

Yadong Li

EDUCATION

- Ph.D.** Tsinghua University (China) and University of Tokyo (Japan), Joint Graduate Program in Environmental Engineering, 1987-1992
- M.S.** Tsinghua University (China), Environmental Engineering, 1985-1987
- B.S.** Tsinghua University (China), Environmental Engineering, 1980-1985

PROFESSIONAL REGISTRATION

Professional Engineer (Environmental Engineering), Mississippi, License No. 15764

EXPERIENCE

- 2008-present **Associate Professor**, Department of Civil & Environmental Engineering, Jackson State University.
- 2002-2008 **Assistant Professor**, Department of Civil & Environmental Engineering, Jackson State University
- 1998-2001 **Research Assistant Professor**, Capsule Pipeline Research Center and Department of Civil & Environmental Engineering, University of Missouri-Columbia
- 1995-1998 **Visiting Assistant Professor**, Department of Civil & Environmental Engineering, University of Missouri-Columbia
- 1995 **Visiting Scholar**, National Risk Management Research Laboratory, U.S. Environmental Protection Agency, Cincinnati, Ohio
- 1992-1995 **Lecturer**, Department of Environmental Engineering, Tsinghua University (China)
- 1991-1992 **Graduate Research Assistant**, Department of Environmental Engineering, Tsinghua University (China)
- 1989-1991 **Graduate Research Assistant**, Department of Nuclear Engineering, The University of Tokyo (Japan)
- 1985-1989 **Graduate Research Assistant**, Department of Environmental Engineering, Tsinghua University (China)

RESEARCH INTERESTS

Solid waste & hazardous waste: fate and risk of hazardous contaminants, conversion of municipal solid waste into fuel and new products; use of biomass waste materials as renewable energy resource; electronic waste environmental hazards and treatment, remediation of contaminated sites, research and design of sanitary and secure landfills; utilization of coal combustion byproducts; stabilization/solidification of hazardous waste.

Groundwater pollution: Detection, modeling, and experimental simulation of transport and transformation of contaminants in subsurface

Environmental chemistry: Chemical behavior of radionuclides and heavy metals in surface and ground waters

Biological treatment: composting and anaerobic digestion of biowastes; domestic wastewater irrigation.

Engineering Economics: Economic analysis of engineering projects/facilities.

RESEARCH GRANTS

“2012-2016 Students Summer Research Internship Program,” U.S. Army Corps of Engineers Engineer Research and Development Center (ERDC), 5 year starting April 1, 2012; **PI: Yadong Li**, Co-PI: Farshad Amini; Amount: \$2,000,000.

“Data Sampling and Modeling of Contaminant Dispersant,” Northern Gulf Institute, one year starting Aug. 1, 2010; PI: Gordon Skelton; **Senior Environmental Specialist: Yadong Li**; Amount: \$349,314

“MRI: Acquisition of An ICP-OES for Multidisciplinary Environmental Studies and Training,” National Science Foundation, 3 years starting Sept. 1, 2010. **PI: Yadong**, Co-PI: Lin Li; Amount: \$245,877

“Enhancing Transportation Education through Real-World Design Projects,” Institute for Multimodal Transportation (IMTRANS), Jackson State University, 1 year starting July 1, 2009. **PI: Yadong Li**; Amount: \$11,913

“Research Experiences for Teachers,” National Science Foundation, 1 year starting July 1, 2006. **PI: Yadong Li**; Amount: \$20,000

“Study of E-waste Environmental Hazards and Treatment,” National Science Foundation CAREER Award, 5-year project starting July 1, 2003. **PI: Yadong Li**; Amount: \$400,398

“Toxicity Assessment and Evaluation of E-waste by the Toxicity Characteristic Leaching Procedure (TCLP),” 2002 (12-month project, starting Dec. 2002). PI: Pao-Chiang Yuan **Co-PI: Yadong Li**; Amount: \$38,645; Funding: U.S. Department of Energy Environmental Technology Consortium

“Compacting Solid Waste Materials Generated in Missouri to Form New Products,” 2001 (12-month project, starting Jan. 2001). **PI: Yadong Li**, Co-PI: Yuyi Lin; Amount: \$100,000; Funding: Missouri Department of Natural Resources

“High-pressure compaction of corn seed residues to form a solid fuel,” 2001 (12-month project, starting March. 2001). PI: Henry Liu, **Co-PIs: Yadong Li** and Yuyi Lin; Amount: \$74,000; Funding: Integrated Protein Technologies, Monsanto Company

“University of Missouri-Columbia Environmental Engineering Partnerships for Training in Chinese Language and Culture,” 2000-2002 (24-month project, starting Jan. 2001). PI: Lee Peyton; **Co-PIs: Yadong Li** and Terry Weidner; Amount: \$257,000; Funding: National Security Education Program, U.S. Department of Defense

“Compacting Biomass and Municipal Solid Waste to Form an Upgraded Fuel,” 1998-2000 (20-month project). PI: Henry Liu, **Co-PIs: Yadong Li** and Yuyi Lin; Amount: \$395,000; Funding: U.S. Department of Energy

“Quasi-Static Electromagnetic Resistivity Surveys for 3-D Imaging of Subsurface DNAPL Contamination,” 1997-1999 (24-month project). PI: Lee Peyton; **Co-PIs: Clark Gantzer, Steve Anderson, and Yadong Li**; Amount: \$67,500; Funding: Environmental Security Technology Certification Program, U.S. Department of Defense

“A Waste Characterization Study for Waste/Source Reduction of State Targeted Materials,” 1996-1997 (12-month project). PI: Lee Peyton, Co-PI: Shanka Banerji, **Investigator: Yadong Li**; Amount: \$77,000; Funding: Missouri Department of Natural Resources

“Composite Material from Post-Consumer Plastics and Fly Ash,” 1997-1998 (12-month project). **PI: Yadong Li**, Co-PI: Lee Peyton; Funding: Center for Environmental Technology, University of Missouri-Columbia

COURSES TAUGHT

Introduction to Environmental Engineering
Environmental Engineering laboratory
Water and Wastewater Treatment Processes
Unit Processes and Operations in Environmental Engineering
Design of Environmental Engineering Facilities
Solid Waste Management
Capstone Design
Fluid Mechanics
Fluid Mechanics Laboratory
Hydrology
Engineering Economy
Engineering Graphics
Engineering Mechanics II
University Success

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers (ASCE), **Member**, 1998-present
Association of Environmental Engineering and Science Professors, **Member**, 2000-present
National Society of Professional Engineers (NSPE), Member, April 2008 – March 2009
Alliance of Hazardous Materials Professionals (AHMP), Member, March 2009 – present

PUBLICATIONS

Refereed papers in professional journals:

- Virginia C. Tickles, **Yadong Li**, Wilbur Walters (2013). “Integrating Cost Engineering and Project Management in a Junior Engineering Economics Course and a Senior Capstone Project Design Course.” *College Student Journal*, in press
- Lin Li, Bin Peng, Fabio Santos, **Yadong Li**, and Farshad Amini (2011). “Groundwater Impacts from Leaching of Coal Combustion Products in Roadways Embankment Constructions.” *Journal of ASTM International*, 8(8): 1-12.
- Yadong Li**, Li Jin (2011). “Environmental Release of Mercury from Broken Compact Fluorescent Lamps.” *Environmental Engineering Science*, 28 (10): 687-691; DOI: 10.1089/ees.2011.0027
- Yadong Li**, Jay B. Richardson, Xiaojun Niu, Ollie J. Jackson, Jeremy D. Laster, Aaron K. Walker (2009). “Dynamic leaching test of personal computer components.” *Journal of Hazardous Materials*, 171:1058-1065
- Yadong Li**, Jay B. Richardson, R. Mark Bricka, Xiaojun Niu, Hongbin Yang, Lin Li, and Arturo Jimenez (2009). “Leaching of heavy metals from E-waste in simulated landfill columns.” *Waste Management*, 29: 2147-2150
- Ran An, **Yadong Li**, Xiaojun Niu, and Hongtao Yu (2008). “Responses of antioxidant enzymes in catfish exposed to liquid crystals from E-waste.” *International Journal of Environmental Research and Public Health*, 5(2): 99-103
- Zongguo Wen, Kumnin Zhang, Du Bin, **Yadong Li**, and Wen Li (2007). “Case study on the use of genuine progress indicator to measure urban economic welfare in China.” *Ecological Economics*, 63: 463-475
- Xiaojun Niu and **Yadong Li** (2007). “Treatment of waste printed wire boards in electronic waste for safe disposal.” *Journal of Hazardous Materials*, 145: 410-416
- Yadong Li**, Jay B. Richardson, Aaron K. Walker, and Pao-Chiang Yuan (2006). “TCLP heavy metal leaching of personal computer components.” *Journal of Environmental Engineering (ASCE)*, 132 (4): 497-504
- Yadong Li**, Henry Liu, and Ou Zhang (2001). “High-pressure compaction of municipal solid waste to form densified fuel.” *Fuel Processing Technology*, 74: 81-91
- Yadong Li** and Henry Liu (2000). “High-pressure binderless compaction of waste paper to form useful fuel.” *Fuel Processing Technology*, 67(1): 11-21
- Yadong Li** and Henry Liu (2000). “High-pressure densification of wood residues to form an upgraded fuel.” *Biomass and Bioenergy*, 19(3): 177-186
- Yadong Li**, D. J. White, and R. L. Peyton (1998). “Composite material from fly ash and post-consumer PET.” *Resources, Conservation and Recycling*, 24(2): 87-93
- Yadong Li** and Guoding Li (1994). “Study on the hydrolysis reaction of Np(V).” *Journal of Nuclear and Radiochemistry*, 16(1): 49-53

- Yadong Li**, Guoding Li, and Kunmin Zhang (1994). “Study on absorption spectra, redox, and complexation of neptunium ions in carbonate solution.” Journal of Nuclear and Radiochemistry, 16(2): 22-25
- Yadong Li**, Kunmin Zhang, and Guoding Li (1994). “Study on the redox processes of neptunium ions in acid solution.” Chinese Journal of Nuclear Science and Engineering, 14(2): 91-94
- Yadong Li**, Zenko Yoshida, and Yoshiharu Kato (1993). “Electrolytic preparation of neptunium species in concentrated carbonate media.” Radiochimica Acta, 60(2-3): 115-119
- Joonhong Ahn, Yutaka Furuhashi, **Yadong Li**, and Atsuyuki Suzuki (1991). “Analysis of radionuclide transport through fracture networks by percolation theory.” Journal of Nuclear Science & Technology, 28(5): 433-446
- Yongfeng Nie, Zhaochang Liu and **Yadong Li** (1989). “Study on the transport and transformation of pollutants in unsaturated vadose zone.” Environmental Science (China), 10(2): 2-6

Conference Presentations, Proceedings, and Abstracts

- David P. Fries, Brian Gregson, Geran Barton, Gary Hendrick, Sandra Pettit, **Yadong Li**, David Millie, Gary Fahnenstiel (2012). “Mobile-Solar Autonomous Underwater Sampler (SAUS): Extending the Radius of Lab Based Mass Spectrometry.” 60th Conference on Mass Spectrometry and Allied Topics, American Society of Mass Spectrometry, Vancouver, Canada, May 20-24, 2012
- Shariana Cordero, **Yadong Li**, and Lin Li (2012). “Environmental Impact of Fly Ash Reuse in Road Embankment Construction.” Transportation Research Board 91st Annual Meeting, Washington, DC, Jan. 22-26, 2012
- Yadong Li** (2011). “Environmental Release of Mercury from Broken Compact Fluorescent Lamps.” 6th International Conference on Waste Management and Technology, Suzhou, China, Aug. 30-Sep. 1, 2011
- Lin Li, Fabio Santos, and **Yadong Li** (2011). “Geotechnical Properties of Fly Ash and Soil Mixtures for Use in Highway Embankments.” 2011 World of Coal Ash (WOCA) Conference, Denver, CO, May 9-12, 2011
- Fabio Santos, Lin Li, and **Yadong Li** (2011). “Groundwater Impacts from Leaching of Coal Combustion Products in Roadways Embankment Constructions.” International Symposium on Testing and Specification of Recycled Materials, Baltimore, MD, Feb. 2-4, 2011
- Fabio Santos, Lin Li, and **Yadong Li** (2011). “The Beneficial Reuse of Fly Ash in Embankment Construction and Its Environmental Impacts.” Transportation Research Board 90th Annual Meeting, Washington, DC, Jan. 23-27, 2011
- Yadong Li** (2010). “Environmental Impact of E-waste.” 5th International Conference on Waste Management and Technology, Beijing, China, Dec. 15-17, 2010

- Li Jin, Samson Bulti, and **Yadong Li** (2009). "Environmental Release of Mercury from Compact Fluorescent Light Bulbs." 6th Intl. Sym. Recent Advances in Environmental Health Research, Jackson, MS, Sept 14, 2009
- Yadong Li** (2009). "Environmental Concerns of Electronic Waste." Tennessee Recycling Coalition/Mississippi Recycling Coalition Joint Conference, Tunica, MS, Aug.12-13, 2009
- Yadong Li** and P.C. Yuan (2009). "Environmental Releases of Hazardous Materials from Obsolete Electronics and E-waste Recycling." Alliance of Hazardous Materials Professionals of Mississippi Second Quarter 2009 Meeting, Jackson, MS, June 25, 2009
- Yadong Li** and Bradnado Turnquest (2008). "Photolytic degradation of brominated flame retardants in the environment." MidSouth SETAC Annual Meeting, Vicksburg, MS, May 14-16, 2008
- Yadong Li**, Jay B. Richardson, Xiaojun Niu, Ollie J. Jackson, Arturo Jimenez, Jeremy D. Laster, and R. Mark Bricka (2007). "Leaching of Heavy Metals from E-waste in Simulated Landfill Columns." 4th Intl. Sym. Recent Advances in Environmental Health Research, Jackson, MS, Sept 16-19, 2007
- Bradnado Turnquest, Xiaojun Niu, and **Yadong Li** (2007). "Photolytic Degradation of brominated flame retardants in the environment." 4th Intl. Sym. Recent Advances in Environmental Health Research, Jackson, MS, Sept 16-19, 2007
- Ran An, **Yadong Li**, and Hongtao Yu (2007). "Biotoxicity of liquid crystals from obsolete laptop computers." 4th Intl. Sym. Recent Advances in Environmental Health Research, Jackson, MS, Sept 16-19, 2007
- Yadong Li**, R. An, and X. Niu (2007). "Biological Effects of Liquid Crystal Materials on Fish." 37th Mid-Atlantic Industrial & Hazardous Waste Conference, March 21-23, 2007, Cincinnati, OH
- Yadong Li** (2006). "Environmental Impact of E-waste." ASCE Mississippi Section Meeting, Hattiesburg, MS, Nov. 1-3, 2006
- Yadong Li**, O. Jackson, J. Laster, I. Dorsett, and X. Niu, (2006). "Dynamic leaching test of computer components for environmental impact assessment." 3rd Intl. Sym. Recent Advances in Environmental Health Research, Jackson, MS, September 17-20, 2006
- Xiaojun Niu and **Yadong Li** (2006). Treatment of waste printed wire boards in obsolete computers for safe disposal. Poster presentation at 3rd Intl. Symposium on Recent Advances in Environmental Health Research, Sept 17-20, 2006, Jackson, MS
- Yadong Li** (2006). "Dynamic leaching of toxic elements from computer components." 2nd Intl. Conf. Environmental Science and Technology, American Academy of Sciences, Houston, TX, USA, August 19-22, 2006
- Yadong Li**, O. Barnes, and R. M. Brick (2005). "Environmental impact of brominated flame retardants in E-waste." Proc. Intl. Conf. Energy, Environment, and Disasters – INCEED 2005, Charlotte, North Carolina, July 24-30, 2005
- Yadong Li**, O. Barnes, and R. M. Brick (2005). "Leaching of toxic elements from computer components." Proc. Intl. Conf. Energy, Environment, and Disasters – INCEED 2005, Charlotte, NC, July 24-30, 2005

- Yadong Li** (2004). "Toxicity evaluation of personal computers." 19th Annual Hazardous Materials Management Conference, North American Hazardous Materials Management Association, Dec. 6-10, 2004, Miami, FL
- Yuyi Li, **Yadong Li**, and Ying Zhang (2002). "High-pressure compaction of fly ash to make construction bricks." Proc. 19th Annual International Pittsburgh Coal Conference, September 23-27, 2002, Pittsburgh, PA. ISBN 1-890977-19-5
- Yadong Li**, Henry Liu, and Yuyi Lin (2002). "High-pressure compaction of flyash to produce super bricks." Abstracts for 27th Intl. Technical Conference on Coal Utilization & Fuel Systems, March 4-7, 2002, Clearwater, FL
- Yadong Li**, Henry Liu, and Yuyi Lin (2002). "Issues concerning the use of biomass bog fuel to co-fire with coal at power plants." Abstracts for 27th Intl. Technical Conference on Coal Utilization & Fuel Systems, March 4-7, 2002, Clearwater, FL
- Yuyi Lin, **Yadong Li**, Xinguo Cai, and Ou Zhang (2002), "Compaction solid waste material to form new products." Proc. 30th Missouri Waste Control Coalition Conference, July 7-9, 2002, Columbia, Missouri
- Yadong Li** and Henry Liu (2001). "Biomass log fuel (BLF) for co-firing with coal at existing power plants: a feasibility study." Proc. 25th International Technical Conference on Coal Utilization & Fuel Systems, March 5-8, 2001, Clearwater, FL. pp 1033-1040
- Henry Liu and **Yadong Li** (2000). "Compacting municipal solid waste into 'logs' for combustion at coal-fired power plants." Proc. International Symposium on Energy in the 21st Century, January 9-13, 2000, Hong Kong. Vol. 4, pp.1420-1426
- Yadong Li**, Rusheng Hu, Jonathan E. Wenzel, and Henry Liu (2000). "Turning yard waste into an upgraded biofuel." Proc. 25th International Technical Conference on Coal Utilization & Fuel Systems, March 6-9, 2000, Clearwater, FL. pp.107-114
- Yadong Li** and Henry Liu (2000). "Compaction biomass waste materials into logs for co-firing with coal." Proc. 17th International Pittsburgh Coal Conference, September 11-15, 2000, Pittsburgh, PA, USA. Published on CD-ROM, Paper No. 27-8
- Henry Liu and **Yadong Li** (2000). "Transporting Solid Wastes by Pipelines: A Feasibility Analysis Based on State-of-the-Art." Proc. of Convergence 2000 Conference Environmental and Pipeline for the Next Millennium, American Society of Civil Engineers (ASCE), July 23-26, 2000, Kansas City, MO. pp.338-347
- Z. Yoshida, H. Aoyagi, Y. Kato, **Yadong Li**, and S. Kihara (1991). "Redox, disproportionation, and complex formation reactions of neptunium ions." Proc. 3rd Int. Sym. Advanced Nuclear Energy Research: Global Environment and Nuclear Energy, March 13-15, 1991, Mito, Japan. pp.268-272

Book chapters:

- Zenko Yoshida, **Yadong Li**, and Joung-duk Kim (1996). "Asia: Japan, China, and Korea," Chapter 17. In: Separation Techniques in Nuclear Waste Management, pp.285-300, Editors: T. E. Carleson, N. A. Chipman, and C. M. Wai, CRC Press, Inc., Florida

Yadong Li (1992). “Experimental study on the chemical behavior of neptunium in groundwater.” In: Radioactive Waste Management, Vol.3, pp.127-133, Editors: Shanggeng Luo and Xuequn Li, China Ocean Press

U.S. PATENT

Yadong Li, Lee Peyton, and David J. White. Composite Material from Fly Ash and Waste Polyethylene Terephthalate. Patent Number: 6583217. Granted 2003