiming Wu (2014). "A 3-D Finite-Difference Dam-Break Wave Model Based on Volume-of-Fluid Surface Tracking Method", *Wave Propagation*, Luiz Rocha and Mateus Gomes (eds.), Academy Publish, WY, USA, pp. 355–380.
- (6) <u>Podjanee Inthasaro</u> and Weiming Wu (2016). "One-Dimensional Model of Water Quality and Aquatic Ecosystem/Ecotoxicology in River Systems." Chapter 3 in *Advances in Water Resources Management*, Handbook of Environmental Engineering, Vol. 16, L.K. Wang, C.T. Yang and H.-H. S. Wang (eds), Springer, Switzerland, pp. 247-292, DOI 10.1007/978-3-319-22924-9\_3.
- (7) Qin Chen, Weiming Wu, and Ling Zhu (2018). "Recent Developments in Numerical Modeling of Coastal Hydrodynamics and Sediment Transport." Chapter 5 in Advances in Coastal Hydraulics, Vijay Panchang and James Kaihatu (eds.), World Scientific, pp. 145-197.

#### **Journal Papers Published**

- Jianhen Xie, Yitian Li, and Weiming Wu (1989). "Numerical modeling of the reciprocating flow in the Sanjiang downstream approach channel of Gezhouba Project," *J. Research Institute of Yangtze River*, No. 3, pp. 1–9 (in Chinese).
- (2) Weiming Wu and Yitian Li (1991). "On the nesting problems of one- and twodimensional mathematical models for river flow and sediment motion," *J. Wuhan University of Hydraulic and Electric Engineering*, 24(5), 539–545 (in Chinese).
- (3) Weiming Wu and Yitian Li (1992). "A new one-dimensional numerical modeling method for river flow and sedimentation," *J. Sediment Research*, No. 1, pp. 1–8 (in Chinese).
- (4) Weiming Wu (1992). "A laterally-averaged vertical two-dimensional mathematical model of water flow," *J. Wuhan University of Hydraulic and Electric Engineering*, Supplement, pp. 14–19 (in Chinese).
- (5) Weiming Wu and Yitian Li (1993). "The study of nonuniform sediment transport capacity," J. Sediment Research, No. 4, pp. 81-88 (in Chinese).
- (6) Weiming Wu, Chunyan Hu, and Guolu Yang (1995). "Horizontal two-dimensional numerical model for water flow and sediment transport," *Chinese J. Hydraulic Eng.*, No.10, pp. 40–46 (in Chinese).
- (7) Yunhui Wang and Weiming Wu (1995). "Influences of human disturbances on river environment," J. Water Conservancy and Hydraulic Power in Northeast China, No. 3, pp. 11–17 (in Chinese).
- (8) Weiming Wu (1996). "General coordinate transformation and its application to river numerical modeling," *J. Sediment Research*, No. 2, pp. 92–100 (in Chinese).

- (9) Fenglian Qiu and Weiming Wu (1996). "The analysis of incoming flow and sediment conditions as well as channel morphological changes in Wuhan reach of the Yangtze River," *J. Sediment Research*, No. 2, pp. 56–61 (in Chinese).
- (10) Weiming Wu and Sam S.Y. Wang (1999). "Movable bed roughness in alluvial rivers," *J. Hydraulic Eng.*, ASCE, 125(12), 1309–1312.
- (11) Weiming Wu, Sam S.Y. Wang, and Yafei Jia (2000). "Nonuniform sediment transport in alluvial rivers," *J. Hydraulic Research*, IAHR, 38(6), 427–434.
- (12) Weiming Wu and Sam S.Y. Wang (2000). "Mathematical models for liquid-solid twophase flow," *Int. J. Sediment Research*, 15(3), 288–298.
- (13) Weiming Wu, Wolfgang Rodi, and Thomas Wenka (2000). "3-D numerical modeling of water flow and sediment transport in open channels," *J. Hydraulic Eng.*, ASCE, 126(1), 4–15.
- (14) Weiming Wu, Pingyi Wang, and <u>Nobuyuki Chiba</u> (2004). "Comparison of five depthaveraged 2-D turbulence models for river flows," *Archives of Hydro-Engineering and Environmental Mechanics*, Polish Academy of Science, 51(2), 183–200.
- (15) Weiming Wu, Enhui Jiang, and Sam S.Y. Wang (2004). "Depth-averaged 2-D calculation of flow and sediment transport in the Lower Yellow River," *Int. J. River Basin Management*, IAHR, 2(1).
- (16) Weiming Wu, Dalmo A. Vieira, and Sam S.Y. Wang (2004). "A 1-D numerical model for nonuniform sediment transport under unsteady flows in channel networks," J. *Hydraulic Eng.*, ASCE, 130(9), 914–923.
- (17) Weiming Wu (2004). "Depth-averaged 2-D numerical modeling of unsteady flow and nonuniform sediment transport in open channels," *J. Hydraulic Eng.*, ASCE, 130(10), 1013–1024.
- (18) Weiming Wu and Sam S.Y. Wang (2004). "Depth-averaged 2-D calculation of tidal flow, salinity and cohesive sediment transport in estuaries," *Int. J. Sediment Research*, 19(3), 172–190.
- (19) Weiming Wu and Sam S.Y. Wang (2004). "Depth-averaged 2-D calculation of flow and sediment transport in curved channels," *Int. J. Sediment Research*, 19(4), 241–257.
- (20) Sam S.Y. Wang and Weiming Wu (2005). "Computational simulation of river sedimentation and morphology A review of the state of the art," *Int. J. Sediment Research*, 20(1), 7–29.
- (21) Weiming Wu, F. Douglas Shields, Jr., Sean J. Bennett, and Sam S.Y. Wang (2005). "A depth-averaged 2-D model for flow, sediment transport and bed topography in curved channels with riparian vegetation," *Water Resources Research*, 41(W03015), p. 15.
- (22) Weiming Wu and Sam S.Y. Wang (2005). "Empirical-numerical analysis of headcut migration," *Int. J. Sediment Research*, 20(3), 233–243.
- (23) Weiming Wu, Mustafa Altinakar, and Sam S.Y. Wang (2006). "Depth-average analysis of hysteresis between flow and sediment transport under unsteady conditions," *Int. J. Sediment Research*, 21(2), 101–112.
- (24) Weiming Wu and Sam S. Y. Wang (2006). "Formulas for sediment porosity and settling velocity," *J. Hydraulic Eng.*, ASCE, 132(8), 858–862.

- (25) Weiming Wu and Sam S.Y. Wang (2007). "One-dimensional modeling of dam-break flow over movable beds," *J. Hydraulic Eng.*, ASCE, 133(1), 48–58.
- (26) Sean J. Bennett, Weiming Wu, Carlos V. Alonso, and Sam S. Y. Wang (2008). "Modeling fluvial response to in-stream woody vegetation: implications for stream corridor restoration," *Earth Surface Processes and Landforms*, 33(6), 890–909.
- (27) Weiming Wu and Sam S.Y. Wang (2008). "One-dimensional explicit finite-volume model for sediment transport with transient flows over movable beds," *J. Hydraulic Research*, IAHR, 46(1), 87–98.
- (28) <u>Zhiguo He</u>, Weiming Wu, and Sam S.Y. Wang (2008). "Coupled finite-volume model for 2-D surface and 3-D subsurface flows," *J. Hydrologic Eng.*, ASCE, 13(9), 835–845.
- (29) Shields, Jr., F. D., S. R. Pezeshki, G. V. Wilson, W. Wu, and S. M. Dabney (2008).
   "Rehabilitation of an incised stream with plant materials: the dominance of geomorphic processes," *Ecology and Society* 13(2): 54. [online] URL: http://www.ecologyandsociety.org/vol13/iss2/art54/
- (30) <u>Zhiguo He</u>, Weiming Wu, and Sam S.Y. Wang (2009). "An integrated two-dimensional surface and three-dimensional subsurface contaminant transport model considering soil erosion and sorption," *J. Hydraulic Eng.*, ASCE, 135(12), 1028–1040.
- (31) Weiming Wu (2009). Book review of *Sedimentation Engineering Processes, Measurements, Modeling, and Practice* (ASCE Manuals and Reports on Engineering Practice No. 110), *J. Hydraulic Eng.*, ASCE, 135(6), 536–537.
- (32) <u>Zhiguo He</u>, Weiming Wu, and F. Douglas Shields, Jr. (2009). "Numerical analysis of effects of large wood structures on channel morphology and fish habitat suitability in a southern U.S. sandy creek," *Ecohydrology*, Wiley-Blackwell, 2, pp. 370–380, August.
- (33) Weiming Wu and <u>Zhiguo He</u> (2009). "Effects of vegetation on flow conveyance and sediment transport capacity," *Int. J. Sediment Research*, 24(3), 247–259.
- (34) <u>Zhiguo He</u> and Weiming Wu (2009). "A physically-based integrated numerical model for flow, upland erosion, and contaminant transport in surface-subsurface systems," *Science in China, Series E - Technological Sciences*, 52(11), 3391–3400, doi: 10.1007/s11431-009-0335-6.
- (35) Weiming Wu, <u>Alejandro Sanchez</u>, and Mingliang Zhang (2011). "An implicit 2-D shallow water flow model on unstructured quadtree rectangular mesh," *Journal of Coastal Research*, Special Issue, No. 59, pp. 15–26.
- (36) <u>Alejandro Sanchez</u> and Weiming Wu (2011). "A non-equilibrium sediment transport model for coastal inlets and navigation channels," *Journal of Coastal Research*, Special Issue, No. 59, pp. 39–48.
- (37) Christopher W. Reed, Mitchell E. Brown, Alejandro Sanchez, Weiming Wu, and Adele M. Buttolph (2013). "The Coastal Modeling System flow model (CMS-Flow): Past and Present." *Journal of Coastal Research*, Special Issue: 59, pp. 1–6.
- (38) Mingliang Zhang and Weiming Wu (2011). "A two dimensional hydrodynamic and sediment transport model for dam break based on finite volume method with quadtree grid," *Applied Ocean Research*, Elsevier, 33, 297–308.

- (39) ASCE/EWRI Task Committee on Dam/Levee Breaching (Weiming Wu as the Committee Chair and corresponding author) (2011). "Earthen embankment breaching," *Journal of Hydraulic Engineering*, ASCE, 137(12), 1549–1564.
- (40) Weiming Wu, <u>Reza Marsooli</u> and Zhiguo He (2012). "A depth-averaged twodimensional model of unsteady flow and sediment transport due to non-cohesive embankment break/breaching." J. Hydraulic Engineering, ASCE, 138(6), 503–516.
- (41) Soumendra N. Kuiry, Weiming Wu, and Yan Ding (2012). "A one-dimensional shock-capturing model for long wave run-up on sloping beaches." *Journal of Hydraulic Engineering*, Indian Society for Hydraulics, 18(2), 65–79.
- (42) Weiming Wu and <u>Reza Marsooli</u> (2012). "A depth-averaged 2-D shallow water model for breaking and non-breaking long waves affected by rigid vegetation." *Journal of Hydraulic Research*, IAHR, 50(6), 558–575.
- (43) IAHR Working Group for dam-break flows over mobile beds: (Sandra Soares-Frazão, Ricardo Canelas, Zhixian Cao, Luis Cea, Hanif M. Chaudhry, Andres Die Moran, Kamal El Kadi, Rui Ferreira, Ignacio Fraga Cadórniga, Noemi Gonzalez-Ramirez, Massimo Greco, Wei Huang, Jasim Imran, Jérôme Le Coz, Reza Marsooli, André Paquier, Gareth Pender, Marianeve Pontillo, Jeronimo Puertas, Benoit Spinewine, Catherine Swartenbroekx, Ryota Tsubaki, Catherine Villaret, Weiming Wu, Zhiyuan Yue & Yves Zech) (2012): Dambreak flows over mobile beds: experiments and benchmark tests for numerical models, *Journal of Hydraulic Research*, IAHR, 50(4), 364–375.
- (44) Mingliang Zhang, Weiming Wu, Lihwa Lin, and J. Yu (2012). "Coupling of wave and current numerical model with unstructured quadtree grid for nearshore coastal waters." *Science China Technological Sciences*, 55(2), 568–580.
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# Journal Discussions Published

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- (32) Weiming Wu and Sam S. Y. Wang (2003). "Selection and evaluation of nonuniform sediment transport formulas for river modeling," Proc. XXXth IAHR Congress, Thessaloniki, Greece, pp. 831-838.
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- (50) <u>Zhiguo He</u>, Weiming Wu, Yongping Yuan, and Sam S.Y. Wang (2007). "Simulation of soil erosion and sediment transport using a physically-based integrated surfacesubsurface model," *Proc. 2007 World Environmental and Water Resources Congress*, May 13-19, Tampa, FL (on CD-Rom).
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- (58) Weiming Wu, <u>Zhiguo He</u>, and Sam S.Y. Wang (2009). "A depth-averaged 2-D model of non-cohesive dam/levee breach processes," *Proc. 2009 World Environmental and Water Resources Congress*, May 17-21, Kansas City, MO (on CD-Rom).

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- (64). <u>Reza Marsooli</u>, Mingliang Zhang, and Weiming Wu (2011). "Vertical and horizontal two-dimensional numerical modeling of dam-break flow over fixed beds." Proc. 2011 World Environmental and Water Resources Congress, May 22-26, Palm Springs, CA.
- (65) Soumendra N. Kuiry, Weiming Wu and Yan Ding (2011). "A hybrid finite-volume finite-difference scheme for one-dimensional Boussinesq equations to simulate wave attenuation due to vegetation." Proc., ASCE 2011 World Environmental & Water Resources Congress, May 22-26, Palm Springs, California.
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- (68) <u>Podjanee Inthasaro</u> and Weiming Wu (2012). "A 1-D aquatic ecosystem/ecotoxicology model in open channels", Proc. 2012 International Symposium on Public Health and Environmental Protection, Macau, China, May 28-30.
- (69) <u>Reza Marsooli</u> and Weiming Wu (2012). "Three-dimensional numerical simulation of dam break flow based on a volume of fluid approach", Proc. 3rd Int. Symp. on Shallow Flows, Iowa City, USA, June 4 6.
- (70) Weiming Wu and <u>Qianru Lin</u> (2012). "Nonuniform sediment transport under current and waves." Proc. 33rd Int. Conf. on Coastal Engineering, Santander, Spain.
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- (72) Weiming Wu (2013). "An explicit finite-volume depth-averaged 2-D model of morphodynamic processes near marsh edges and vegetation patches." Proc. 12th International Symposium on River Sedimentation, Kyoto, Japan, Sept. 1-5.
- (73) <u>Qianru Lin</u> and Weiming Wu (2013). "A formula for multiple-sized near-bed suspended-load concentration under current and waves." Proc. 35th IAHR Congress, Chengdu, China, Sept. 8-13.

- (74) Weiming Wu (2015). "3-D numerical modeling of undertow current and sediment transport in surf zone." Proc. 2015 International Conference on Coastal Sediments, San Diego, CA.
- (75) Weiming Wu, Yavuz Ozeren, Qin Chen, Ranjit Jadhav, and Daniel Wren (2016). "Laboratory and field investigations of wave attenuation by live marsh vegetation." Proc. the 6th International Conference on the Application of Physical Modelling in Coastal and Port Engineering and Science (Coastlab16), Ottawa, Canada, May 10-13.
- (76) <u>Chamil Perera</u> and Weiming Wu (2016). "Erosion coefficients of cohesive sediments." Proc. the 2016 World Environmental & Water Resources Congress, West Palm Beach, FL, USA, May 22-26.
- (77) Weiming Wu, Ian M. Knack, <u>Zahra Sharifnezhadazizi</u>, <u>Chamil Perera</u>, Brandon Teetsel, and <u>Amina Grant</u> (2016). "Investigation of quantity and quality of sediments impounded by Burden Pond Dam of Troy, NY." Proc. 12th Int. Conf. on Hydroscience and Eng., Taiwan, Nov. 6-10.
- (78) Yavuz Ozeren, Daniel G. Wren, and Weiming Wu (2016). "Wave setup on vegetated beach: laboratory experiments." *Proc. Int. Conference on Coastal Engineering*, Antalya, Turkey, Nov. 17-20.
- (79) Weiming Wu (2017). "Simplified physically-based modeling of levee breach on Sutter Bypass Channel." E-proceedings of the 37th IAHR World Congress, August 13–18, 2017, Kuala Lumpur, Malaysia.

## Keynotes

- (1) Weiming Wu and Sam S.Y. Wang (2010). "An introduction to latest developments in soil erosion and sediment transport modeling." Keynote, *Proc. 11th International Symposium on River Sedimentation*, September 6-9, Stellenbosch, South Africa, pp. 27-42.
- (2) Weiming Wu (2016). "Mixed cohesive and noncohesive sediment transport: A state of the art review." Keynote, *Proc. 13th International Symposium on River Sedimentation*, September 19-22, Stuttgart, Germany.
- (3) Weiming Wu (2018). "Interactions of waves, current and vegetation." Sixth International Conference on Estuaries and Coasts (ICEC2018), August 20-23, Caen, France.
- (4) Weiming Wu (2020). "A Simplified Physically-Based Model of Coastal Dike and Barrier Breaching," 8<sup>th</sup> Int. Conf. on the Application of Physical Modeling in Coastal and Port Engineering and Science (COASTLAB20), Dec. 9-12, Zhoushan, China.

### **Master Classes and Short Courses**

- Weiming Wu and George Constantinescu (2012), Master Class on "Numerical Solution of Fluvial Processes," River Flow 2012, Sept. 4, San Jose, Costa Rica.
- Weiming Wu (2013), Master Class on "Computational River Dynamics," 35<sup>th</sup> IAHR Congress, Sept. 8, Chengdu, China.
- Weiming Wu (2014), Short Course on "Hydrodynamic and Sediment Transport Modeling", June 22-27, Zhejiang University, Hangzhou, China.
- Weiming Wu (2016), Technical Workshop on Dam and Levee Breach Modeling using DLBreach, 2016 World Environmental & Water Resources Congress, West Palm Beach, FL, May 26.

## **Invited Lectures and Presentations**

- (1) "Modeling of Flow and Mass Transport in Uplands, Wetlands and Open Waters," presented at Mississippi Delta Water Resources Review Meeting, March 21-22, 2006, Stoneville, MS.
- (2) "Sediment Transport Modeling," Dec. 1, 2006, presented at Yangtze River Research Institute, Wuhan, China.
- (3) "1-D Simulation of Sedimentation Processes in TGP Reservoir," Oct. 24, 2007, presented at the International Research and Training Center on Erosion and Sedimentation, Beijing, China.
- (4) "Efficient 2D/3D Numerical Solution Algorithms for Shallow Water Equations," July 18, 2008, presented at the Coastal and Hydraulics Laboratory, ERDC, U.S. Army Corps of Engineers, Vicksburg, MS.
- (5) "A Sediment Entrainment Function for Simulation of Local Scour near In-stream Hydraulic Structures Based on 3-D RANS Model," presented at Workshop on Computational Hydraulics for Transportation, September 23-24, 2009, Argonne National Laboratory, Chicago, IL.
- (6) "Sediment Transport Modeling," June 4, 2010, presented at Naval Research Laboratory, Stennis Space Center, MS.
- (7) "Advances in Coastal Hydrodynamic and Sediment Transport Modeling," June 10, 2010, presented at Coastal and Hydraulic Laboratory, ERDC, U.S. Army Corps of Engineers, Vicksburg, MS.
- (8) "Advances in Hydrodynamic and Sediment Transport Modeling," June 28, 2010, presented at Zhejiang University, Hangzhou, China.
- (9) "Physically-Based Dam/Levee Breach Modeling," presented at Workshop on Dam Stability, Safety and Failure, January 26-27, 2011, Oxford, MS.
- (10) "Dam/Levee Breach Modeling," Sept. 15, 2011, presented at Yangtze River Research Institute, Wuhan, China.
- (11) "Investigation of Surge and Wave Reduction by Vegetation," Sept. 16, 2011, Presented at Wuhan University, China.
- (12) "Physically-Based Dam/Levee Breach Modeling," May 28, 2012, presented at Hong Kong University of Science and Technology, China.
- (13) "Effects of Vegetation in Riverine and Coastal Systems," June 1, 2012, presented at Pearl River Research Institute, Guangzhou, China.
- (14) "Recent Advances in Dam/Levee Breach Modeling," July 1, 2013, presented at Heriot Watt University, UK.
- (15) "Effects of Vegetation in Surface Water Systems," July 2, 2013, presented at Glasgow University, UK.
- (16) "Non-equilibrium Sediment Transport Modeling," March 17, 2014, presented at National Chiao Tung University, Taiwan.
- (17) "Physically-Based Dam/Levee Breach Modeling," March 19, 2014, presented at National Chung Hsing University, Taiwan.

- (18) "Implicit Finite-Volume 2D/3D Models for Flow and Sediment Transport in Riverine, Estuarine and Coastal Systems," March 21, 2014, presented at Water Resources Agency Planning Institute, Taiwan.
- (19) "Sediment Transport Modelling," June 11, 2014, presented at Yonsei University, South Korea.
- (20) "Surge and Wave Attenuation by Vegetation," June 12, 2014, presented at Yonsei University, South Korea.
- (21) "Dam/Levee Breach Modeling," June 13, 2014, presented at Chungnam National University, South Korea.
- (22) "Coastal Sediment Transport Modeling," July 1, 2014, presented at Nanjing Institute of Hydraulic Research, Nanjing, China.
- (23) "Surge and Wave Attenuation by Vegetation," July 2, 2014, presented at Hohai University, Nanjing, China.
- (24) "Sediment Transport Modeling," July 9, 2014, presented at China Institute of Hydropower and Water Resources, Beijing, China.
- (25) "Advances in Dam/Levee Breach Modeling," July 11, 2014, presented at Tsinghua University, Beijing, China.
- (26) "Wave and Surge Attenuation by Vegetation," Oct. 16, 2014, presented at Cornell University, Ithaca, NY, USA.
- (27) "Challenges in Sedimentation Engineering," Dec. 17, 2015, Presented at Wuhan University, China.
- (28) "Simplified Physically-Based Modeling of Dam/Levee/Barrier Breaching." Feb. 12, 2016, presented at Coastal and Hydraulic Laboratory, ERDC, U.S. Army Corps of Engineers, Vicksburg, MS.
- (29) "Wave Attenuation by Vegetation." June 14, 2016, presented at Dalian University of Technology, Dalian, China
- (30) "Surge and Wave Attenuation by Vegetation." June 15, 2016, presented at Dalian Ocean University, Dalian, China
- (31) "Coastal Levee and Barrier Breach Modeling: Extension of DLBreach." June 17, 2016, presented at China Institute of Hydropower and Water Resources, Beijing, China
- (32) "Erosion of Mixed Cohesive and Noncohesive Sediments." Nov. 11, 2016, presented at Water Resources Agency Planning Institute, Taiwan.
- (33) "Introduction to the Coastal Modeling System." Nov. 11, 2016, presented at Water Resources Agency Planning Institute, Taiwan.
- (34) "Erosion of Mixed Cohesive and Noncohesive Sediments." Dec. 22, 2016, presented at Zhejiang University, China.
- (35) "Non-equilibrium Sediment Transport Modeling." Dec. 29, 2016, presented at Chongqing Jiaotong University, Chongqing, China.
- (36) "Introduction to Dam/Levee Breach Model DLBreach." Aug. 11, 2017, presented at Water Resources Agency Planning Institute, Taiwan.
- (37). "Nonuniform Sediment Transport in Rivers, Estuaries and Coastal Waters." Aug. 19, 2017, Youth Sediment Tribute to Ning Chien, Tsinghua University, Beijing, China.

- (38) "Dam Decommission and Removal in the U. S." Sept 29, 2017, Department of Civil and Environmental Engineering, Clarkson University, NY, USA.
- (39) "Simplified Physically-Based Modeling of Dam/Levee/Barrier Breaching," Sept. 18, 2019, Nanjing Institute of Hydraulic Research, China
- (40) "A 3-D Model of Flow and Sediment Transport in Coastal Shallow Waters." Oct. 9, 2019, Zhejiang University, Zhoushan, Zhejiang, China
- (41) "Erosion of Mixed Cohesive and Noncohesive Sediments." Oct. 9, 2019, Zhejiang University, Zhoushan, Zhejiang, China
- (42) "A 3-D Model of Flow and Sediment Transport in Shallow Waters." Oct. 15, 2019, Yangtze River Research Institute, Wuhan, China
- (43) "Erosion of Mixed Cohesive and Noncohesive Sediments." Oct. 18, 2019, Wuhan University, Wuhan, China
- (44) "Erosion of Mixed Cohesive and Noncohesive Sediments." Oct. 24, 2019, China East Normal University, Shanghai, China

#### **Conference Presentations** (with abstract)

- Podjanee Inthasaro and Weiming Wu (2007). "Evaluation of fish habitat suitability using 1-D and depth-averaged 2-D models," *Presented at the Mid-South Area Engineering and Sciences Conference*, Oxford, MS, May 17-18 (abstract on CD-Rom).
- (2) Volodymyr I. Maltsev, Weiming Wu, and Marjorie M. Holland (2007). "Using remote sensing for estimation of velocity of delta formation at the Kakhovka Reservoir, Dnieper River, Ukraine," *Presented at the Mid-South Area Engineering and Sciences Conference*, Oxford, MS, May 17-18 (abstract on CD-Rom).
- (3) <u>Qianru Lin</u> and Weiming Wu (2010). "A 1-D model of cohesive sediment transport in open channels," Presentation at 2010 World Environmental and Water Resources Congress, May 16-20, Providence, RI (Abstract included in proceedings).
- (4) Weiming Wu (2012). "Earthen embankment breach modeling: past, present and future," Presented at 2012 World Environmental & Water Resources Congress, May 20-24, Albuquerque, NM.
- (5) <u>Meng Wang</u> and Weiming Wu (2013). "Comparison of parametric dam breach models," Presented at 2013 World Environmental & Water Resources Congress, May 19-23, Cincinnati, OH.
- (6) <u>Reza Marsooli</u> and Weiming Wu (2013). "3-D numerical simulation of dam-break flows on movable beds," Presented at 2013 World Environmental & Water Resources Congress, May 19-23, Cincinnati, OH.
- (7) Weiming Wu and <u>Qianrun Lin</u> (2014). "A 3-D finite-volume model for coastal morphodynamic processes," Presented at the 34<sup>th</sup> International Conference on Coastal Engineering, June 15-20, Seoul, South Korea.
- (8) Weiming Wu and <u>Chamil Perera</u> (2015). "3-D numerical simulation of flows in large lake." Presented in 58th Annual Conference on Great Lakes Research, International Association of Great Lakes Research, May 25-29, Burlington, VT, USA.

- (9) Weiming Wu (2015). "Introduction to a simplified physically-based dam/levee breach model — DLBreach." Presented in 2015 World Environmental and Water Resources Congress, May 17-21, Austin, Texas.
- (10) <u>Reza Marsooli</u> and Weiming Wu (2015). "Numerical investigation of tsunami and storm wave attenuation by vegetation using a 3D RANS model." Presented in 2015 World Environmental and Water Resources Congress, May 17-21, Austin, Texas.
- (11) Weiming Wu and <u>Alex Sanchez</u> (2015). "Development of embankment breach models for coastal applications." Presented in the Erosion Workshop, June 30-July 1, Hydrology Engineering Center, U.S. Army Corps of Engineers, Davis, CA.
- (12) Weiming Wu, Ian M. Knack, Brandon Teetsel, <u>Chamil Perera</u>, <u>Zahra Sharifnezhadazizi</u>, and <u>Amina Grant</u> (2016). "Assessment of sediments impounded by the aged Burden Pond Dam of Troy, NY." Presented at the 2016 World Environmental & Water Resources Congress, West Palm Beach, FL, USA, May 22-26.
- (13) Weiming Wu (2017). "A simplified physically-based model for coastal barrier island breaching." Presented at the 2017 International Perspective on Water Resources and the Environment, Jan. 4-6, Wuhan, China.
- (14) Weiming Wu and Meng Wang (2017). "Development of a 1-D physically-based model of dam/levee breach processes." Presented at the 2017 World Environmental & Water Resources Congress, Sacramento, CA, USA, May 21-25.
- (15) Weiming Wu and Zhiguo He (2017). "Coastal sediment transport modeling." Invited Speaker, the First Int. Conf. on Marine Sciences and Advanced Technology, Aug. 3-5, Udayana University, Denpasar, Bali, Indonesia.
- (16) Weiming Wu, Ian M. Knack, Chamil Perera, Rachitha Muthukumarana and Meng Wang (2018). "Assessment of sediments impounded by the Bingham Mills Dam in the Hudson River Watershed." Presented in 2018 World Environmental and Water Resources Congress, June 3-7, Minneapolis, MN.
- (17) Weiming Wu and Meng Wang (2018). "Development of a 1-D embankment breaching model." Presented in the 13<sup>th</sup> International Conference on Hydroscience and Engineering, June 18-22, Chongqing, China.
- (18) Weiming Wu (2018). "3-D numerical modeling of sediment transport near coastal inlets." Presented in the 36<sup>th</sup> International Conference on Coastal Engineering, July 30-August 3, Baltimore, MD.
- (19) Dilshan S. P. Amarasinghe Baragmage, Koushyar Shaloudegi, Narutoshi Nakata, and Weiming Wu (2018). "Hybrid simulation of coastal loading on structures." Presented in the 36<sup>th</sup> International Conference on Coastal Engineering, July 30-August 3, Baltimore, MD.
- (20) Weiming Wu (2019). "Physically-Based Dam and Levee Breach Modeling." (invited) Annual Conf. of Chinese Society of Hydraulic Engineering, Oct. 22-24, Yichang, China.

## **Technical Reports (selected)**

- Yitian Li and Weiming Wu (1991). "The study and preliminary application of the numerical model for sediment transport in the fluctuating backwater region of Three Gorges Project," *Technical Report for Project No. 16-1-6*, Wuhan University of Hydraulic and Electric Engineering. (in Chinese)
- (2) Weiming Wu (1997). "3-D calculations of flow and sediment transport in rivers -- An introduction to FAST3D.river code," *Final Report on the Research Project granted by*

Alexander von Humboldt Foundation of Germany, Institute for Hydromechanics, University of Karlsruhe, Germany.

- (3) Weiming Wu and Dalmo A. Vieria (2000). "One-dimensional channel network model CCHE1D 2.0 -- Technical manual," *Technical Report No. NCCHE-TR-2000-1*, National Center for Computational Hydroscience and Engineering, University of Mississippi.
- (4) Dalmo A. Vieira and Weiming Wu (2000). "One-dimensional channel network model CCHE1D version 2.0 – user's manual," *Technical Report No. NCCHE-TR-2000-2*, National Center for Computational Hydroscience and Engineering, University of Mississippi.
- (5) Weiming Wu (2001). "CCHE2D sediment transport model," *Technical Report No. NCCHE-TR-2001-3*, National Center for Computational Hydroscience and Engineering, University of Mississippi. This report is published on NCCHE website.
- (6) Weiming Wu and Dalmo A. Vieria (2002). "One-dimensional channel network model CCHE1D 3.0 -- technical manual," *Technical Report No. NCCHE-TR-2002-1*, National Center for Computational Hydroscience and Engineering, University of Mississippi.
- (7) Dalmo A. Vieira and Weiming Wu (2002). "One-dimensional channel network model CCHE1D version 3.0 – user's manual," *Technical Report No. NCCHE-TR-2002-2*, National Center for Computational Hydroscience and Engineering, University of Mississippi.
- (8) Yafei Jia and Weiming Wu (2007). "Numerical and empirical modeling tools for studying sand and gravel mining hole evolutions and bank erosion in alluvial rivers", final report submitted to Flood Control District of Maricopa County, Arizona.
- (9) Wu, W., Ozeren, Y., Wren, D., Chen, Q., Zhang, G., Holland, M., Ding, Y., Kuiry, S.N., Zhang, M., Jadhav, R., Chatagnier, J., Chen, Y., and Gordji, L. (2011). "Investigation of surge and wave reduction by vegetation." Phase I Report for SERRI Project No. 80037, The University of Mississippi, MS, p. 315, with p. 465 Appendices. http://www.ncche.olemiss.edu/~wuwm/SERRI-Report
- (10) Alejandro Sánchez, Weiming Wu, Julie Dean Rosati, Zeki Demirbilek, Tanya Beck, Rob Thomas, Jamsey Rosati III, Chris Reed, and Irene Watts (2011). "Verification and validation of the Coastal Modeling System, Report 3: Hydrodynamics," ERDC/CHL TR-11-10, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- (11) Alejandro Sánchez, Weiming Wu, Tanya M. Beck, Honghai Li, Julie Dean Rosati, Zeki Demirbilek, and Mitchell Brown (2011). "Verification and validation of the Coastal Modeling System, Report 4: Sediment transport and morphology change," ERDC/CHL TR-11-10, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- (12) Wu, W., Ozeren, Y., Wren, D., Chen, Q., Zhang, G., Holland, M., Marsooli, R., Lin, Q., Jadhav, R., Parker, K. R., Pant, H., Bouanchaud, J., and Chen, Y. (2012). "Investigation of surge and wave reduction by vegetation (Phase II) —Interaction of Hydrodynamics, Vegetation and Soil." Phase II Report for SERRI Project No. 80037, The University of Mississippi, MS, p. 395. http://www.ncche.olemiss.edu/~wuwm/SERRI-Report

- (13) Li, H., A. Sanchez, W. Wu, and C. W. Reed (2013). "Implementation of Structures in the CMS: Part I, Rubble Mound." Coastal and Hydraulics Engineering Technical Note ERDC/CHL CHETN-IV-93. Vicksburg, MS: US Army Engineer Research and Development Center.
- (14) Li, H., A. Sanchez, W. Wu, and C. W. Reed (2013). "Implementation of structures in the CMS: Part II, Weir." Coastal and Hydraulics Engineering Technical Note ERDC/CHL CHETN-IV-94. Vicksburg, MS: US Army Engineer Research and Development Center.
- (15) Li, H., A. Sanchez, W. Wu, and C. W. Reed (2013). "Implementation of structures in the CMS: Part III, Culvert." Coastal and Hydraulics Engineering Technical Note ERDC/CHL CHETN-IV-95. Vicksburg, MS: US Army Engineer Research and Development Center.
- (16) Li, H., A. Sanchez, and W. Wu (2013). "Implementation of structures in the CMS: Part IV, Tide Gate." Coastal and Hydraulics Engineering Technical Note ERDC/CHL CHETN-IV-96. Vicksburg, MS: US Army Engineer Research and Development Center.
- (17) Alejandro Sánchez, Weiming Wu, Honghai Li, Mitchell Brown, Chris Reed, Julie Dean Rosati, and Zeki Demirbilek (2014). "Coastal Modeling System: Mathematical Formulations and Numerical Methods." ERDC/CHL TR-14-2, Coastal and Hydraulics Laboratory, U.S. Army Engineer Research and Development Center, Vicksburg, MS.
- (18) Weiming Wu and Chamil Perera (2015). "Erosion of Mixed Cohesive and Noncohesive Sediments." Final Report Submitted to U. S. Army Engineer Research and Development Center for the BAA Project W912HZ-14-P-0110 "Laboratory Experiments on Erosion of Mixed Cohesive/Noncohesive Sediments", Clarkson University, NY.
- (19) Weiming Wu (2016). "Enhancement of the Simplified Physically-Based Model DLBreach for Coastal Levee and Barrier Breaching." Interim Report Submitted to U. S. Army Engineer Research and Development Center for the first phase (June 4, 2015 – Feb. 4, 2016) of BAA Project W912HZ-15-P-0058 "Implementation of Physically-Based Simulation Algorithms for USACE's Next-Generation Dam/Levee/Barrier Breach Models", Clarkson University, NY.
- (20) Weiming Wu (2016). "Introduction to DLBreach A Simplified Physically-Based Dam/Levee Breach Model, version 2016.4." Technical Report, Department of Civil and Environmental Engineering, Clarkson University, NY, p. 119.
- (21) Weiming Wu (2016). "Inputs and Outputs of DLBreach A Simplified Physically-Based Dam/Levee Breach Model, version 2016.4." Technical Report, Department of Civil and Environmental Engineering, Clarkson University, NY, p. 17.