

Juneseok Lee, Ph.D., P.E.

Associate Professor & California Water Service Co. Chair Professor

Department of Civil and Environmental Engineering

San José State University

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Email: Juneseok.Lee@sjsu.edu

EDUCATION

Virginia Tech (Blacksburg, VA)

May 2008

Ph.D. in Environmental Water Resources Program, Department of Civil and Environmental Engineering

- Dissertation title: Two Issues in Premise Plumbing; Contamination Intrusion at Service Lines and Choosing Alternative Plumbing Material
- Co-Advisors: Dr. Andrea Dietrich, Dr. Vinod Lohani and (Late) Dr. G.V. Loganathan

Virginia Tech (Blacksburg, VA)

December 2004

M.S., Environmental Water Resources Program in Civil and Environmental Engineering

- Thesis title: Decision Support System for Optimal Replacement of Plumbing System
- Advisor: (Late) Dr. G.V. Loganathan

Korea University (Seoul, South Korea)

August 2001

Bachelor of Science, Civil and Environmental Engineering

EMPLOYMENT

San José State University (San Jose, CA)

August 2014 - Present

Associate Professor, Department of Civil and Environmental Engineering

San José State University (San Jose, CA)

August 2008- July 2014

Assistant Professor, Department of Civil and Environmental Engineering

Virginia Tech (Blacksburg, VA)

August 2002- May 2008

Lab Instructor, CEE2814 Measurement, Department of Civil and Environmental Engineering

Graduate Research Assistant funded from NSF Grant DMI-0329474: ‘: Towards sustainable drinking water infrastructure’

Graduate Research Assistant funded from AWWARF Project #301: ‘Non-Uniform Corrosion in Copper Piping - Assessment’

Daewoo Eng. & Construction Co., Ltd (Seoul, South Korea) July 2001- December 2001
Staff, Overseas Civil Project Team

Republic of Korea Marine Corps January 1996-March 1998
Sergeant, Lance Corporal

REGISTRATION

Professional Engineer (P.E.) of Civil Engineering, State of California (#78606) 2011

AWARDS

San José State University College of Engineering
Lorell Faculty Development Award Feb 2015

California Water Service Co. Chair Professorship June 2014
Named as California Water Service Co. Professorship to lead the collaborative with students and the CalWater technical Staff to solve a wide range of challenges confronting the water industry

San José State University Research Foundation (San Jose, CA)
2013 Young Investigator Award May 2013

San José State University College of Engineering
Davidson Professorship Award May 2012

San José State University College of Engineering
Junior Professorship Award May 2012

American Society of Civil Engineers (ASCE) Excellence in Civil Engineering Education (ExCEEEd) Fellowship
2011 ASCE ExCEEEd Fellow July 2011

Selected to attend NCAR Faculty Workshop: Young Scientist June 2010
invited to the National Center for Atmospheric Research (NCAR) Early Career Scientist Assembly Junior Faculty Forum: “Climate and Water: Advancing adaptation science and strategies for water resource vulnerability from climate variability and change”

Virginia Tech CEE Graduate Scholarship Aug 2007

RESEARCH GRANTS**EXTERNAL**

Funding Agency	Amount	Details of the project
California Water Service Company (June 2014 – May 2019) – Tower Foundation	\$450,000 (SJSU Tower Foundation)	To Solve a wide range of challenges confronting drinking water industry
ASCE ExCEED Fellowship (July 2011)	\$2,075	Selected as the ASCE 2011 ExCEED fellow
Hewlett-Packard (Jan 2011)	\$5,000	Life Cycle Assessment of Piping Material Research Support Gift
California Water Service Company (January 2011 – May 2014)	\$100,000	'Water Demand Analysis due to Water Meter Installation in California', Single- PI (Juneseok Lee).
National Science Foundation (August 2009 – December 2011)	\$ 149,957	'Integrating Sustainability into Lower Division Core Engineering Courses', as PI (Juneseok Lee) with 3 other co-Pis
National Center for Atmospheric Research (July 2010)	\$1,100 (<i>Travel fund</i>)	Invited as young scientist to NCAR (National Center for Atmospheric Research) on Water-Climate area conference
<i>EXTERNAL TOTAL</i>		\$708,132

INTERNAL

CALIFORNIA STATE UNIVERSITY (CSU)	
2012 CSU Water Resources and Policy Initiative (WRPI)	Research Proposal 0.2 Release Time during spring 2012
2011 CSU Research Grant	0.2 Release Times during fall 2011 and spring 2012 plus \$2,500
WRPI Proposal Committee	Stipend \$500
California State University	Research Funds (AY 2008-2009), Total amounts: \$7.493
WRPI- Water Resources Policy Initiatives (2009 & 2011)	Conference Travel Funds \$1,000
SAN JOSE STATE UNIVERSITY (SJSU)	

San José State University College of Engineering	2014-2015 SJSU COE Scholarly Activities Incentive Program, 0.2 Release Time during fall 2014
San José State University Research Foundation	2013 San Jose State University Young Investigator Award, Cash Prize \$1,000
San José State University	RSCA Research Grant (AY 2012-2013), 0.2 Release Time during fall 2013
San José State University College of Engineering	Davidson Professorship (AY 2012-2013), total \$1,500
San José State University College of Engineering	Junior Professorship Program (\$16,000) plus \$3,000 for professional development
San José State University College of Engineering	Laboratory Refreshment Grants (AY 2010-2011), total amounts: \$48,324
San José State University College of Engineering	Professional Laboratory Development Support (AY 2008-2010), total amounts: \$25,000
San José State University College of Engineering	Faculty Development Grant (AY 2009-2010), total amounts: \$7,450
San José State University College of Engineering	Summer Supplement Grant (AY 2009), total amounts: \$6,000
San José State University College of Engineering	Research Planning Grants (AY 2008-2009), total amounts: \$10,000
INTERNAL TOTAL	\$127,267 Plus 1.0 Release time (for research)

GRANT TOTAL (INTERNAL + EXTERNAL): \$836,399

JOURNAL ARTICLES

* denotes SJSU student research assistant

1. Tanverakul, S.* and **J. Lee** (2015), Review of Residential Water Demand Modeling from A Practical Perspective (under review)
2. **Lee, J.** (2015), Hydraulic Transients in Service Lines (under review)
3. **Lee, J.** and S. Chae (2015), Hourly Water Demand Analysis for Micro Water Grid Development (under review)
4. **Lee, J.** (2015), Forensic Water Demand Analysis of Low Income Ratepayer Assistance Program (Accepted for publication in *Journal of Water Supply: Research and Technology - AQUA*)
5. **Lee, J.** (2015), A Holistic Decision-Making Framework for Selecting Domestic Piping Materials (Accepted for publication in *Journal of Water Supply: Research and Technology - AQUA*)

6. Tanverakul, S.* and **J. Lee** (2015), Water Demand Analysis due to Water Meter Installation in CA (Accepted for publication in *Journal American Water Works Association*)
7. **Lee, J.** and Tanverakul, S*. (2014), Water Price Elasticity Analysis in CA (Accepted for publication in *Journal of Water Supply: Research and Technology - AQUA*)
8. **Lee, J.**, E. Kleczyk, D. Bosch, A. Dietrich, and V. Lohani (2013). Consumer Preferences in Pipe Failure Prone Area, *Journal American Water Works Association* (May 2013).
9. Ruberto, A.*, **J. Lee** and A. Bayer (2013). Water Energy Nexus Analysis of a Public University in California, *Water Efficiency* (May 2013).
10. **Lee, J.**, V. Lohani, A. Dietrich, and G.V. Loganathan (2012). Hydraulic Transients in Plumbing Systems, *IWA Water Supply, Water Science & Technology: Water Supply*, 12(5), 619–629.
11. McNeeley, S, S. Tessoroff, H. Lazrus, T. Heikkila, I. Ferguson, J. Arrigo, S. Attari, C. Cianfrani, L. Dilling, J. Gurdak, S. Kampf, D. Kauneckis, C. Kirchhoff, **J. Lee**, B. Lintner, K. Mahoney, S. Opitz-Stapleton, P. Ray (2012). Catalyzing Frontiers in Water-Climate-Society Research A View from Early Career Scientists and Junior Faculty, *American Meteorological Society (BAMS)*, page 477.
12. **Lee, J.**, E. Kleczyk, D. Bosch, E. Tanellari, S. Dwyer, and A. Dietrich. (2009). Case Study: Preference Trade-offs toward Home Plumbing Attributes and Materials, *Journal of Water Resources Planning and Management*, 135 (4), 237-243.
13. J. Delleur, **J. Lee**, V.K. Lohani, and L. Ormsbee (2009). Summary and Reflections on the Professional Career of GV Loganathan. *Journal of Water Resources Planning and Management*, 135(4), 209-214
14. Farooqi. O. E, G. V. Loganathan, M.A. Edwards, D. Bosch, **J. Lee**, and P. Scardina (2009). Copper Pinhole Failures: Plumbing Susceptibility and Management, *Journal of Water Resources Planning and Management*, 135 (4), 227-236
15. **J. Lee** and G. V. Loganathan (2006). Consumer Preferences Towards Plumbing Attributes, *Virginia Water Central, Virginia Water Resources Center*, No. 28, July 2006, pp. 10-11.
16. Loganathan, G. V., and **J. Lee** (2005). Decision Tool for Optimal Replacement of Plumbing Systems, *Journal of Civil and Environmental Engineering Systems*, 22(3), 1-16.

BOOK CHAPTERS

1. **Lee, J.** and O. Farooqi (2014) 'Emerging Issues in Drinking Water Distribution Systems: Focusing on Minor Water Systems'. Potable Water, Emerging Global Problems and Solution. Series: The Handbook of Environmental Chemistry, Vol. 30 Edited by Younos, Tamim, Grady, Caitlin A. ISBN 978-3-319-06562-5

ON-GOING WORKING PAPERS

1. **Lee, J.**, Impacts Analysis of Green Infrastructure on Water-Energy Nexus
2. **Lee, J.**, Water-Energy Nexus Issues in Pipe Network Systems
3. **Lee, J.**, Preference Analysis of Bottled Water using Multi-Criterion Decision Model
4. **Lee, J.**, Decision Analysis of Renewable Alternative Energy Sources
5. **Lee, J.**, National Level Failure Analysis of Service Lines
6. **Lee, J.**, Development of Modified Hunter's Methods toward Effective Conservation
7. **Lee, J.**, Hydraulic Transients Analysis in High-Rise Building

CONFERENCE PROCEEDINGS

*(*indicates SJSU graduate student; ** indicates SJSU undergraduate student)*

1. Chae, S. and **J. Lee**, HIC 2014 – *11th International Conference On Hydroinformatics*, New York, New York, USA, August 17 – 21, 2014, “Development of Micro Water Grid Pilot Platform”.
2. Tanverakul, S*. and **J. Lee**, 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, " Water Demand Analysis due to Water Meter Installation in CA."
3. Tanverakul, S*. and **J. Lee**, 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, " Water Price Elasticity Analysis in CA. "
4. Tanverakul, S*. and **J. Lee**, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "Historical Review of US Water Demand."
5. **Lee, J.** and E. Easterling**, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "LCA and EIO-LCA Applications to Plumbing Materials."
6. Tanverakul, S*. and **J. Lee**, 2012 AWWA ACE National Conference, Dallas, Texas, "Water Demand Analysis in Northern CA"(ppt format)
7. **Lee, J.**, N. Okamoto, R. Chung, and T. Anagnos, “Integrating Sustainability into Lower Division Core Engineering Courses”, FIE2011 (Frontiers in Education), October 2011.
8. **Lee, J.**, and A. Fayyaz*, “Investigation of Drinking Water Service Lines with Leaks”. The 12th annual Water Distribution Systems Analysis Conference (WDSA 2010), September 12-15, 2010 in Tucson, Arizona.
9. **Lee, J.**, V. K. Lohani, A. M. Dietrich, and G. V. Loganathan (Late), “Possible Contamination Intrusion Issues at Service Lines”, World City Water Forum 2009, August 18-21, 2009, Songdo Convensia, Incheon, Korea.

10. **Lee, J.**, Vinod K. Lohani, A. M. Dietrich, and G. V. Loganathan (Late), "Low Pressure Propagation at Service Lines", ASCE 11th Water Distribution Systems Analysis Symposium (WDSA2009) within the EWRI Conference, May 17-21, 2009, Kansas City, Missouri.
11. **Lee, J.**, D. Bosch, E. Kleczyk, E. Tanellari, A. M. Dietrich, and V. K. Lohani, "Case Study: Homeowner's Preference Trade-Offs Towards Plumbing Systems in Pipe Failure Prone Area", ASCE 11th Water Distribution Systems Analysis Symposium (WDSA2009) within the EWRI Conference, May 17-21, 2009, Kansas City, Missouri.
12. Loganathan, G. V., **J. Lee**, D. Bosch, S. Dwyer, S. Willis-Walton, and E. Kleczyk, "Preference trade-offs in choosing domestic plumbing materials", Pipelines 2006 Focus: 'Service to the Owner', Chicago Sheraton & Towers, Chicago, IL, July 30 – August 2, 2006.
13. Loganathan, G. V., **J. Lee**, D. Bosch, S. Dwyer, and E. Kleczyk, "Preference trade-offs in material selection for plumbing systems", Seventh International Congress on Civil Engineering, Tarbiat Modarres University, Tehran, Iran, May 8-10, 2006.
14. **Lee, J.**, G. V. Loganathan, D. Bosch, S. Dwyer, and E. Kleczyk, "Consumer concerns and preference tradeoffs in home plumbing systems", 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio August 27-30, 2006.
15. Loganathan, G. V., and **J. Lee**, "Analyzing copper plumbing pipe failures", World Water & Environmental Resource Congress 2005, May 15- 19, 2005, Anchorage Convention Center, Anchorage, Alaska.

CONFERENCE PRESENTATIONS

(*indicates SJSU graduate student; ** indicates SJSU undergraduate student)

1. Tanverakul, S*. and **J. Lee**, 2013 AWWA ACE National Conference, Boulder, Colorado, " Water Demand Analysis due to Water Meter Installation " (Poster Presentation).
2. Tanverakul, S*. and **J. Lee**, 2013 AWWA ACE National Conference, Boulder, Colorado, "Water Price Elasticity Analysis " (Poster Presentation).
3. Tanverakul, S*. and **J. Lee**, 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, " Water Demand Analysis due to Water Meter Installation in CA ".
4. Tanverakul, S*. and **J. Lee**, 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, " Water Price Elasticity Analysis in CA ".
5. Tanverakul, S*. and **J. Lee**, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "Historical Review of US Water Demand".
6. **Lee, J.** and E. Easterling**, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "LCA Applications to Plumbing Materials".
7. **Lee, J.**, N. Okamoto, R. Chung, and T. Anagnos, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "Implementing Sustainability into Lower Division Engineering Courses".

8. Tanverakul, S*. and **J. Lee**, 2012 AWWA ACE National Conference, Dallas, Texas, "Water Demand Analysis in Northern CA".
9. Chaudhry, A., S. Dallman and **J. Lee**, 2012 Western Economic Association International, 87th Annual Conference, "Decision Making tool for Rainwater Harvesting Program Implementation".
10. Tanverakul, S*. and **J. Lee**, 2012 Western Economic Association International, 87th Annual Conference, "Water Price and Demand in US".
11. **Lee, J.**, N. Okamoto, R. Chung, and T. Anagnos, 'Integrating Sustainability into Lower Division Core Engineering Courses', FIE2011 (Frontiers in Education), October 2011.
12. **Lee J.**, T. Anagnos, R. Chung, and N. Okamoto., 'Integrating Sustainability into Lower Division Core Engineering Courses'. ASCE EWRI 2011 World Environmental & Water Resources Congress, Bearing Knowledge for Sustainability, Palm Springs, California, May 22-26, 2011.
13. **Lee, J.**, "Residential Water Demand Analysis due to Water Meter Installation in California". ASCE EWRI 2011 World Environmental & Water Resources Congress, Bearing Knowledge for Sustainability, Palm Springs, California, May 22-26, 2011.
14. **Lee, J.**, A. Easterling**, and A. Shah, "Life Cycle Assessment of Different Plumbing Materials toward Better Informed Decision Making". ASCE EWRI 2011 World Environmental & Water Resources Congress, Bearing Knowledge for Sustainability, Palm Springs, California, May 22-26, 2011.
15. **Lee, J.** "Investigation of the Drinking Water Service Lines". The California Nevada Section American Water Works Association (AWWA). Annual fall 2010 conference in Sacramento, CA from October 5 – 8, 2010.
16. **Lee, J.**, and A. Fayyaz**, "Investigation of Drinking Water Service Lines with Leaks". The 12th annual Water Distribution Systems Analysis Conference (WDSA 2010), September 12-15, 2010 in Tucson, Arizona.
17. **Lee, J.**, "On-going Research Related with Climate Change Issues" National Center for Atmospheric Research
18. **Lee, J.**, A. Fayyaz**, and C. Luk*. "Analysis of Hydraulic Transients at T-Junctions: Focusing on the Water Main and Service Lines". CWEA 2010 Annual Conference - California Water Environment Association, Apr 20, 2010. Poster presentation.
19. **Lee J.**, T. Anagnos, R. Chung, and N. Okamoto. "Integrating Sustainability into Lower Division Core Engineering Courses". Poster session. NSF Awardees Conference, January 31-February 2, 2010, Reston, VA
20. **Lee, J.** "Gaseous Cavitation Phenomenon within Drinking Water Infrastructures." 2009 AWRA Annual Water Resources Conference, Red Lion Hotel on 5th Avenue, Seattle, Washington, November 9-12, 2009

21. **Lee, J.**, V. K. Lohani, A. M. Dietrich, and G. V. Loganathan (Late), “Possible Contamination Intrusion Issues at Service Lines”, World City Water Forum 2009, August 18-21, 2009, Songdo Convensia, Incheon, Korea
22. **Lee, J.**, V. K. Lohani, A. M. Dietrich, and G. V. Loganathan (Late), “Low Pressure Propagation at Service Lines”, ASCE 11th Water Distribution Systems Analysis Symposium (WDSA2009) within the EWRI Conference, May 17-21, 2009, Kansas City, Missouri.
23. **Lee, J.**, D. Bosch, E. Kleczyk, E. Tanellari, A. M. Dietrich, and V. K. Lohani, “Case Study: Homeowner’s Preference Trade-Offs Towards Plumbing Systems in Pipe Failure Prone Area”, ASCE 11th Water Distribution Systems Analysis Symposium (WDSA2009) within the EWRI Conference, May 17-21, 2009, Kansas City, Missouri.
24. **Lee, J.**, V. K. Lohani, and A. M. Dietrich, “Drinking Water Contamination Issues At Service Line Due To Hydraulic Transients: Experiments And Numerical Modeling”, KSEA Northwest Regional Conference (November 1, 2008)
25. Kleczyk, E., D. Bosch, E. Tanellari, and **J. Lee**, ”Household Preferences for Plumbing Materials: CA, CV, and AHP”, AAEA Poster Presentation, July 2008.
26. **Lee, J.**, V. K. Lohani, and A. M. Dietrich, “Contamination Intrusion at Service Lines”, Poster presentation at AWWA, Georgia, Atlanta, June 2008.
27. **Lee, J.**, S. Williamson, V. K. Lohani, and A. M. Dietrich, “Low Pressure Propagation Analysis in an Experimental Plumbing Rig”, Virginia/West Virginia, Water Research Symposium, November 26-27, 2007, Blacksburg, VA.
28. **Lee, J.**, and G. V. Loganathan, “ Consumer Preferences Towards Plumbing Attributes”, Virginia Water Central, Virginia Water Resources Center, No. 28, July 2006, pp. 10-11. Available at <http://www.vwrrc.vt.edu/central/Va%20Water%20Central%20June%202006%20one%20column.pdf>
29. **Lee, J.**, J. Ortiz, and G.V. Loganathan, “Analyzing the Low Pressure Propagation in an Experimental Plumbing System”, Virginia Water Science and Technology Symposium, November 1-3, 2006, Blacksburg, VA.
30. Kleczyk, E., D. Bosch, and **J. Lee**, “Corrosion in Home Drinking Water Infrastructure: Assessment of Causal Factors and Costs”, Virginia Water Science and Technology Symposium, November 1-3, 2006, Blacksburg, VA.
31. Loganathan, G. V., **J. Lee**, D. Bosch, S. Dwyer, S. Willis-Walton, and E. Kleczyk, “Preference Trade-offs in Choosing Domestic Plumbing Materials”, Pipelines 2006 Focus: ‘Service to the Owner’, Chicago Sheraton & Towers, Chicago, IL, July 30 – August 2, 2006.
32. Loganathan, G. V., **J. Lee**, D. Bosch, S. Dwyer, and E. Kleczyk, “Preference Trade-offs in Material Selection for Plumbing Systems”, Seventh International Congress on Civil Engineering, Tarbiat Modarres University, Tehran, Iran, May 8-10, 2006.

33. **Lee, J.**, G. V. Loganathan, D. Bosch, S. Dwyer, and E. Kleczyk, “Consumer Concerns and Preference Tradeoffs in Home Plumbing Systems”, 8th Annual International Symposium on Water Distribution Systems Analysis, Cincinnati, Ohio August 27-30, 2006.
34. **Lee, J.**, and G. V. Loganathan, “Preference Analysis of Home Plumbing Material”, Virginia Water Resources Research Center, National Water Research Symposium: Balancing water law and science, October 10-12, 2005, Virginia Tech, Blacksburg, Virginia.
35. Kleczyk, E., D. Bosch, S. Dwyer, **J. Lee**, and G. V. Loganathan, “Maryland Home Drinking Water Assessment”, Virginia Water Resources Research Center, National Water Research Symposium: Balancing water law and science, October 10-12, 2005, Virginia Tech, Blacksburg, Virginia.
36. Loganathan, G. V., and **J. Lee**, “Analyzing Copper Plumbing Pipe Failures”, World Water & Environmental Resource Congress 2005, May 15- 19, 2005, Anchorage Convention Center, Anchorage, Alaska.
37. **Lee, J.**, and G. V. Loganathan, “Analysis of Home Plumbing Pipe Failures”, Virginia Water Research Symposium, 2004: Assessing and Managing, Virginia’s Water Resources, October 4-6, 2004, Virginia Tech, Blacksburg, Virginia.
38. Loganathan, G. V., D. Bosch, and **J. Lee**, “Economic Impacts: Pipe Replacement Analysis”, Water Security in the 21st Century, Washington, DC, July 30 - August 1, 2003. A Special Joint Conference of Universities Council on Water Resources (UCOWR), National Institutes of Water Resources (NIWR), Environmental and Water Resources Institute of the ASCE (EWRI).

RESEARCH REPORTS

1. California Water Service Company, **Lee, J.** Residential Water Demand Analysis due to Water Meter Installations, May 2014
2. NSF Final Report (Award ID: 0935162). “Integrating Sustainability into Lower Division Core Engineering Courses”. **Lee, J.**, N. Okamoto, R. Chung, and T. Anagnos, Jan. 2011.
3. AWWARF Project #3015 Report “Pinhole leak trends and plumbing material selection” by Farooqi, O., **Lee, J.**, Loganathan, G. V., Edwards, M., Scardina, P. and Bosch, D.
4. AWWARF Project #3015 Report, “National Pinhole Leak Cost and Willingness to Pay for Improved Plumbing Materials”. Bosch, D., E. Sarver, E. Tanellari, S. Dwyer, S. Willis-Walton, G.V. Loganathan, O. Farooqi, and **J. Lee**
5. Tellico Village Community Survey Research Report, Bosch, D., Kleczyk, E., **Lee, J.**, and Tanellari, E. 2007.

INVITED TALKS

- San Jose State University, Sustainability Matters Showcase, “*Sustainable Drinking Water Infrastructure*”, December 5, 2011.
- Korea Gas Company (Ansan, South Korea). Title: “*Optimal Replacement Time of Piping Systems*”, August 8, 2011.
- San Jose State University, ENG100W Guest Speaker, Title: “*Water Resources Sustainability and its Infrastructures*”, October 13, 2010.
- Seoul Metropolitan Government, Waterworks Research Institute (Seoul, South Korea), Sponsored by Waterworks Research Institute’s 2010 waterworks specialist invitation program. Title: “*Several Issues in Premise Plumbing: Contamination Intrusion at Service Lines, Choosing Alternative Plumbing Materials, Practical Applications, and on-going research*”. August 12, 2010.
- Brain Korea 2010, Korea University (Seoul, South Korea), sponsored by Brain Korea (BK) 21 initiative for Global Leaders in Construction Engineering program. Title: “*Contamination Intrusion at Service Lines and Consumers’ Concerns*”, January 19, 2010.
- PPI Plastic Pipe Institute. “*Analysis of Consumer Preferences towards Piping Materials*”, Blacksburg, VA, March 2008.
- Korea Water Corporation, Daejeon, South Korea, “*Decision tools for optimal replacement of plumbing system and consumer preferences towards plumbing attributes*”, May, 2007.
- Korea University, Seoul, Korea, “*Economically sustainable decision support system for drinking water infrastructure and homeowner’s preference trade-offs in plumbing materials*”, May, 2007.

ENGINEERING CONSULTING

HomeServeUSA

January 2015

Failure Analysis of Water Service Lines

- Developed Best Management Practices for Water Service Lines

California Water Service Company

June 2014

Analysis of Current Asset Management at CalWater

- Reviewed current Asset Management and developed holistic Decision Support Systems

Advanced Water Management Research Program of the Ministry of Land, Infrastructure and Transport in the South Korean Government (12-TI-C01)

Development of a Micro Water Grid (MWG) Pilot platform for green buildings

Jan 2014

- Developed demand model
- Performed hydraulic analysis of high-rise building
- Applied decision modeling for optimal building design

Schwarz & Wheeler, San Jose, CA

January 2013

Hydraulic Surge Analysis

- Hydraulic surge analysis of Marina County, CA.
- Hydraulic surge analysis of San Jose, CA.

PPI (Professional Publications, Inc)

February 2013

On-Line Course Instructor

- Developed Civil Engineering Water Resources and Environmental On-line Course Materials
- Developed Civil Engineering Surveying On-line Course Materials

STUDENT RESEARCH SUPERVISION

San José State University (San Jose, CA)

Undergraduate Student Research Project Supervision

Name	Semester	Research Topic
Ryan Barker	fall 2013	Water Conservation related LEED Standard
Vincent Castaneda	spring 2013	Case Study: Application of EPA SWMM
Angela Ruberto	spring 2012	Water-Energy Nexus Issues in San Jose State University
Yonatan Tan	spring 2012	Case Study: Application of Global Climate Model (GCM)
Aldo Reyes	fall 2011	Case Study: Application of EPA SWMM
Uriel Ortiz	fall 2011	Case Study: Application of HEC-HMS
Zhen Wang	spring 2011	Case Study: Water Demand Analysis
Yansen Hendra	fall 2010	Hydraulic Transients at Service Lines
Khanh Huynh	fall 2010	Gaseous Cavitation at Service Lines
Charles Luk	spring 2010	Hydraulic Transients at T-Junctions
Thanhphong Doan	fall 2009	Hydraulic Transients Analysis at Water Mains

Graduate Student Research Project Supervision

Name	Semester	Research Topic
Brandon Woods	Spring 2015	Water Quality Analysis using Intervention Analysis
Jon Marshall	Spring 2015	Hydraulic Transients in Contra Costa Water District
Chris Mar	Spring 2015	Pipe Network Optimization using EPANET linked with Matlab
Shari Carlet	Spring 2015	Water Demand Analysis in Palo Alto, CA
Madeline Baker	fall 2014	Pipe Network Optimization using EPANET linked with Matlab
E.Eiesner-Streller	fall 2014	Historical Review of Water Price
Long Phi Hoang	fall 2014	Application of SVM for Water Demand Forecasting
Yi Ying Huang	fall 2014	Pipe Network Optimization using EPANET linked with Matlab
Sujan Maharjan	S & F 2012	Hourly Water Demand in High-Rise Building
S. Tanverakul	S & F 2012	Water Demand Analysis in California
Rafael Lopez	spring 2011	Application of EIO-LCA for Plumbing Materials
Tim Hampton	spring 2010	Practical Planning and Management for Water Infrastructure
Poyom Riles	spring 2009	Case Study: Application of HEC-RAS
Abdullah Fayyz	fall 2008	Hydraulic Transients Analysis at Water Mains

Virginia Tech (Blacksburg, VA)*Undergraduate Student Mentor*

- Published a Conference paper with an undergraduate student (Lee et al., 2007);
- Created a LabVIEW Educational Video Presentation (7.5 minutes) for Engineering Education Department (Fall 2007);
- Mentor on *hands-on* hydraulics activity (water tower experiment) including demonstration to ENGE 1024 GTAs (Fall 2007)

TEACHING**San José State University (San Jose, CA)****2008-Present***Have instructed Civil Engineering Courses including:*

- CE150 Introduction to Hydrology and Hydraulics,
- CE152 Engineering Hydrology,
- CE154 Hydraulic Design,
- CE250 Modeling in Water Resources Engineering,
- CE251 Open Channel Hydraulics,
- CE256 Sustainable Water Resources Engineering
- 12 semesters' Student Teaching Evaluation Average (SOTES): **4.8/5.0** (Fall 2008 – Spring 2014)
- *Water Resources Program Coordinator (fall 2008- present)*

- Coordinated all undergraduate and graduate level courses related to Water Resources Engineering Program
- *Course Coordinator for CE008 Surveying(2011- present)*
- *Course Coordinator for CE20 Engineering Graphics, CAD and Programming (2011- present)*

PPI (Professional Publications, Inc)

2011- 2013

On-Line Course Instructor

- Taught On-line Civil PE (Professional Engineer Exam) Review Courses
 - Hydrology
 - Hydraulics
 - Water Treatment
 - Waste Water Treatment
 - California Surveying

In-Class Course Instructor

- Taught Civil FE/EIT (Fundamentals of Engineering/ Engineers in Training) Review Courses
 - Fluid Mechanics
 - Probability and Statistics
 - Calculus
 - Linear Algebra

Virginia Tech (Blacksburg, VA)

2003-2007

Instructor

- Instructed Civil Engineering CEE 2814 Surveying Laboratory (fall 2003 ~ summer 2007)
 - 5 year (10 semesters) Teaching Evaluation Average: **4.9/5.0**
- Instructed Civil Engineering Fluid Mechanics (CEE 3304), Water Resources Engineering (CEE 3314), and Measurement (CEE 2814) on a substitute basis

NEW COURSE DEVELOPMENTS

San José State University (San Jose, CA)

- CE250 Modeling in Water Resources Engineering
 - Various modeling approaches for optimal planning and operation of environmental and water resources systems.
- CE254 Water Resources Systems Management
 - Various optimization tools for water resources systems planning and management considering that water resources projects are expensive to build and complicated to operate, and this involves many random system variables.

- CE256 Sustainable Water Resources Engineering
 - Sustainable practices that practicing hydraulic engineers will likely encounter. The topics include water use, water-energy nexus, water excess management concepts, environmental impact assessment, risk-based analysis, and water resources management issues.
- CE258 GIS Applications in Water Resources Engineering
 - Geographic Information Systems (GIS) Applications in hydrology and water supply, spatial analysis, Digital Elevation Model (DEM), pre and post processing of hydrologic model

ACADEMIC ADVISING

San José State University (San Jose, CA)

Water Resources Program Graduate Advisor (fall 2008- present)

- Advised Water Resources Program's Graduate Students

CEE Designated Undergraduate Advisor (fall 2011 – spring 2014)

- Have advised ~200 students per semester toward their academic success.

PROFESSIONAL SERVICE

NSF Proposal Panel Reviewer

- Invited as a panelist for NSF REE Program, April 2014

NSF Awardees Conference

- Invited as a Panelist in "What is sustainability" session, January 2010

NSF Proposal Reviewer

- Reviewed proposal for *National Science Foundation (NSF)* (2009)

Reviewer for Journals

- Reviewed manuscripts for *Urban Water* (2010 - present)
- Reviewed manuscripts for *Journal American Water Works Association* (2010 - present)
- Reviewed manuscripts for *Journal Korean Society of Hazard Mitigation* (2012)
- Reviewed manuscripts for *Drink. Water Eng. Sci. Discuss, Delft Copernicus* (2012)
- Reviewed manuscripts for ASCE EWRI WDSA Manuscripts (2010)
- Reviewed manuscripts for *ASCE Journal of Environmental Engineering* (2009)
- Reviewed manuscripts for *ASCE Journal of Hydrologic Engineering* (2006)

- Reviewed manuscripts for *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering* (2006)

Professional Society Meetings & Conferences

- Invited as the Water Scholars for Thailand by Dr. Tamim Younos, President & CEO of The Cabell Brand Center
- Served as the Member of the ASCE EWRI WDSA (2014- Present)
 - Member of the ASCE Task Committee on Research Database for Water Distribution Systems
- Served as the Chair for HIC 2014 Conference Technical Session (2014)
- Invited as IWTC 2014 Organization Committee (2014- Present)
- Invited as a Panel Member at the CSU Water Resources Policy Initiatives Annual Conference (2012)
- Invited as a discussant at the Western Economic Association International Conference (2012)
- Technical Session Moderator, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico
- ASCE WDSA 2010 Conference (Tucson, AZ) Abstract and Manuscript Reviewer
- Invited as an International Advisory Board for WDSA 2010 Conference
- Session Moderator, 2009 AWRA Annual Water Resources Conference, Red Lion Hotel on 5th Avenue, Seattle, Washington, November 9-12, 2009
- Chaired & co-chaired poster, optimization, and sustainability session at World City Water Forum 2009

California State University

- CSU Proposal Writing Committee

San José State University

University Committee

- SJSU Senate Committee Member (2013)

College of Engineering Committee

- Served as the Associate Dean for Research Search Committee Member (fall 2014)
- Served as the CEE Representative to College of Engineering's Undergraduate Curriculum Committee (fall 2013 – spring 2014)
 - Dealt with a major curricular issue – reduction of curriculum to 120 units
- CEE Representative to Department Designated Graduate Advisor (2012-2013)
- CEE Representative to Student Project Committee (2012-2013)
- College of Engineering, Vision 2015 (Invited by Dean Belle Wei)

- This task force is playing an important role in determining the future direction of the COE.
- College of Engineering, Resource Advisory Board (recommended by Departmental Chair Ndon)
 - Resource Advisory Board is developing strategies for allocating and identifying resources to achieve goals set by the 2015 Task Force.
- College of Engineering - FE Exam – Reviewer for COC Meeting

Civil Engineering Department Committee

- Served as SJSU CEE Retention, Tenure and Promotion Committee Member (fall 2014)
- Served as SJSU CEE Student Affairs Coordinator (2009- Present)
- Served as a member of the CEE Department ABET Assessment committee member to review assessments documents (2008 – present)
 - Has championed for two outcomes for the ABET accreditation process (Outcomes H & K)
- Served as a CEE Department Scholarship Committee Member to evaluate and rank applications for available department scholarships every year (2008 – present)
- Served as a CEE Department Curriculum Committee (2008 – present)

Student Service

- SJSU CEE Chi Epsilon EIT Exam Review (2013)
- Faculty Advisor for SJSU AWWA (American Water Works Association) Student Chapter (2012-present)
- Faculty Advisor for SJSU ASCE Water Resources (2012-present) Advisor for SJSU ASCE Environmental and Water Resources Engineering Student Club (Environmental aspects, Dr. Udeme Ndon/ Water Resources aspects, Dr. Juneseok Lee)

COMPUTER AND LANGUAGE SKILLS

- Programming Language: MATLAB, Visual Basic
- Technical Software: Arc GIS 8.3, Civil 3D 2007, EPANET, EPAN-SWMM, HEC-HMS, HEC-RAS, MS Office packages, and VTPSHUM.
- Language: Native speaker in Korean, and fluent in English