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**1. POST SECONDARY EDUCATION**

- 2003 **Ph.D.** in Environmental Engineering, University of British Columbia, Canada
- 1993 **M.A.Sc.** in Environmental Engineering, University of British Columbia, Canada
- 1989 **M.Eng.** in Environmental Engineering, Tsinghua University, Beijing, China
- 1986 **B.Eng.** in Environmental Engineering, Tsinghua University, Beijing, China

**2. PROFESSIONAL REGISTRATION/CERTIFICATION**

- 2004 **Board Certified Environmental Engineer (BCEE)**, Certified Specialist in Water Supply and Wastewater, *American Academy of Environmental Engineers* (current)
- 1995 Licensed **Professional Engineer (P.E.)** in Civil Engineering, State of Washington, USA (current)
- 1994 Registered **Professional Engineer** in Environmental Engineering, Province of British Columbia, Canada (1994-2004)

**3. EMPLOYMENT HISTORY**

- 2008-current Associate Professor with tenure, **Southern Illinois University Edwardsville, USA**
- 2002-2008 Assistant Professor, **Southern Illinois University Edwardsville, USA**
- 2001-2002 Sessional Instructor, **British Columbia Institute of Technology, Canada**
- 1998-2002 Graduate Research Assistant, University of British Columbia, Canada
- 1994-1999 Project Engineer (Environmental), **Dayton & Knight Ltd., BC, Canada**
- 1991-1994 Environmental Engineer, **Stantec Consulting Ltd., Canada**

#### 4. PUBLICATIONS (full papers)

1. **Zhou, J.**, Erdal, Z. K., McCreanor, P. T., Montalto, F. (2010) *Sustainability*. Water Environment Research, 82 (10), pp. 1376-1395
2. **Zhou, J.**, Grinter, M., Wrenn, B. A. (2010) *Water Usage and Sustainable Water Supply for Ethanol Production*. In the Proceedings of the Sixth International Conference on Sustainable Water Environment: Water Infrastructures in Time of Climate Change, July 29-31, University of Delaware, Newark, DE
3. **Zhou, J.**, Montalto, F., Erdal, Z. K., McCreanor, P. T. (2009) *Sustainability*. Water Environment Research, 81 (10), pp. 1451-1489
4. **Zhou, J.**, Mora, R., Dacha, R.S., Guntaka, A. (2009) *Evaluating the Sustainability of Wastewater Sludge Processes through Life Cycle Analysis*. In the Proceedings of 12th International Water Association (IWA) Sludge Conference, Aug. 8-10, Harbin, China
5. **Zhou, J.**, Jaffery, S.F., Paulson, B., Johnson, K.A. (2009) *Inhibitory Effect of Decomposing Barley Straw on Algal Growth in Water*. In the Proceedings of ASCE-EWRI 2009 International Conference, Jan. 5-7, Bangkok, Thailand
6. L. Jin, L., Zhao, J., **Zhou, J.** (2009) *An Integrated Approach for Septic Tank Management: World Bank Global Environment Facility Yantai Demonstration Study*. In the Proceedings of 2009 International Conference on Sustainable Water Infrastructure for Cities and Villages of the Future, Nov. 6-9, Beijing, China
7. L. Jin, L., Zhao, J., **Zhou, J.** (2009) *Policy and Regulations for Yantai Septic Tanks Management*. In the Proceedings of 2009 International Conference on Sustainable Water Infrastructure for Cities and Villages of the Future, Nov. 6-9, Beijing, China
8. Hu, S. and **Zhou, J.** (2008) *Developing a GIS-Based Information Management System for On-site Wastewater Treatment Facilities*. International Journal of Software Engineering & Knowledge Engineering, 18 (4) pp. 1-11
9. **Zhou, J.**, Mulla, F.A. and Harper, J. (2008) *An Innovative Approach to Handle Shock Loading to Wastewater Treatment Process through Reusing Waste Activated Sludge*, In Proceedings of ASCE-EWRI 2008 World Water and Environment Resources Congress, May 12-16, Honolulu, HI
10. **Zhou, J.**, Fitzmorris, K.B., and Qi, Y. (2008) *Biosolids and Sludge Management*. Water Environment Research, 80 (10), pp. 1241-1261
11. Lin, C, Vaughn, B.M. and **Zhou, J.** (2007) *Experience in Developing and Managing a Web Site to Assist in Teaching Civil Engineering Undergraduate Laboratory Courses*. Computers in Education Journal, 18 (1), pp.2-12
12. **Zhou, J.**, Parker, W. and Laha, S. (2007) *Biosolids and Sludge Management*. Water Environment Research, 79 (10), pp.1496-1527
13. **Zhou, J.** and Hu, S. (2007) *On-line Data Collection and GIS-based Biosolids Information Management System*. In Proceedings of 2007 WEF/AWWA Joint Residuals and Biosolids Management Conference, Apr. 15-17, Denver, CO
14. **Zhou, J.**, Corley, C. E., Zhu, L., Broeckling, L., Renth, R., and Kluge, T.R. (2006) *Better with Barley Straw*. Water Environment & Technology, 18 (1), pp.70-73
15. Parker, W., Laha, S., and **Zhou, J.** (2006) *Biosolids and Sludge Management*. Water Environment Research, 78 (10), 1429-1468

16. **Zhou, J.**, Jaffery, S.F., and Hill, W.R. (2006) *Effects of Barley Straw on Algae Growth in Wastewater*. In Proceedings of IWA 2006 World Water Congress, Sept. 10-14, Beijing, China
17. **Zhou, J.** (2006) *Rapid Determination of Wastewater Sludge Dewatering Performance and Conditioning Chemical Dosage Using Capillary Suction Timer*. In Proceedings of ASCE-EWRI 2006 World Water and Environment Resources Congress, May 21-25, Omaha, NE
18. **Zhou, J.**, Corley, C. E., Zhu, L., Broeckling, L., Renth, R., and Kluge, T.R. (2005) *Barley Straw to Improve Performance of Small Wastewater Treatment Lagoon System*. In Proceedings of WEF 78<sup>th</sup> Annual Conference & Exposition (WEFTEC'05), Oct. 29-Nov. 2, Washington DC
19. Hu, S. and **Zhou, J.** (2005) *Developing a GIS-based Information Management Systems for On-site Wastewater Treatment Facilities*. In Environmental Informatics Archives, Vol. 3, pp. 328-334. Also in Proceedings of 4<sup>th</sup> International Conference on Environmental Informatics-ISEIS'2005, July 26-28, Xiamen, Fujian, China
20. **Zhou, J.** (2005) *Effective Use of Videos to Enhance the Teaching and Learning of Environmental Engineering*. In Proceedings of ASEE 2005 Annual Conference & Exposition, June 12-15, Portland, OR
21. **Zhou, J.** (2004) *Effects of Solids Concentration on Capillary Suction Time as a Measurement Method of Wastewater Sludge Dewaterability*. In Proceedings of WEF 77<sup>th</sup> Annual Conference & Exposition (WEFTEC'04), Oct. 2-6, New Orleans, LA
22. **Zhou, J.** (2004) *Achieving Balance between Student-Centered Learning and Instructor-Centered Teaching - A Case Study of an Environmental Engineering Course*. In Proceedings of ASEE 3<sup>rd</sup> International Colloquium on Engineering Education, Sept. 7-10, Beijing, China
23. **Zhou, J.**, Hu, S., Bhusal, A., and Jones, F. (2004) *Spatial Wastewater Biosolids Information Management System: a GIS Approach*. In Environmental Informatics Archives, Vol. 2, pp. 902-909. Also in Proceedings of ISEIS International Conference on Environmental Informatics, Aug. 25-27, Regina, SK, Canada
24. **Zhou, J.** (2004) *Video-enhanced Instruction Bring Real-world Application and Interactive Learning to Classroom*. In Proceedings of ASEE Illinois/Indiana Sectional Conference, Mar. 26-27, Peoria, IL
25. **Zhou, J.**, Mavinic, D.S., and Kelly, H.G. (2004) *Cations distribution in thermophilic aerobically digested biosolids*. In Proceedings of WEF 18<sup>th</sup> Annual Residual and Biosolids Management Conference, Feb. 22-25, Salt Lake City, UT
26. **Zhou, J.**, and Mavinic, D.S. (2003) *Pollution reduction at waste management facilities through thermophilic sludge digestion*. Water Science & Technology, 48 (3), pp. 57-63.
27. **Zhou, J.**, Mavinic, D.S., Kelly, H.G., and Ramey, W.D. (2003) *Experimental assessment of factors influencing dewatering properties of thermophilically digested biosolids*. In Proceedings of IWA Sludge Management Conference, June 23-25, Trondheim, Norway, pp. 111-118.
28. **Zhou, J.**, Mavinic, D.S., and Kelly, H.G. (2003) *Factors of impact on dewatering properties of thermophilically digested biosolids*. In Proceedings of 2<sup>nd</sup> Canadian Organic Residuals Recycling Conference, April 24-25, Penticton, BC, Canada
29. **Zhou, J.**, Mavinic, D.S., Kelly, H.G., and Ramey, W.D. (2002) *Effects of temperature and extracellular proteins on dewaterability of thermophilically digested biosolids*. Journal of Environmental Engineering and Science, 1 (6), pp. 409-415.

30. **Zhou, J.**, and Mavinic, D.S. (2002) *Pollution reduction at waste management facilities through thermophilic sludge digestion*. In Proceedings of 1<sup>st</sup> IWA Young Researchers Conference, Sept. 9-10, Cranfield, UK (best poster award), pp. 106-112.
31. **Zhou, J.**, Mavinic, D.S., Kelly, H.G., and Ramey, W.D. (2002) *Dewaterability of thermophilically digested biosolids: effects of temperature and cellular polymeric substances*. In Proceedings of 2002 Joint CSCE/ASCE-EWRI Environmental Engineering Conference, July 21-24, Niagara Falls, Ontario, Canada
32. **Zhou, J.**, Kelly, H.G., Mavinic, D.S. and Ramey, W.D. (2001) *Digestion effects on dewaterability of thermophilic and mesophilic aerobically digested biosolids*. In Proceedings of WEF 74<sup>th</sup> Annual Conference & Exposition (WEFTEC'01), Oct. 13-17, Atlanta, GA
33. **Zhou, J.**, Mavinic, D.S. and Kelly, H.G. (2001) *Flocs size profiling to characterise dewatering properties of thermophilic and mesophilic aerobically digested biosolids*. In Proceedings of 7<sup>th</sup> CSCE Environmental Engineering Conference, May 30-June 2, Victoria, BC, Canada (2<sup>nd</sup> place student paper award)
34. Kelly, H.G., Frese, H., Gibb, A. and **Zhou, J.** (2000) *Dewatering improvements of thermophilically digested biosolids through addition of metal salts at the Salmon Arm Water Pollution Control Centre*. In Proceedings of 6<sup>th</sup> CSCE Environmental Engineering Conference, June 7-10, London, Ontario, Canada, pp. 241-246.

## 5. DISSERTATION AND THESIS

- **Zhou, J.** (2003) Dissertation for Ph.D. degree in Environmental Engineering: *Factors Influencing Dewaterability of Thermophilic Aerobically Digested Biosolids*. Advisors: Dr. Donald S. Mavinic, Professor of Environmental Engineering and Mr. Harlan G. Kelly, Adjunct Professor of Environmental Engineering, University of British Columbia, Canada
- **Zhou, J.** (1993) Thesis for Master of Applied Science degree in Environmental Engineering: *The Accuracy and Precision of ORP Monitoring in Bio-Nutrient Removal Processes*. Advisor: Dr. William K. Oldham, Professor Emeritus of Environmental Engineering, University of British Columbia, Canada

## 6. GRANTS, FELLOWSHIP, AWARDS (funded)

1. Principal Investigator (PI), "Green Infrastructure Retrofits for an Urban Environment: Bioretention on South Grand Great Streets - Water Monitoring and Study", from East-West Gateway Council of Governments, 2011-2014
2. PI, "City of St. Louis Low Impact development Alley Pilot Study – Phase I" from CH2M Hill Inc. with City of St. Louis, 2008-2009
3. PI, "Survey and Analysis of Industrial Water Demand and Supply at the Tri-City Port District" from National Great Rivers Research and Education Center, 2008
4. Joint PI, "Developing the Basis for Creating Environmental Networking Organizations in Downstate Illinois" from Illinois Waste Management and Research Center, Champaign, IL, 2006-2008
5. Co-PI, "Competitive Intelligence for Small Businesses" from State of Illinois, 2006 (GIS-based information system)
6. Project Director (PD), "Environmental Engineering Internship" from Basilico Engineering Inc., St. Louis, MO, 2003-2006

7. PI, "Develop an Operational Strategy to Handle Shock Loading to Wastewater Treatment Process", SIUE Funded University Research, 2006-2007 (GPS-X wastewater process simulation and modeling)
8. PI, "Barley Decomposition and Inhibitory Effects on Algae Growth in Wastewater" from Illinois Waste Management Research Center, Champaign, IL, 2005-2006
9. Principal Advisor of a M.S. thesis that won SIUE 2005 Outstanding Thesis Award, titled "The Development and Application of a GIS-based Wastewater Biosolids Information Management System"
10. PI, "Impact of Roxana WWTP Discharge on Water Quality in the Cahokia Diversion Channel" from Village of Roxana, IL, 2004
11. PI, SIUE: Summer Research Fellowship "Rapid Determination of Conditioning Chemical Dosage to Dewater Wastewater Sludge", 2005
12. PI, SIUE: Research Equipment and Tools Program, "Particle Charge Detector to Enhance Environmental Engineering Research", 2004
13. PI, SIUE: Funded University Research, "Kinetics of Barley Decomposition in Wastewater", 2004-2005
14. Co-PI, SIUE, Excellence in Graduate Education, "Promoting Research in Environmental Engineering", 2004
15. PI, "Barley Straw for Algae Control in New Baden Wastewater Lagoon", from Illinois Environmental Protection Agency, Springfield, IL, 2004
16. PI, SIUE: Summer Research Fellowship, "Field Study for Algae Control in Wastewater Lagoon", 2004
17. PI, SIUE: Funded University Research, "Developing a Wastewater Biosolids Information Management System", 2003-2004
18. Recipient, American Society of Civil Engineers, "ASCE Excellence in Civil Engineering Education (ExCEED) Fellowship", 2003
19. PD, SIUE: Excellence in Graduate Education, "Developing a New Graduate Course: Municipal Infrastructure Design", 2004
20. PD, SIUE: Excellence in Undergraduate Education, "Enhancing the Teaching of Environmental Engineering by Multimedia Tools", 2003-2004
21. PI, SIUE, Summer Research Fellowship, "Effects of Solids Concentration on Capillary Suction Time as a Measurement Method of Wastewater Sludge Dewaterability", 2003
22. PD, SIUE, Excellence in Graduate Education, "Learning and Teaching beyond the Classroom: WebCT for an Environmental Engineering Laboratory Course", 2003

## **7. TEACHING IN HIGHER EDUCATION**

### Southern Illinois University Edwardsville, USA (2002-current)

CE 416 Engineering Hydrology	CE 460 Municipal Infrastructure Design
CE 480 Environmental Analysis	CE 486 Wastewater Treatment Design
CE 487 Water Treatment Design	CE 493 Engineering Senior Capstone Design
CE 581 Advanced Wastewater Treatment	CE 582 Water Quality and Treatment
CE 596 Sustainable Engineering	CE 380 Environmental Engineering

### British Columbia Institute of Technology, Canada (2001-2002)

EENG 7714 Methods of Wastewater Analysis	EENG 8753 Industrial Wastewater Treatment I
EENG 8754 Industrial Wastewater Treatment II	

## **8. PROFESSIONAL ENGINEERING EXPERIENCE (full time)**

### **1994 – 1998 Project Engineer, Dayton & Knight Ltd. Canada**

- Design and Construction Management of Wastewater Treatment Plants  
(Cities of Salmon Arm, Whistler, Vernon, Campbell River, Langley, JAMES, Greater Nanaimo)  
Designed various components of wastewater treatment plants including hydraulic profile, headworks, primary and secondary reactors (physical-chemical and biological treatment processes), disinfection and final disposal, sludge digestion and gas collection. Conducted preparation of specifications, shop drawing review, and construction management.
- Sanitary Sewer Modelling, Study Analysis, Design and Construction Management  
(Cities of North Vancouver, Kimberley, West Vancouver, Salmon Arm, Pitt Meadows, Maple Ridge, Burnaby, City of Nanaimo, and Regional District of Nanaimo).  
Design and construction management of sanitary forcemain, sanitary sewer rehabilitation. Sanitary system analysis, inflow and infiltration monitoring and studies, long term infrastructure improvement and capital planning.
- Sewage and Drainage Pump Stations  
(Departure Bay, Nanaimo; Laurier, Port Coquitlam)  
Pre-design of drainage pump station. Construction management of standby generator for a major sewage pumping station.
- Water Supply System Modelling, Analysis and Studies  
(Cities of Delta, Abbotsford, Surrey, Kimberley, Pitt Meadows)  
Water supply system analysis, computer model development and calibration, long term infrastructure improvement and capital planning.

### **1991 – 1994 Environmental Engineer, Stantec Consulting Ltd. Canada**

- Wastewater Collection and Treatment  
(Saskatoon BNR Wastewater Plant; Sewage pump stations, Port Coquitlam).  
Worked as a design engineer for 12 months on various components of the 1993 expansion of Saskatoon Wastewater Treatment Plant (biological nutrient removal - BNR process). Pre-design of sanitary sewage pump stations.
- Water Supply and Treatment  
(GVRD water filtration pilot plant studies, Trail Water Treatment Plant).  
Worked as an operation engineer for 12 months to conduct pilot-scale water treatment studies including coagulation and flocculation, sedimentation, filtration, and ozonation. Provided operator training to Trail Water Treatment Plant.
- Various Municipal Projects (in British Columbia, Canada).

## 9. SERVICE TO THE PROFESSION

- Reviewer for the following journals
  - *Water Research*
  - *Bioresource Technology*
  - *Center for Sustainable Engineering Electronic Library, USA*
  - *Journal of Hazardous Materials*
  - *ASCE Journal of Environmental Engineering*
  - *Journal of Environmental Informatics*
  - *Environmental Technology*
  - *Water Environment Research*
- Reviewer for the following conferences
  - International Water Association (IWA) 2006 World Water Congress
  - IWA 2006 Young Researchers Conference
  - American Society for Engineering Education (ASEE) 2006 Annual Conference
  - ASEE 2005 Illinois-Indiana Section Conference
- Reviewer for the following agencies
  - Lindbergh Foundation
  - US Environmental Protection Agency (USEPA) Design Manual for Municipal Wastewater Stabilization Ponds
  - National Science Foundation (NSF) 2006 CCLI Program
  - North Carolina Biotechnology Center, Science & Technology Development Program
- Program Committee member, 2006 Annual National Operators Training Conference
- Session moderator, ASEE IL/IN 2004 Sectional Conference
- Session moderator, 2006 ASCE World Environmental & Water Resources Congress
- Chair, the Residuals Management Technical Committee of the ASCE-EWRI (current)
- President, Chinese-American Professors in Environmental Engineering and Science (current)