

## **JUNESEOK LEE**

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### **Associate Professor & California Water Service Co. Chair Professor**

Department of Civil and Environmental Engineering, San José State University, San José, CA 95192

Tel: (408)924-3854; Email: [Juneseok.Lee@sjsu.edu](mailto:Juneseok.Lee@sjsu.edu);

*Lee Water-Infra Analytics*: <http://www.leewaterinfra.com/>

## **EDUCATION**

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**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 Dr. G.V. Loganathan (in memoriam)

**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: Dr. G.V. Loganathan (in memoriam)

**Korea University (Seoul, South Korea)** August 2001

*Bachelor of Science, Civil and Environmental Engineering*

## **EMPLOYMENT**

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**University of Delaware (Newark, DE)** Jan 2017 - Present

*Visiting Scholar, Department of Civil and Environmental Engineering*

**San José State University (San José, CA)** Aug 2014 - Present

*Associate Professor, Department of Civil and Environmental Engineering*

**San José State University (San José, CA)** Aug 2008- Jul 2014

*Assistant Professor, Department of Civil and Environmental Engineering*

**PPI (Professional Publications, Inc.)** Jan 2012 - Dec 2013

- *Professional Engineering Exam Water Resources Instructor (both On-line and In-class)*
- *California Surveying Exam Instructor (On-line)*
- *Fundamental Engineering Exam Instructor (In-class)*

**Virginia Tech (Blacksburg, VA)** Aug 2002- May 2008

- *Lab Instructor, CEE2814 Measurement (Surveying), 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*

**PROFESSIONAL REGISTRATION****Professional Engineer (P.E.) of Civil Engineering, State of California (#78606)**

2011

**AWARDS****SJSU College of Engineering (COE)***Professional Career Development Award*

July 2016

**SJSU COE***Faculty Release Time Award (0.4 RTA)*

July 2016

**SJSU COE***Professional Career Development Award*

Dec 2015

**University of Central Florida**

May 2015

*Technical Workshop: Bridge between U.S. and Korea Infrastructure Evaluation – Current Status of ASCE Report Card for America’s Infrastructure and Recommendations for Developing Korea Report Card***SJSU COE***Faculty Release Time Award (0.6 RTA)*

May 2015

**SJSU***Research, Scholarship and Creative Activity (RSCA) Award*

May 2015

**SJSU Civil & Environmental Engineering (CEE)***Professional Career Development Award*

May 2015

**SJSU CEE***Lorell Faculty Development Award*

Feb 2015

**California Water Service Co. Chair Professorship**

June 2014

*Named as California Water Service Co. (Cal Water) Professorship to lead the collaborative with students and the Cal Water technical Staff to solve a wide range of challenges confronting the water industry***SJSU Research Foundation (SJSURF)***2013 Young Investigator Award*

May 2013

**SJSU COE***Davidson Professorship Award*

May 2012

**SJSU COE***Junior Professorship Award*

May 2012

**American Society of Civil Engineers (ASCE) Excellence in Civil Engineering Education (ExCEEd) Fellowship***2011 ASCE ExCEEd 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

**GRANTS**

**External**

<b>Funding Agency</b>	<b>Amount</b>	<b>Details of the project</b>
EPA (as co-PI; in collaboration with Purdue and Michigan State University; 2017-2019)	\$3.1 Million	Water Quality Impacts due to Conservation
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 (Travel fund)	Invited as young scientist to NCAR (National Center for Atmospheric Research) on Water-Climate area conference
<b>EXTERNAL TOTAL</b>		<b>\$708,132</b>

**Internal (Competitive)**

<b>California State University (CSU)</b>	
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
<b>San José State University (SJSU)</b>	
SJSU COE	Professional Development Grant (\$1,500)
SJSU COE	Research Incentive Program 2016-2017, 0.4 Release Time
SJSU COE	Research Incentive Program 2015-2016, 0.6 Release Time
SJSU UNIV	2015 RSCA (Summer Scholarship \$5,000)
SJSU CEE	2015 SJSU CEE Professional/ Career Development Awards (\$4,000)
SJSU CEE	2015 Lorell Faculty Development Grant (\$350)
SJSU COE	2014-2015 SJSU COE Scholarly Activities Incentive Program, 0.2 Release Time during fall 2014
SJSURF	2013 San Jose State University Young Investigator Award, Cash Prize \$1,000
SJSU UNIV	RSCA Research Grant (AY 2012-2013), 0.2 Release Time during fall 2013
SJSU COE	Davidson Professorship (AY 2012-2013), total \$1,500
SJSU COE	Junior Professorship Program (\$16,000) plus \$3,000 for professional development

SJSU COE	Laboratory Refreshment Grants (AY 2010-2011), total amounts: \$48,324
SJSU COE	Professional Laboratory Development Support (AY 2008-2010), total amounts: \$25,000
SJSU COE	Faculty Development Grant (AY 2009-2010), total amounts: \$7,450
SJSU COE	Summer Supplement Grant (AY 2009), total amounts: \$6,000
SJSU COE	Research Planning Grants (AY 2008-2009), total amounts: \$10,000
<b>INTERNAL TOTAL</b>	<b>\$127,267 plus 1.6 Release time (for research)</b>

**GRANT TOTAL (INTERNAL + EXTERNAL): \$854,899 + EPA (3.1 Million)**

## **JOURNAL ARTICLES**

\* denotes SJSU student research assistant

1. Gungor-Demirci, G., **J. Lee**, J. Keck (2017), Measuring Water Utility Performance Using Two-Stage Data Envelopment Analysis, *Journal American Water Works Association* (under review)
2. Gungor-Demirci, G., **J. Lee**, J. Keck (2017), Two Stage Data Envelopment Analysis: A Perspective From The Water Industry, *ASCE Journal of Water Resources Planning and Management* (under review)
3. **Lee, J.**, J. Keck, P. Yang, S. Geetha (2017), Water Mains Replacement Program in California, *CSU Geospatial* (under review)
4. **Lee, J.**, K. Bae, and T. Younos (2016), An Innovative Paradigm Shift toward Optimal Sustainability: Decentralized Green Water-Infrastructure Systems (DGWIS). *ASCE Journal of Sustainable Water in the Built Environment* (under review)
5. Jeyachandran, I. and **J. Lee** (2016), Impacts Analysis of Green Infrastructure, *Urban Water* (under review)
6. Gungor-Demirci, G., **J. Lee**, M. Mirzaei and T. Younos (2016), How Do People Make a Decision on Bottled and Tap Water? Preference Elicitation with Nonparametric Bootstrap Simulation, *Water and Environment Journal* (in press)
7. Dallman, S., A.M. Chaudhry, M. K. Muleta and **J. Lee** (2016), The Value of Rain: Benefit Cost Analysis of Rainwater Harvesting Systems, *Water Resources Management* (in press)
8. Mirzaei, M., M. Faghih, J. Adamowski, **J. Lee** and A. El-Shafie (2016), Uncertainty estimation in flood inundation mapping: an application of non-parametric bootstrapping, *River Research and Applications* (in press)
9. Tanverakul, S. and **J. Lee** (2016), Historical Review of US Residential Water Demand, *IWA Water Practice and Technology* Vol 11 (2), pp. 433 (doi: 10.2166/wpt.2016.050)
10. **Lee, J.** (2016), Residential Water Demand Analysis in a Low Income Ratepayer Assistance Program in California, US, *Water and Environment Journal* (doi: 10.1111/wej.12158)
11. Mirzaei, M., M. Faghih, T. P. Ying, A. El-Shafie, Y. F. Huang, and **J. Lee** (2016). Application of a Rainfall-Runoff Model for Regional-Scale Flood Inundation Mapping for the Langat River Basin, *IWA Water Practice and Technology*, Vol 11 (2), pp. 373 (doi: 10.2166/wpt.2016.044 )
12. Keck, J. and **J. Lee** (2015), A New Model for Industry – University Partnerships, *Journal American Water Works Association*, November, 107(11), 84-90, DOI: <http://dx.doi.org/10.5942/jawwa.2015.107.0161>

13. **Lee, J.** (2015), Hydraulic Transients in Service Lines, *International Journal of Hydraulic Engineering*, 4(2).
14. Mirzaei, M., Y.F. Huang, A. El-Shafie, T. Chimeh, **J. Lee**, N. Vaizadeh, J. Adamowski (2015), Uncertainty analysis for extreme flood events in a semi-arid region, *Natural Hazards*, 10.1007/s11069-015-1812-9
15. **Lee, J.** and S. Chae (2015), Hourly Water Demand Analysis for Micro Water Grid Development, *Journal of Water Supply: Research and Technology – AQUA* 65 (1) 12-17; DOI: 10.2166/aqua.2015.144
16. **Lee, J.** (2015), A holistic decision-making framework for selecting domestic piping materials, *Journal of Water Supply: Research and Technology – AQUA*, 64(3), p 326–332, doi:10.2166/aqua.2015.088
17. Tanverakul, S.\* and **J. Lee** (2015), Impacts of Metering on Residential Water Use in California, *Journal American Water Works Association*, 107(2), p 78-79
18. **Lee, J.** and Tanverakul, S\*. (2015), Water Price Elasticity Analysis in CA, *Journal of Water Supply: Research and Technology – AQUA*, 64(2), p 211-218
19. **Lee, J.**, E. Kleczyk, D. Bosch, A. Dietrich, and V. Lohani (2013). Homeowners’ decision-making in a premise plumbing failure-prone area, *Journal American Water Works Association*, 105(5), E236-241, DOI: <http://dx.doi.org/10.5942/jawwa.2013.105.0071>.
20. Ruberto, A.\*, **J. Lee** and A. Bayer (2013). Water Energy Nexus Analysis of a Public University in California, *Water Efficiency* (May 2013).
21. **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.
22. McNeeley, S, S. Tessorf, 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.
23. **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.
24. 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
25. 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
26. **J. Lee** and G. V. Loganathan (2006). Consumer Preferences Towards Plumbing Attributes, *Virginia Water Central, Virginia Water Resources Center*, No. 28, p. 10-11.
27. Loganathan, G. V., and **J. Lee** (2005). Decision Tool for Optimal Replacement of Plumbing Systems, *Journal of Civil and Environmental Engineering Systems*, 22(3), p. 1-16.

## WORKING PAPERS

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1. **Lee, J.**, J. Keck T. Walski, O. Farooqi, P. Yang (2017), Water Mains Replacement from a Practical Perspective, preparing for the *Journal American Water Works Association*

2. Younos, T. and **J. Lee** (2017), Renewable Energy Applications in Water Industry, preparing for the *Water and Environment*
3. **Lee, J.** and M. Meehan (2017), Reliability Analysis of Service Line Materials, preparing for the *Journal American Water Works Association*
4. **Lee, J.** (2017), Non-Revenue Water Analysis
5. **Lee, J.** (2017), Development of Modified Hunter's Methods toward Effective Conservation
6. **Lee, J.** (2017), Hydraulic Transients Analysis in High-Rise Building

## BOOK CHAPTERS

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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

## CONFERENCE PROCEEDINGS

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

1. **Lee, J.** and M. Meehan, 2016 AWWA Water Infrastructure Conference, Phoenix, AZ October 30-November 2, 2016. "Reliability Analysis of Service Line Materials".
2. Bautista, A\*, **J. Lee** and J. Keck, "Water Mains Replacement Program in California.", 2016 ASCE World Environmental and Water Resources Congress, West Palm Beach, Florida, USA, May 22-26, 2016.
3. Demirci, G.G., **J. Lee** and J. Keck, "Efficiency Analysis of Water Utilities using DEA.", 2016 ASCE World Environmental and Water Resources Congress, West Palm Beach, Florida, USA, May 22-26, 2016.
4. Chae, S. and **J. Lee**, "Development of Micro Water Grid Pilot Platform", HIC 2014 – *11th International Conference On Hydroinformatics*, New York, New York, USA, August 17 – 21, 2014.
5. Tanverakul, S\* and **J. Lee**, "Water Demand Analysis due to Water Meter Installation in CA.", 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, USA, May 19-23, 2013.
6. Tanverakul, S\* and **J. Lee**, "Water Price Elasticity Analysis in CA.", 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, USA, May 19-23, 2013.
7. Tanverakul, S\* and **J. Lee**, ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, USA, May 20-24, 2012, "Historical Review of US Water Demand."
8. **Lee, J.** and E. Easterling\*\*, ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, USA, May 20-24, 2012, "LCA and EIO-LCA Applications to Plumbing Materials."
9. Tanverakul, S\* and **J. Lee**, "Water Demand Analysis in Northern CA"(ppt format), AWWA ACE National Conference, June 10-14, 2012, Dallas, Texas,
10. **Lee, J.**, N. Okamoto, R. Chung, and T. Anagnos, "Integrating Sustainability into Lower Division Core Engineering Courses" FIE2011 (Frontiers in Education), Rapid City, South Dakota, USA, October 12-15, 2011,

11. **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.
12. **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.
13. **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.
14. **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.
15. 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.
16. 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.
17. **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.
18. 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.

## **RESEARCH REPORTS**

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1. University of Central Florida, **Lee, J.** Technical Workshop: Bridge Between U.S. and Korea Infrastructure Evaluation – Current Status of ASCE Report Card for America’s Infrastructure and Recommendations for Developing Korea Report Card – Drinking Water
2. California Water Service Company, **Lee, J.** Residential Water Demand Analysis due to Water Meter Installations, May 2014
3. 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.
4. 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.
5. 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**
6. Tellico Village Community Survey Research Report, Bosch, D., Kleczyk, E., **Lee, J.**, and Tanellari, E. 2007.

## CONFERENCE PRESENTATIONS

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

1. **Lee, J.** and M. Meehan, 2016 AWWA Water Infrastructure Conference, Phoenix, AZ October 30-November 2, 2016. "Reliability Analysis of Service Line Materials".
2. **Lee, J.** AESS (Association for Environmental Studies and Science) – Annual Conference, Washington, D.C. June 8-11, 2016. "Critical Issues on Drinking Water Infrastructure".
3. 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".
4. Tanverakul, S\*. and **J. Lee**, 2013 AWWA ACE National Conference, Boulder, Colorado, " Water Demand Analysis due to Water Meter Installation " (Poster Presentation).
5. Tanverakul, S\*. and **J. Lee**, 2013 AWWA ACE National Conference, Boulder, Colorado, "Water Price Elasticity Analysis " (Poster Presentation).
6. 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 ".
7. Tanverakul, S\*. and **J. Lee**, 2013 ASCE World Environmental and Water Resources Congress, Cincinnati, Ohio, " Water Price Elasticity Analysis in CA ".
8. Tanverakul, S\*. and **J. Lee**, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "Historical Review of US Water Demand".
9. **Lee, J.** and E. Easterling\*\*, 2012 ASCE World Environmental and Water Resources Congress, Albuquerque, New Mexico, "LCA Applications to Plumbing Materials".
10. **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".
11. Tanverakul, S\*. and **J. Lee**, 2012 AWWA ACE National Conference, Dallas, Texas, "Water Demand Analysis in Northern CA".
12. Chaudhry, A., S. Dallman and **J. Lee**, 2012 Western Economic Association International, 87th Annual Conference, "Decision Making tool for Rainwater Harvesting Program Implementation".
13. Tanverakul, S\*. and **J. Lee**, 2012 Western Economic Association International, 87th Annual Conference, "Water Price and Demand in US".
14. **Lee, J.**, N. Okamoto, R. Chung, and T. Anagnos, 'Integrating Sustainability into Lower Division Core Engineering Courses', FIE2011 (Frontiers in Education), October 2011.
15. **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.
16. **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.
17. **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.

18. **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.
19. **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.
20. **Lee, J.,** “On-going Research Related with Climate Change Issues” National Center for Atmospheric Research
21. **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.
22. **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
23. **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
24. **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
25. **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.
26. **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.
27. **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)
28. Kleczyk, E., D. Bosch, E. Tanellari, and **J. Lee,** ”Household Preferences for Plumbing Materials: CA, CV, and AHP”, AAEA Poster Presentation, July 2008.
29. **Lee, J.,** V. K. Lohani, and A. M. Dietrich, “Contamination Intrusion at Service Lines”, Poster presentation at AWWA, Georgia, Atlanta, June 2008.
30. **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.
31. **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>

32. **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.
33. 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.
34. 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.
35. 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.
36. **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.
37. **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.
38. 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.
39. 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.
40. **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.
41. 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).

## **INVITED TALKS**

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1. San José State University, Sustainability Matters Showcase, “*Sustainable Drinking Water Infrastructure*”, December 5, 2011.
2. Korea Gas Company (Ansan, South Korea). Title: “*Optimal Replacement Time of Piping Systems*”, August 8, 2011.
3. San José State University, ENG100W Guest Speaker, Title: “*Water Resources Sustainability and its Infrastructures*”, October 13, 2010.
4. 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.

5. 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.
6. PPI Plastic Pipe Institute. "*Analysis of Consumer Preferences towards Piping Materials*", Blacksburg, VA, March 2008.
7. Korea Water Corporation, Daejeon, South Korea, "*Decision tools for optimal replacement of plumbing system and consumer preferences towards plumbing attributes*", May, 2007.
8. 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**

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### **HomeServeUSA**

June 2015

*Failure Analysis of Water Service Lines*

- Develop Failure Models for different service line materials
- Develop 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 water 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 Material

## STUDENT RESEARCH SUPERVISION

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### San José State University (San Jose, CA)

#### Graduate Student Research Project Supervision

Name	Semester	Research Topic
Andrea Bautista	Spring 2016	Optimal Replacement of Water Mains
Jose Oropeza	Fall 2015	Estimating Energy Use from Water Systems in SJSU
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

#### Undergraduate Student Research Project Supervision

Name	Semester	Research Topic
Matheus Seveino	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Alessandra Siqueira	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Wallace Gomes	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Carolina Castro	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Caio Alves	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Matheus Correa	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Milena Albuquerque	Sum 2015	Drinking Water Infrastructure & Flushing Issues
Ryan Barker	fall 2013	Water Conservation related LEED Standard
Vincent Castaneda	spring 2013	Case Study: Applicatino 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

**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

*Instructed Civil Engineering Courses including:*

Undergraduate Courses

- CE150 Introduction to Hydrology and Hydraulics,
- CE152 Engineering Hydrology,
- CE154 Hydraulic Design,

Graduate Courses

- CE250 Modeling in Water Resources Engineering,
- CE251 Open Channel Hydraulics,
- CE256 Sustainable Water Resources Engineering

- **Overall Student Teaching Evaluation Average (SOTES): 4.8/5.0 (Fall 2008 – Spring 2016)**

**PPI (Professional Publications, Inc)**

2011- 2013

PE Exam On-Line Course Instructor

- Hydrology; Hydraulics; Water Treatment; Waste Water Treatment;
- California Surveying

FE Exam In-Class Course Instructor

- Fluid Mechanics; Probability and Statistics; Calculus; Linear Algebra

**Virginia Tech (Blacksburg, VA)**

2003-2007

- Instructed Civil Engineering CEE 2814 Surveying Laboratory (fall 2003 - summer 2007)
- Instructed Civil Engineering Fluid Mechanics (CEE 3304), Water Resources Engineering (CEE 3314), and Measurement (CEE 2814) on a substitute basis

- **Overall Student Teaching Evaluation Average: 4.9/5.0 (fall 2003 - summer 2007)**

## **NEW COURSE DEVELOPMENT**

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### **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**

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### **San José State University (San Jose, CA)**

- *Water Resources Program Coordinator (fall 2008- present)*: Coordinated all undergraduate and graduate level courses related to Water Resources Engineering Program
- *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.
- *Surveying Course Coordinator (2011- present)*: Coordinated CE8 Surveying Courses including surveying equipment inspections
- *Engineering Graphics, CAD and Programming Course Coordinator (2011- present)*: Coordinated CE20 AutoCAD and Programming including maintaining Department CAD licensure

## **PROFESSIONAL SERVICE**

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### **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)

### **Associate Editor for the ASCE Journal of Water Resources Planning and Management (JWRPM)**

- Reviewed manuscripts for possible publications in ASCE Journal of Water Resources Planning and Management, 12/01/2016

Management (2016- Present)

### **Reviewer for Journals**

- Reviewed manuscripts for *Journal Environmental Studies and Sciences*; *Urban Water*; *Journal American Water Works Association*, *Journal Korean Society of Hazard Mitigation*; *Drink. Water Eng. Sci. Discuss*, *Delft Copernicus*; *ASCE EWRI WDSA Manuscripts*; *ASCE Journal of Environmental Engineering*; *ASCE Journal of Hydrologic Engineering*; *ASCE Journal of Waterway, Port, Coastal, and Ocean Engineering*;

### **Professional Society**

#### ASCE (American Society of Civil Engineers)

- Served as the Member of the ASCE EWRI WDSA (2014- Present)
- Member of the ASCE Task Committee on Research Database for Water Distribution Systems
- ASCE EWRI Water, Wastewater & Stormwater Committee Member (2016 – Present)

#### AWWA (American Water Works Association)

- AWWA Customer Metering Practices Committee Member (2016- Present)
- Faculty Advisor for SJSU's AWWA (American Water Works Association) Student Chapter (2012-present)

#### International and Other Significant Professional Society

- Invited as an Editorial Board Member of the Austin Journal of Irrigation (2015 – Present)
- Invited as the Water Scholars for Thailand by Dr. Tamim Younos, President & CEO of the Green Water-Infrastructure Academy
- Invited as the Think Tank Affiliate for Green Water Infrastructure Academy, Washington, D.C. (October 2015)

### **Conferences**

#### ASCE (American Society of Civil Engineers)

- 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

#### International and Other Significant Conferences

- Invited as a Water & Environment Session Chair for the 10<sup>th</sup> KSEA (Korean Scientist and Engineers Association) Northwest Regional Conference (October 2015)
- Served as the Chair for HIC 2014 Conference Technical Session (2014)
- Invited as IWTC 2014 Organization Committee (2014- Present)
- Chaired & co-chaired poster, optimization, and sustainability session at World City Water Forum 2009
- Invited as a discussant at the Western Economic Association International Conference (2012)
- Session Moderator, 2009 AWRA Annual Water Resources Conference, Red Lion Hotel on 5th Avenue, Seattle, Washington, November 9-12, 2009

## UNIVERSITY SERVICE

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### California State University (CSU)

- CSU Proposal Writing Committee (2011)
- Invited as a Panel Member at the CSU Water Resources Policy Initiatives Annual Conference (2012)

### SJSU University-Level Committee

- SJSU Senate Committee Member (2013)

### SJSU College-Level 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; fall 2015 - spring 2016; fall 2016 – spring 2017); Dealt with a major curricular issue – reduction of curriculum to 120 units
- CEE Representative to Department Designated Graduate Advisor (2011-2014)
- 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

### SJSU Department -Level Committee

- Served as CEE Executive Committee (fall 2016)
- Served as SJSU CEE Chair Review Committee Member (fall 2015)
- Served as SJSU CEE Part-time Retention & Promotion Committee Member (fall 2015)
- 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)

### SJSU Student Service

- 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. Udem Ndon/ Water Resources aspects, Dr. Juneseok Lee)
- SJSU CEE Chi Epsilon EIT Exam Review (2013)

## COMPUTER AND LANGUAGE SKILLS

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



**PROFESSIONAL AFFILIATION**

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- Member of the American Society of Civil Engineers (ASCE) 2008- Present
- Member of the American Water Works Association (AWWA) 2008- Present