EUNSU LEE

Curriculum Vitae

April 2, 2019

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EDUCATION

- 2011 Ph.D. Transportation and Logistics, North Dakota State University, Fargo, North Dakota, USA
 - Dissertation: "Spatiotemporal Simulation Model for Global Containerized Freight in North America" advised by Dr. Kambiz Farahmand (North Dakota State University, Fargo, ND)
- 2007 M.S. Industrial Management and Engineering, North Dakota State University, Fargo, North Dakota, USA
 - Thesis: "Simulation of Inventory Policy Integrated with Transportation Strategies" advised by Dr. Kambiz Farahmand (North Dakota State University, Fargo, ND)
- 2001 M.B.A. Production Management, Hanyang University, Seoul, Korea
 - Thesis: "An Application of Conjoint Analysis to Information System Design" advised by Dr. Hosun Rhim (Korea University, Seoul, Korea)
- 1996 B.E. Computer Science and Engineering, Kwandong University (Catholic Kwandong University as of October 2014), Gangnung-city, Gangwon-do, Korea

PROFESSIONAL APPOINTMENTS AND EMPLOYMENT

- 2018 Present Associate Professor of Supply Chain, Logistics and Maritime Port Management, School of Business, New Jersey City University, Jersey City, NJ
- 2015 2018 Assistant Professor of Management, School of Business, New Jersey City University, Jersey City, NJ
- 2013 2015 Adjunct Faculty, Transportation and Logistics Program, Graduate School of Interdisciplinary, North Dakota State University, Fargo, ND
- 2013 2015 Adjunct Faculty, Department of Industrial and Manufacturing Engineering, College of Engineering & Architecture, North Dakota State University, Fargo, ND
- 2012 2015 Associate Research Fellow, the Upper Great Plains Transportation Institute. North Dakota State University, Fargo, ND
- 2011 2012 Research Analyst, the Upper Great Plains Transportation Institute. North Dakota State University, Fargo, ND
- 2005 2011 Graduate Research Assistant, the Upper Great Plains Transportation Institute at North Dakota State University, Fargo, ND
- 2002 2004 Logistics Consultant, Korex Consulting Inc., Seoul, Korea
- 2001 2002 ERP Finance and Decision Support Consultant, Baan Korea Co. Ltd., Seoul, Korea
- 2001 Technical Service Manager & Project Manager, E-IDEA Data Bank Co., Seoul, Korea
- 2001 Project Manager, Department of Information Technology, National Livestock Cooperatives Federation, Seoul, Korea
- 1998 2000 Systems Analyst, Department of Information Technology, National Livestock Cooperatives Federation, Seoul, Korea

- 1996 1998 Systems Integration Engineer, Division of Milk Production, National Livestock Cooperatives Federation, Seoul, Korea
- 1990 1992 Ordinance Logistician, Army of the Republic of Korea

PROFESSIONAL LICENSES AND CERTIFICATES

- 2018 Bloomberg Market Concepts (**BMC**), Bloomberg Professional Services
- 2012 2022 Certified Supply Chain Professional (**CSCP**) the Association for Operations Management (APICS) ID: 115216, January 1, 2012 (Valid Until January 31, 2022).
- 2011 2021 Certified in Production and Inventory Management (**CPIM**), the Association for Operations Management ID: 113581, September 27, 2011 (Valid Until September 30, 2021).
- 2012 2017 GIS Professional (**GISP**), the Geographic Information Systems Certification Institute (GISCI)-No.65258, January 2021.
- 2000 Korea Certified Logistics Consultant, endorsed by the Minister of Land, Transport, and Maritime Affairs, Republic of Korea, 2000 ~.
- National License for Distribution Manager (1st & 2nd class), licensed by the Korea Chamber of Commerce and Industry, endorsed by Minister of Knowledge Economy, Republic of Korea, 1999 ~ .

INVITED TALKS

- 2019 "Transportation/Logistics/Distribution (TLD) middle-skill program," the NJCU **Logistics Center**, Jersey City, NJ (February 6 & 13, 2019; 12 hours in total)
- 2018 "Urban Transportation and Supply Chain Systems in NY/NJ," **Tianjin Municipal Engineering Design & Research Institute, China**, at the campus of New Jersey City University in Jersey City, NJ (October 26, 2018)
- 2018 "Statewide Freight Modeling to Support Energy and Agricultural Logistics," **Korea Research Institute for Human Settlements (KRIHS),** City of Sejong Special Self-Governing City, Korea (August 3, 2018)
- 2014 "Using FAF Data in Economic Analysis", Office of Freight Management and Operations, **Federal Highway Administration (FHWA),** U.S. Department of Transportation (Number of attendee: 159).
- 2014 "Linear Referencing Systems and Management: Applications," **Pine to Prairie GIS User Group** (Number of attendee: 19).
- 2014 "Vehicle Routing Problem using ArcGIS," **Pine to Prairie GIS User Group** (Number of attendee: 25).

PUBLICATIONS (*Corresponding Author)

Refereed Papers

- 2018 Wadhwa, S.S.*, Farahmand, K. & Lee, E.S., "Site Selection Using Multi-Attribute Decision Analysis in GIS: A Case Study on the Brownfields of Minnesota", *International Journal of Engineering Research & Innovation*, 10(1), 51-56.
- 2018 Khan, I.U.*, **Lee, E.S.**, and Khan, M.A., "Developing a Highway Rail Grade Crossing Accident Probability Prediction Model: A North Dakota Case Study," Safety, 4(2), 1-12. https://doi.org/10.3390/safety4020022 (**Selected as Cover Story of the Special Issue**)

- 2017 Bridgelall, R., **Lee, E.***, and Bell, M. "Strategic Global Logistics Management for Sourcing Road Oil in the U.S.," *Journal of International Trade, Logistics, and Law*, 3(2), 1-11. http://www.jital.org/index.php/jital/article/view/64 (**Bright Idea Award**)
- 2017 **Lee, E.*** "Revamping Tribal Road Networks from Various Sources and Improving Quality of the Networks," *Transportation Research Record: Journal of the Transportation Research Board*, No. 2605, 124-132. http://dx.doi.org/10.3141/2605-13.
- 2017 Dharmadhikari, N.*, Farahmand, K., Lee, E., Vachal, K., and Ripplinger, D. "Yield Forecasting to Sustain the Agricultural Transportation under Stochastic Environment." *International Journal of Research in Engineering and Science*, 5(8), 51-60. http://ijres.org/papers/Volume%205/Vol5-Iss8/Version-1/H5815160.pdf.
- 2016 Bridgelall, R.*, Rafert, J.B., Tolliver, D., & Lee, E. "Rapid hyperspectral image classification to enable autonomous search systems," Journal of Spectral Imaging, 5 (a5), 1-8. http://dx.doi.org/10.1255/jsi.2016.a5
- 2016 Bridgelall, R., Lee, E.* & Taleqani, A.R. "Sourcing Strategy for Asphalt Production Feedstock Considering Multimodal Transport Options," *Management Review: International Journal*, 11(1), 4-31. https://www.informs.org/content/.../MRIJ%202016%2011(1)%20pp%204-31.pdf
- 2016 Bridgelall, R.*, Rafert, J.B., Tolliver, D., & Lee, E. "Resolution Agile Remote Sensing for Hazardous Material Spill," Transportation Research Record: Journal of Transportation Research Board, No. 2547. http://dx.doi.org/10.3141/2547-08
- 2016 Park, Y.S., Al-Qublan, H., Lee, E. *, & Egilmez, G. "Interactive Spatiotemporal Analysis of Oil Spills Using Comap in North Dakota," *Informatics*, 3(2), 1-10. http://dx.doi.org/10.3390/informatics3020004
- 2016 Dharmadhikari, N., Lee, E. *, & Kayabas, Po. "The Lifecycle Benefit-Cost Analysis for a Rural Bridge Construction to Support Energy Transportation," *Infrastructures*, 1(1). 1-14. http://dx.doi.org/10.3390/infrastructures1010002
- 2015 Stith, D. & Lee, E.* "Context Sensitive Solution: A Case Study of Jamestown Corridor Improvement," *Journal of Civil Engineering and Architecture*, 9(11). 1334-1340. http://dx.doi.org/10.17265/1934-7359/2015.11.008
- 2015 Dharmadhikari, N.* & Lee, E. "Average Opportunity-Based Accessibility of Public Transit Systems to Grocery Stores in Small Urban Area," *Cogent Engineering* 2(1), http://dx.doi.org/10.1080/23311916.2015.1068968
- 2015 Lee, E.*, & Oduor, P. G. "Using Multi-attribute Decision Factors for Traffic Assignment," ISPRS *International Journal of Geo-Information 4*(2), 883-899. http://dx.doi.org/10.3390/ijgi4020883
- 2015 Lee, E.*, Dybing, A., & Shakya, S. "Location-Routing Problem with Time Window and Land Use Plan using GIS," *Beverages 1*(2), 55-69. http://dx.doi.org/10.3390/beverages1020055
- 2015 Lee, E.* "Spatial Analysis for an Intermodal Terminal to Support Agricultural Logistics: A Case Study in the Upper Great Plains." *Management Research Review 38*(3). 299-319. http://dx.doi.org/10.1108/MRR-06-2013-0131
- 2015 Choi, J., Roberts, D.C.*, & Lee, E. "Forecasting Oil Production in North Dakota Using the Seasonal Autoregressive Integrated Moving Average (S-ARIMA)," *Natural Resources* 6, 6-16. http://dx.doi.org/10.4236/nr.2015.61003
- 2015 Choi, J.*, Roberts, D.C., & Lee, E. "Productivity Growth in the Transportation Industries in the United States: An Application of the DEA Malmquist Productivity Index," *American Journal of Operations Research* 5(1), 1-20. http://wx.doi.org/10.4236/ajor.2015.51001
- 2014 Choi, J.*, Roberts, D.C., & Lee, E. "Forecast of CO₂ emissions from the U.S. Transportation Sector: Estimation from a Double Exponential Smoothing Model," *Journal of Transportation Research Forum* 53(3), 63-81

- 2014 Choi, J., Lee, E.*, & Roberts, D.C. "Reshaping Tribal Road Network Using Public Information," *Journal of Geographic Information System* 6(6), 594-604. http://dx.doi.org/10.4236/jgis.2014.66049
- 2014 Kim, C.M. & Lee, E.* "Soybean Import Demand Analysis in East Asia: Korea, China, and Japan," *Management Review: An International Journal* 9(1), 4-24
- 2014 Lee, E.* "Designing Service Coverage and Measuring Accessibility and Serviceability of Rural and Small Urban Ambulance Systems," *Systems*, 2(1), 34-53. http://dx.doi.org/10.3390/systems2010034
- 2014 Lee, E.*, Farahmand, K., Oduor P. G., & Tolliver, D. "Intermodal Transportation of Global Supply Chain for the Containerized Freight," *Maritime Economics & Logistics*, 16(1), 33-54
- 2014 Lee, E.* & Rhim, H. "Defining Factors Affecting User's Satisfaction for Information Systems by Using Conjoint Analysis," *Management Research Review*, *37*(1), 69-88. http://dx.doi.org/10.1108/MRR-10-2012-0213
- 2013 Lee, E.* & Farahmand, K. "Simulation of Port Disruption and Transportation Resources for U.S. Containerized Imports," *Management Review: An International Journal 8(1)*, 4-37. https://www.informs.org/content/download/277561/2659267/file/MRIJ%208
- 2013 Lee, E.* & Farahmand, K. "Simulation of a Base Stock Inventory Management System Integrated with Transportation Strategies of a Logistic Network," *Journal of Civil Engineering and Architecture* 7(5), 633-644. http://dx.doi.org/10.17265/1934-7359/2013.05.014
- 2012 Lee, E.*, Farahmand, K., & Oduor, P. G. "Application of Signal Detection Theory to Ascertain Driving Risk and Mitigation in a Flooded Urban Area," *Journal of Civil Engineering and Architecture* 6(4), 515-530
- 2012 Lee, E.*, Oduor, P. G., & Farahmand, K. "Simplistic Geospatial Techniques in Analyzing Transportation Dynamics for Origin-Destination Container Movement Routes in the Unites States," *Journal of Transportation, System Engineering, and Information Technology* 12(1), 79-90
- 2011 Lee, E.*, Oduor, P. G., Farahmand, K., & Tolliver, D. "Heuristic Path-Enumeration Approach for Container Trip Generation and Assignment," *Journal of Transportation Research Forum* 50(3), 7-21
- 2011 Tolliver, D.*, Dybing, A., Lu, P., & Lee, E. "Modeling Investments in County and Local Roads to Support Agricultural Logistics," *Journal of Transportation Research Forum* 50(2), 101-115 (Selected as Cover Story of the Issue)

Refereed Conference Proceedings

- 2018 Taleqani, AR, Lee, E.S., & Hough, J. (2018, January), Micro-Simulation Approach to Rural Freight Movement Modeling, Proceedings of the Transportation Research Board, Washington D.C. Transportation Research Board 97th Annual Meeting, 18-00085. https://trid.trb.org/view/1494287
- 2017 Ibold, K. & Lee, E. (2017, March). Site Selection of Air and Spaceport for Space Tourism Using Multi-Criteria Approach. In M. Tehrani (Eds.), Proceedings of the Northeast Decision Science Institute Conference, Springfield, MA, 22-25 March (pp. 742-753).
- 2017 Lee, E. (2017, January). Revamping Tribal Road Networks from Various Sources and Improving Quality. In TRB committee ABE80 Standing Committee on Native American Transportation Issues, Compendium of Transportation Research Board 96th Annual Meeting, Washington D.C., 15-17 January (pp.19). Paper ID:17-05560.
- 2016 Bridgelall, R*., Rafert, J.B., Tolliver, D., & Lee, E. "Resolution Agile Remote Sensing for Hazardous Material Spill," Transportation Research Board 95th Annual Meeting, 16-0110. http://trid.trb.org/view.aspx?id=1392235.

- 2015 Bridgelall, R. & Lee, E.* "Context Sensitive Solution: A Case Study of Northwest Highway White Rock Lake, Dallas, USA," *Transportation Research Board Annual Meeting Compendium*, January 2015, Paper ID:15-3291.
- 2010 Lee, E.* & Farahmand, K. "Simulation of a Base Stock Inventory Management System Integrated with Transportation Strategies of a Logistic Network," *Proceedings of the 2010 Winter Simulation Annual (WinSim) Conference*, 1934-1945
- 2009 Lee, E.* & Farahmand, K. "Considering Impedance for Intermodal Freight Transportation," In: J.C. Smith and J. Geunes, (eds.) *Innovations Revealed*. Proceedings of the 2009 Institute of Industrial Engineering Research Conference (IERC), 1345-1350
- 2008 Farahmand, K.* & Lee, E. "Investigating Productivity and Efficiency through Simulation Technology and Application." 2008 IIE Annual Conference Applied Solutions Session
- 2008 Lee, E.* & Farahmand, K. "Impact of Demand Variability on Supply Chain Performance," In: J. Fowler and S. Mason, (eds.) *How Businesses Take Flight*. Proceedings of the 2008 Industrial Engineering Research Conference (IERC), 1338-1343

Non-Refereed Papers and Proceedings

- 2013 Lee, E.*, Dybing, A., & Tolliver, A. "Statewide Freight Demand Modeling to Support Long-range Transportation Planning in North Dakota." In *Innovations in Freight Modeling and Data: The Proceedings of the Freight Demand Modeling and Data Improvement Symposium A Transportation Research Board SHRP 2 Symposium.*http://onlinepubs.trb.org/onlinepubs/shrp2/C43/SHRP2_symposium2013_Lee.pdf
- 2013 Lee, E. & Zheng, Z.* "Development of GIS Multimodal Capacity model for the Northern Tier Freight Corridor." *Proceedings of the North Dakota GIS Users Conference 2013*
- 2013 Lee, E. "Connectivity and Equality: Consequence of Emergency Medical Services." *Proceedings of the Geospatial Information Systems for Transportation Symposium and Administrative Subcommittee on Information Systems (ASIS) Meeting*
- 2013 Lee, E. "Long Range Transportation Planning to Deal with Oil Production." *Proceedings of the Geospatial Information Systems for Transportation Symposium and Administrative Subcommittee on Information Systems (ASIS) Meeting*
- 2011 Lee, E. "3D Visualization for Transportation Networks in Flood Regions." *Proceedings of the Geospatial Information Systems for Transportation Symposium*
- 2011 Lee, E.*, Oduor, P.G., Farahmand, K., & Tolliver, D. "Dynamic Algorithm for Geospatial Analysis to Predict Feasible Freight Routes." *Proceedings of the North Dakota GIS Users Conference 2011*
- 2011 Dharmadhikari, N. & Lee, E.* "Overcoming Computational Performance Constraints of Agricultural Transportation Planning in GIS." *Proceedings of the North Dakota GIS Users Conference 2011*
- 2011 Kayabas, P. & Lee, E. "Location Optimality for Ambulance Service in North Dakota." *Proceedings of the North Dakota GIS Users Conference 2011*
- 2010 Lee, E. "Spatial Decompositions for Gravity and Shortest Path for Set covering for Measuring Potential Accessibility to Emergency Service." *Proceedings of URISA's 48th Annual conference for GIS Professionals.*
- 2010 Lee, E. "Estimating Trip Diversion by using Impedance in Flood Region." *GIS-T Symposium* by American Association of State Highways and Transportation Officials
- 2009 Lee, E.* & Farahmand, K. "Location Problem for Intermodal Terminal in North Dakota." Proceedings of the 2009 Transportation Research Forum Conference

Technical Reports

- 2018 Lee, E. & Rahim-Taleqani, Ali (November 2018) "Application of Multi-Agent System with the Large-Scale Agent-Based model for Freight Demand Modeling," Upper Great Plains Transportation Institute, Fargo, ND: Mountain-Plains Consortium, MPC-18-370. https://www.ugpti.org/resources/reports/downloads/mpc18-370.pdf.
- 2017 Lee, E. (March 2017) "Building a Sustainable GIS Framework for Supporting a Tribal Transportation Problem," North Dakota State University Upper Great Plains Transportation Institute, Fargo: Mountain-Plains Consortium: MPC-15-287. https://www.ugpti.org/resources/reports/downloads/mpc15-287.pdf
- 2016 Choi, J., Lee, S.K., Lee, J.M., Lee, E.S., Kim, W.C, & Kwon, H.S., Study on Strategic Plans for Transportation Funding," Korea Research Institute for Human Settlements (KRIHS): 六시 16-56, ISBN 979-11-5898-174-7 (in Korean)
- 2016 Witzke, E., Bhamidipati, C., Diersen, M., Wang, Z., & Lee, E. (March 2016) "Agricultural Freight Data Improvement," South Dakota Department of Transportation: SD2014-09-F, http://nasconetwork.com/Websites/nasconetwork/files/Content/4850034/SD2014-09_Final_Report.pdf
- 2015 Lara Piesch & Lee, E.* (August 2015) "Quality Assurance of Emergency Management Operation Processes through Statistical Process Control," Upper Great Plains Transportation Institute: DP-283, http://www.ugpti.org/resources/reports/details.php?id=818
- 2014 Molla, Stone, L.M., & Lee, E. * (November 2014) "Geostatistical Approach to Detect Traffic Accident Hot Spots and Clusters in North Dakota." Upper Great Plains Transportation Institute: DP-276, http://www.ugpti.org/resources/reports/details.php?id=780
- 2014 Lee, E.*, Dharmadhikari, N., and Dybing, A. (October 2014) "Spatial Estimates of Long-term Drilling Locations." Upper Great Plains Transportation Institute: DP-275, http://www.ugpti.org/resources/reports/details.php?id=777
- 2013 Mitra, S., Lee, E.*, DeHaan, C., Kayabas, P., & Itani, M. (December 2013). "Integrating Supply Chain Models in Urban Freight Planning." Mountain-Plains Consortium: MPC-13-259, http://www.ugpti.org/resources/reports/details.php?id=765
- 2013 Lee, E., Vachal, K.*, & Kayabas, P. (October 2013). "Phase I: Positioning Emergency Medical Services for Trauma Response for Rural Traffic Crashes: Pilot Case of Williston Basin in North Dakota." North Dakota State University, Fargo: Upper Great Plains Transportation Institute: DP-270, http://www.ugpti.org/resources/reports/details.php?id=754
- 2013 Dybing, A.*, Lee, E., DeHaan, C., & Dharmadhikari, N. (February 2013). "Impacts to Montana State Highways due to Bakken Oil Development." Montana Department of Transportation, Helena, (MT. Report No. MT/FHWA-12-005/8219), https://www.mdt.mt.gov/other/webdata/external/research/docs/research_proj/oil_boom/final_report.pdf
- 2011 Tolliver, D.*, Lee, E., Dybing, A., & Lu, P. (November 2011) "Agricultural Transportation in Lower Ohio River Valley." Submitted to U.S. Army Corps of Engineers (confidential report)

Literary (Newspapers and Periodicals)

- 2013 "The Need for Efficient Emergency Management in Rural Areas in S. Korea (농어촌 응급의료체계 구축 서둘러야)." *The Kangwon-Ilbo* 5 Mar. 2013, Kangwon-do Print.
- 2011 "Publishing a Manual for Unpredictable Natural Disasters (예측 불가능한 자연재해, 매뉴얼을 만들어라)." *The Gangwond Domin Ilbo* 16 Feb. 2011, Kangwon-do Print

- 2011 "Suggestions for Effective Snow Plowing under Uncertain Conditions (원활한 제설작업을 위한 제안)." *The KyungNam Domin Ilbo* 15 Feb. 2011, Kyungsangnam-do Print
- 2011 "Things to Consider about Convicting Pirates (해적 재판에 앞서 고려해야 할 것들)." *The HanKyoReh* 29 Jan. 2011, Seoul Print
- 2010 "Clouds of Air Cargo Terrorism in Yemen (예멘 발 항공화물 테러의 후폭풍)." SCM & Logistics 15 Nov. 2010, Seoul Print
- 2010 North Dakota Chapter Rising from the Northern Great Plains, *Korean-American Scientists and Engineers Letters*, 39(1). June 2010, pp. 56
- 2010 Stay Young by Being Energetic, Creative & Having a Learning Attitude, *Korea-America Scientists and Engineers Letters 38*(3). October 2010, pp. 29-30

HONORS & AWARDS

- 2018 Bright Idea Award, New Jersey Policy Research Organization (NJPRO), East Orange, NJ
- 2017 **International Teaching Excellence Award** (Region 1 Recipient), Accreditation Council for Business Schools and Programs (ACBSP), Anaheim, CA
- 2010 **Graduate Student Paper Award (1st Place)**, the Urban and Regional Information Systems Association (URISA), Orland, FL, USA
- 2010 **Graduate Student Paper Winner**, Geospatial Information Systems for Transportation (GIS-T) Symposium, Charleston, WV, USA
- 2010 Graduate Student Scholarship, Korean-American Scientists and Engineers (KSEA), Seattle, WA
- 2009 Inductee of the Tapestry of Diverse Talents, North Dakota State University
- 2008 **Bison Leadership Award** in Culture, Commissioners of Student Activities, Student Government of North Dakota State University
- 2008 **Korean Honor Scholarship**, Embassy of the Republic of Korea in the United States of America, Washington D.C.
- 2007 Google Earth-3D Campus Design Competition in the final list, Google Inc.

Advisees

- 2018 Hyeonjin Cho, Jiyoung Kim, and Minjung Kim won the 1st Place of Poster Presentation Award, the 2018 Fall Business Students Research Showcase at the NJCU School of Business, Jersey City, NJ
- 2018 Edward Valencia won the 2nd Place Presentation Award, the 2018 Fall Business Student Research Showcase at the NJCU School of Business, Jersey City, NJ
- 2018 Bilotta Luke, Miriam Martin won the 3rd Place Presentation Award, the 2018 Fall Business Student Research Showcase at the NJCU School of Business, Jersey City, NJ
- 2018 Kristina Mejias won the 3rd Place Presentation Award, the 2018 Spring Business Student Research Showcase at the NJCU School of Business, Jersey City, NJ
- 2018 Erika Gonzalez received the Best Poster Presentation Award, the Northeast Decision Science Institute (NEDSI) Annual Meeting, Providence, RI
- 2017 Hakeem Reynold will receive the APICS Student Scholarship, APICS 2017 Supply Chain Conference, San Antonio, TX
- 2017 Hakeem Reynolds received the Best Poster Presentation Award, the Business Student Research Showcase, School of Business, NJCU, Jersey City, NJ

- 2017 Erika Gonzalez received the 1st Place of Presentation Award, the Business Student Research Showcase, School of Business, NJCU, Jersey City, NJ
- 2012 Nimish Dharmadhikari and Zijian Zheng received the Graduate Student Paper Award (2nd Place), the Urban and Regional Information Systems Association (URISA), Portland, OR, USA
- 2012 Vu Dang received the Graduate Student Paper Award (4th Place), the Urban and Regional Information Systems Association (URISA), Portland, OR, USA

FUNDS & GRANTS

Externally Funded Projects and Grants

- 2019 "Purchasing Disparity Study of Jersey City." Rutgers City of Jersey City, \$10,000.00, April December, 2019 (Co-PI)
- 2019 "Smart Port." Korea Maritime Institute (KMI), \$10,000.00, January March, 2019 (Principal Investigator)
- 2015 "SHRP2 Education Connection: DTFH6115RA00004." Federal Highway Administration (FHWA), U.S. Department of Transportation, \$10,000.00, July 2015 August 2015 (Principal Investigator)
- 2015 "Agriculture Freight Data Improvement: SD2014-09." Funded by South Dakota Department of Transportation, Pierre, SD. \$45,000.00 of \$175,000.00 (Subcontracted with Cambridge Systematics Inc., February 2015 August 2015. (Principal Investigator)
- 2014 "North Dakota Highway Needs Study." Funded by North Dakota Department of Transportation, Bismarck, ND. \$123,017.00, 2014-2015. (Co-Principal Investigator)
- 2013 "Infrastructure Needs: North Dakota's County, Township, and Tribal Roads and Bridges: 2015-2034." Funded by North Dakota Legislature, Bismarck, ND. \$1,250,000.00, July 2013 June 2015. (Co-Principal Investigator)
- 2013 "Impacts to Montana State Highways due to Bakken Oil Development," Funded by Montana Department of Transportation, Helena, MT. \$110,000.00, May 2012 February 2013. (Completed in February 2013: Principal Researcher)
- 2013 "Grain Flow GIS Prototype Model," Funded by *U.S. Army Corps of Engineers*. \$75,000.00, September 2012. (Completed in November 2013: Co-Principal Investigator)
- 2013 SHRP 2 Symposium, A Transportation Research Board, Herndon, Virginia, USA. \$900.00, October 2013.
- 2012 "Location-Routing Problem for Regional Beer Distribution," Funded by Bergseth, Inc. \$15,000.00, August 2011 August 2012. (Completed in August 2012: Principal Researcher)
- 2012 "U.S. Maritime Regulations and Practices to Develop Intermodal Terminal and Transshipment Facilities." Funded by Korea Maritime Institute, Korea. \$1,500.00, May-July 2012. (Completed in July 2012: Principal Investigator)
- 2011 "An Assessment of County and Local Road Infrastructure Needs in North Dakota" Funded by North Dakota Legislature, Bismarck, ND. \$350,000.00, January 2011 September 2013. (Co-Principal Investigator)
- 2010 Selected Ph.D. Candidate for Colloquium. Institute for Operations Research and the 2010 Management Sciences (INFORMS) Annual Conference, Austin, TX. \$300.00, Transportation and Logistics Program, November 2010.
- 2010 Graduate Students Scholarship Recipient, the Korea-U.S. *Science Corporation Center (KUSCO)* and Korean-American Scientists and Engineers Association (KSEA). \$1,500.00, August 2010.
- 2000 "Purchasing, Sales, and Operations Management Information Systems." Funded by *SungJin Enterprise Ltd.* \$40,000.00, December 2000. (Completed in December 2000: Project Manager)

Internally Funded Projects and Grants

- 2018 "Routing and scheduling of street sweeping in Jersey City," Awarded for Separately Budgeted Research (SBR) from the Provost Office of NJCU. \$4500, September 4, 2018 August 31, 2019.
- 2017 "Port Choice and Competition for U.S. Imported Commodities," Awarded for Separately Budgeted Research (SBR) from the Provost Office of NJCU. \$4080, September 5, 2017 June 30, 2018.
- 2014 "Application of a Multi-Agent System with the Large-Scale Agent-Based Model for Freight Demand Modeling," Awarded from the Mountain Plains Consortium. \$64,249.00, September 30, 2013-September 30, 2017. (Granted: MPC-458 & DTRT13-G-UTC38: Principal Investigator)
- 2013 "Building a Sustainable GIS Framework for Supporting Tribal Transportation Program," Submitted to Mountain-Plains Consortium. \$73,000.00, January 2013 August 2015. (Granted: MPC-425 & DTRT12-G-UTC08: Principal Investigator)
- 2013 "Effectiveness of Advisory Letters in Preventing At-Risk Teen Driver Crashes: Pilot Project," Submitted to Mountain Plains Consortium. \$97,000.00, January 1, 2013 December 31, 2013. (Granted: MPC368&DTRT12-G-UTC08: Co-Principal Investigator)
- 2012 "Comprehensive GIS-Based Rural Regional Transportation Planning Models," Submitted to Mountain Plains Consortium. \$75,000.00, January 2012-December 2012. (Granted: MPC-387 & DTRT12-G-UTC08: Co-Principal Investigator)
- 2010 North American Freight Flows Conference, Irvine, CA, USA; Association of Transportation and Logistics, Funded by North Dakota State University Student Government. \$1,500.00, September 2010.
- 2009 Student Travel Award, Funded by Research, Creative Activities and Technology Transfer, North Dakota State University. \$500.00, May 2009
- 2008 National Association of Korean Schools (NAKS), Boston, MA, USA; Bison Herald, Funded by North Dakota State University Student Government. \$1300.00, July 2008
- 2008 Institute of Industrial Engineering Annual Conference, Vancouver, BC in Canada; Upper Great Plains Transportation Institute, North Dakota State University. \$1500.00, May 2008

PRESENTATIONS († Presenter)

National and International Meetings

- 2019 "The Effect of the Panama Canal Expansion on U.S. Inbound Throughput: An Empirical Analysis,"

 Poster Presentation (Jorge Medina[†], Jongho Kim[†] & E. Lee[†]), Transportation Research Board 98th

 Annual Meeting, Washington D.C., USA (January 13-17, 2019) Invited
- 2018 "Civic Engagement & Community Operational Research: a Case Study of Street Sweeping in Jersey City, NJ," Lectern Presentation (E. Lee[†] & Yi-Yu. Chen), the 2018 INFORMS Annual Meeting, Phoenix, AZ, USA (November 7-9, 2018) Invited
- 2018 "Strategic Transportation and Logistics Management for Importing Crude Oil to Produce Asphalt and Road Oil in the United States," (18-00072) Poster Presentation (Raj Bridgelall[†] and Michael Bell[†], & E. Lee[†]), Transportation Research Board 97th Annual Meeting, Washington D.C., USA (January 7-11, 2018) Peer Reviewed
- 2018 "Micro-simulation Approach to Rural Freight Movement Modeling," (18-00085) Poster Presentation (Ali Rahim-Taleqani[†] E. Lee[†], & J. Hough), Transportation Research Board 97th Annual Meeting, Washington D.C., USA (January 7-11, 2018) Peer Reviewed
- 2018 "Integrating GIS with Optimization Method for a Switchgrass-based Bioethanol Supply Chain," (18-03559) Lectern Presentation (Seyed Ali Esmaeili[†], Ahmad Sobhani, Amin Keramati E. Lee),

- Transportation Research Board 97th Annual Meeting, Washington D.C., USA (January 7-11, 2018)
- 2017 "Five Elements of Importing Asphalt Feedstock," the 48th Decision Science Institute Annual Meeting, Washington D.C., USA (November 18-20, 2017)
- 2017 "Vehicle Routing Problem for Smart Street Sweeping using GIS," the 2017 INFORMS Annual Meeting, Houston, TX, USA (October 22, 2017) Invited
- 2017 "Implementing an Interdisciplinary Business Analytics and Data Science Program at an Urban University (co-authored with J.D. Jayaraman[†])," the 2017 INFORMS Annual Meeting, Houston, TX, USA (October 23, 2017) ^{Invited}
- 2017 "GIS-Based Centralized Visualization Tool to Maintain and Operate Local Road Networks," the 8th International Visualization in Transportation Symposium: Visualization in Action, Washington D.C., USA (July 27-28, 2017) Invited
- 2017 "Revamping Tribal Road Networks from Various Sources and Improving Quality," (17-05560) C164, Transportation Research Board 96th Annual Meeting, Washington D.C., USA (January 8-12, 2017) Peer Reviewed
- 2016 "Clearing Roads and Collecting Debris by Integrating Remote Sensing Technique and VRP," INFORMS 2016 Annual Meeting, Nashville, Tennessee, USA (November 12-16, 2015) Invited
- 2016 "Spatial Optimization for Designing Public Water Supply Systems," INFORMS 2016 Annual Meeting, Nashville, Tennessee, USA (November 12-16, 2015) Invited
- 2016 "Statewide Freight Demand Modeling for Multiple Activities," CITILABS International User Conference: FUTURA 2016, Palm Spring, CA, USA (October 23-26, 2016) Invited
- 2016 "Optimization in Transportation Planning: Assigning Trips on Routes," 2016 INFORMS Optimization Society Conference, Princeton, NJ, USA (March 17-19, 2016)
- 2016 "Resolution Agile Remote Sensing for Hazardous Material Spill (with Bridgelall, R[†]. Rafert, J.B., Tolliver, D.)," Transportation Research Board 95th Annual Meeting, Washington D.C., USA (January 1-14, 2016) Peer Reviewed
- 2015 "An Agent-based Modeling for Remotely Piloted Aircraft Package Delivery in Rural Area (with Ali Rahim Taleqani[†])," INFORMS 2015 Annual Meeting, Philadelphia, Pennsylvania, USA (November 1-4, 2015)
- 2015 "Facility Location Problem Considering Time Window and Land Use Plan using GIS (with Alan Dybing and Sumadhur Shakya)," INFORMS 2015 Annual Meeting, Philadelphia, Pennsylvania, USA (November 1-4, 2015)
- 2015 "Developing Interactive Map for Supporting County Roads Improvement and Transportation Planning (with Bradley Lantz†)," Geospatial Information Systems for Transportation (GIS-T) Symposium, Des Moines, Iowa, USA (April 19-22, 2015)
- 2015 "Eco-Efficiency of U.S. Container Ports Using Data Envelop Analysis (DEA) (with N. Muhammad Aslaam Mohamed Abdul Ghani †, Yong Shin Park)," Transportation Research Forum Annual Meeting, Atlanta, Georgia, USA (March 11-13, 2015)
- 2015 "Airport Congestion Mitigation: A Multimodal Approach (with Annexstad, Jared †)," Transportation Research Forum Annual Meeting, Atlanta, Georgia, USA (March 11-13, 2015)
- 2015 "Feedstock Import Options Regarding Transportation Systems for Asphalt Production (with Raj Bridgelall)," Transportation Research Forum Annual Meeting, Atlanta, Georgia, USA (March 11-13, 2015)
- 2015 "Reshaping Tribal Road Network Using Public Information (with Jaesung Choi[†])," Transportation Research Board 94th Annual Meeting, Washington D.C., USA (January 11-15, 2015) Peer Reviewed

- 2015 "Context Sensitive Solutions: Case Study of Northwest Highway, White Rock Lake, Dallas, Texas (with Raj Bridgelall)," Transportation Research Board 94th Annual Meeting, Washington D.C., USA (January 11-15, 2015) Peer Reviewed
- 2014 "Designing Service Coverage and Measuring Accessibility and Serviceability," INFORMS Annual Meeting, San Francisco, California, USA (November 13-15, 2014)
- 2014 "Yield Forecasting to Sustain the Agricultural Transportation under Stochastic Environment (with N. Dharmadhikari† and F. Kambiz)," 55th Annual Transportation Research Forum, San Jose, California, USA (March 13-15, 2014)
- 2014 "Future Oil Production in North Dakota Estimates Based on a Seasonal Autoregressive Integrated Moving Average (S-ARIMA) (with Jaesung Choi[†] and David Roberts)," 55th Annual Transportation Research Forum, San Jose, California, USA (March 13-15, 2014)
- 2014 "An Investigation of Factors Influencing Port Choice Regarding Commodities and Foreign Trade Partners (with Wonjoo Cho)," 55th Annual Transportation Research Forum, San Jose, California, USA (March 13-15, 2014)
- 2014 "Multimodal Transportation for Crude Oil Shipment in North Dakota," 55th Annual Transportation Research Forum, San Jose, California, USA (March 13-15, 2014)
- 2013 "Statewide Freight Demand Modeling to Support Long-Range Transportation Planning in North Dakota," A Transportation Research Board SHRP 2 Symposium, Herndon, Virginia, USA (October 21-22, 2013) Peer Reviewed
- 2013 "Where is the next drilling location?" GIS-Pro 2013: URISA's 51st Annual Conference for GIS Professionals, Providence, Rhode Island, USA (September 15-19, 2013)
- 2013 "Connectivity and Equality: Consequence of Emergency Medical Services," Geospatial Information Systems for Transportation Symposium and Administrative Subcommittee on Information Systems (ASIS) meeting, Boise, Idaho, USA (May 2013)
- 2013 "Long Range Transportation Planning to Deal with Oil Production: Dynamic Oil Trip Generation," Geospatial Information Systems for Transportation Symposium and Administrative Subcommittee on Information Systems (ASIS) meeting, Boise, Idaho, USA (May 2013)
- 2012 "Integrating Supply Chain Network Model for Auto Industry in Midwest Using GIS," (with Kazemi Yasaman†). The Institute for Operations Research and the Management Sciences (INFORMS) Annual Conference, Phoenix, Arizona, USA (October 2012)
- 2012 "Impetus to Short Sea Shipping through Marine Highways," Transportation Research Forum (TRF) Annual Conference, Tampa, Florida, USA (March 2012)
- 2011 "Positioning Emergency Medical Services for Trauma Response for Rural Traffic Crashes," (with Poyraz Kayabas†). The Institute for Operations Research and the Management Sciences (INFORMS) Annual Conference, Charlotte, North Carolina, USA (November 2011)
- 2011 "Visualizing Path-Based Routes for Import Containerized Freights in U.S," (with Kambiz Farahmand & Denver Tolliver). U.S.-Korea Conference (UKC-2011), Park City, Utah, USA (August 2011)
- 2011 "Signal Detection Theory to Ascertain Driving Risk and Mitigation in a Flooded Urban Area," (with Kambiz Farahmand & Peter G. Oduor). Institute of Industrial Engineering Annual (IIE) Conference, Reno, Nevada, USA (May 2011) Peer Reviewed
- 2011 "Visualizing Path-Based Routes for Import Containerized Freights in U.S." (with Kambiz Farahmand & Denver Tolliver). Transportation Research Forum (TRF) Annual Conference, Long Beach, California, USA (April 2011)
- 2011 "3-D Transportation Network in Flooded Region," GIS-T symposium 2011, Hershey, Pennsylvania, USA (April 2011)

- 2011 "Agent-Based Model for Disruption of Intermodal Transportation" (with Nimish Dharmadhikari[†] & Jarrett Brachman). Transportation Research Forum Annual Conference, Long Beach, California, USA (March 2011)
- 2010 "Simulation of Base Stock Inventory Management System Integrated with Transportation Strategies of a Logistic Network" (with Kambiz Farahmand). 2010 Winter Simulation Conference, Baltimore, Maryland, USA (December 2010) Peer Reviewed
- 2010 "Spatial Decompositions for Gravity and Shortest Path for Set covering for Measuring Potential Accessibility to Emergency Service," URISA's 48th Annual conference for GIS Professionals, Orlando, Florida, USA (September 2010) Peer Reviewed
- 2010 "Decomposing the Customer Preference in Information Systems by Using Conjoint Analysis," Korean-American Scientists and Engineers (KSEA) Young Generation and Professional Forum (YGPF), Seattle, Washington, USA (August 2010)
- 2010 "Visualizing Transportation Network in 3D from LiDAR Data Using Geographic Information Systems," (with Haram Kim) Korean-American Scientists and Engineers (KSEA) Young Generation and Professional Forum (YGPF), Seattle, Washington, USA (August 2010)
- 2010 "Estimating Trip Diversion by using Impedance in Flood Regions," American Association of State Highways and Transportation Officials (AASHTO): Geospatial Information Systems for Transportation (GIS-T) Symposium, Charleston, West Virginia, USA (April 2010)
- 2009 "Simulation-Based Route Selection for Dispatching a Snow Removal Fleet," The Institute for Operations Research and the Management Sciences (INFORMS) Annual Conference, San Diego, California, USA (October 2009)
- 2009 "Analyzing Freight Data between the Borders in North America" (with Christopher DeHaan[†] & Kambiz Farahmand). Transportation Research Board (TRB): North American Freight Analysis Conference, Irvine, California, USA (September 2009)
- 2009 "North American Freight Analysis: Incorporating Logistical Impedance," (with Kambiz Farahmand & Christopher DeHaan). Transportation Research Board (TRB): North American Freight Analysis Conference, Irvine, California, USA (September 2009)
- 2009 "Considering Impedance for Intermodal Freight Transportation," (with Kambiz Farahmand).

 Institute of Industrial Engineering (IIE) Annual Conference, Miami, Florida, USA (May 2009) Peer Reviewed
- 2009 "Location Problem for Intermodal Terminal in North Dakota," (with Kambiz Farahmand).

 Transportation Research Forum (TRF) 50th Annual Conference, Portland, Oregon, USA (March 2009)
- 2008 "Investigation of Productivity and Efficiency by Simulation Technique" (with Kambiz Farahmand). Institute of Industrial Engineering (IIE) Annual Conference, Vancouver, British Columbia, Canada (May 2008)
- 2008 "Impact of Demand Variability of Supply Chain Performance," (with Kambiz Farahmand). Institute of Industrial Engineering (IIE) Annual Conference, Vancouver, British Columbia, Canada (May 2008) Peer Reviewed

State and Regional Meetings

- 2018 "Civic Engagement and Social Entrepreneurs," (with Dr. Yi-Yu Chen), the Accredited College of Business & Program (ACBSP) Region 1 Annual Meeting, Jersey City, NJ Peer Reviewed
- 2018 "A Study on Improving Student Engagement through Research Showcase Participation," (with Michael Bell, J.D.), the Accredited College of Business & Program (ACBSP) Region 1 Annual Meeting, Jersey City, NJ Peer Reviewed

- 2018 "Floor-Loaded or Palletization Problem," Paper session presented at the Northeast Decision Science Institute (NEDSI), Providence, RI Peer Reviewed
- 2017 "Site Selection of Air and Spaceport for Space Tourism Using Multi-Criteria Approach," (with Ibokd, K.). Paper session presented at the meeting of the Northeast Decision Science Institute, Springfield, MA. (March 22-25, 2017) Peer Reviewed
- 2016 "Career Path in Supply Chain Management and Transportation," (with Dr. Amit Mokashi) Association Council for Business Schools and Programs (ACBSP) Region 1 Fall Conference, New York, NY, USA (October 14 & 15, 2016)
- 2013 "Development of GIS Multimodal Capacity Model for Northern Tier Freight Corridor," (with Subhro Mitra, & Zijian Zheng[†]). North Dakota GIS Users Conference 2013, Grand Forks, North Dakota, USA (September 10-12, 2013)
- 2012 "GIS Modeling of County and Local Roads to Support Agricultural Transportation," (with Denver Tolliver, Alan Dybing, & Pan Lu). Minnesota GIS/LIS Consortium Annual Conference, St. Cloud, Minnesota, USA (October, 2012)
- 2011 "Location Optimality for Ambulance in North Dakota," (with Poyraz Kayabas[†]). North Dakota GIS Users Conference 2011, Grand Forks, North Dakota, USA (October 2011).
- 2011 "Winter Road Maintenance Using GIS," (with Poyraz Kayabas[†]). North Dakota GIS Users Conference 2011, Grand Forks, North Dakota, USA (October 2011)
- 2011 "Overcoming Computational Performance Constraints of Agricultural Transportation Planning in GIS," (with Nimish Dharmadhikari[†]). North Dakota GIS Users Conference 2011, Grand Forks, North Dakota, USA (October 2011)
- 2011 "Dynamic Algorithm for Geospatial Analysis to Predict Feasible Freight Routes," (with Denver Tolliver, Peter G. Oduor, & Kambiz Farahmand). North Dakota GIS Users Conference 2011, Grand Forks, North Dakota, USA (October 2011)
- 2010 "Using Digital Elevation Model for Route Choice under Natural Disaster," Graduate Research and Art Forum, North Dakota State University, Fargo, North Dakota, USA (April 2010).
- 2010 "Using Digital Elevation Model for Route Choice under Natural Disaster," Korean-American Science and Engineer Association (KSEA): the Midwest Regional Conference, Iowa City, Iowa, USA (March 2010)

CAMPUS OR DEPARTMENTAL TALKS

- 2014 "Statewide Freight Demand Modeling: Multimodal Perspective for Oil Development," Guest Speaker in IME 472 Seminar Series, Department of Industrial & Manufacturing Engineering, NDSU (April 4, 2014)
- 2011 "Transportation for Globalized and Multicultural Society," Guest Speaker in the World I View Series, Equity and Diversity, NDSU (March 24, 2011)
- 2008 "Application and Modeling for Simulation using Pro-Model®," Guest Lecture in IME 472/672 (Simulation of Business and Industrial Systems), Department of Industrial and Manufacturing Engineering, NDSU (April 2008)
- 2007 "Discrete-Event Simulation for Inventory Analysis," Guest Lecture in IME 790 (Graduate Seminar), Department of Industrial and Manufacturing Engineering, NDSU (March 2007)

WORKSHOPS

2017 "GIS for Tribal Transportation and Land Use," Tribal Leaders and Trade, Bismarck, ND, USA, September 5-8, 2017 (Attendee: 7)

- 2017 "Leading Discussions with Lightning Talk," CXC at New Jersey City University, Jersey City, NJ, USA, May 3, 2017 (Attendee: 15)
- 2016 "Informal Assignment A Movie in Class," CXC at New Jersey City University, Jersey City, NJ, USA (Attendee: 15)

TEACHING EXPERIENCE

Department of Management, School of Business, New Jersey City University

BUSI 203 Business Statistics (Fall 2015/Spring 2016) – Undergraduate

BUSI 203H Business Statistics - Honors Program (Fall 2016) - Undergraduate

MGMT 225 Business Enterprise Applications (Summer 2018)

MGMT 251 Operations and Project Management Fundaments (Winter 2019)

MGMT 300 Introduction to Supply Chain, Logistics, and Maritime Port Management (Fall 2017/Spring 2018/Fall 2018/Spring 2019)

MGMT 305 Procurement and Supplier Management (Fall 2017/Spring 2018/Fall 2018)

MGMT 350 Decision Intelligence in Supply Chain (Spring 2019)

MGMT 311 Organizational Theory and Practices (Spring 2018/Spring 2019) - Undergraduate

MGMT 412 Business Information Systems (Fall 2015/Spring 2016/Fall 2016/Spring 2017/Fall 2017) – Undergraduate

MGMT 413 Global Supply Chain Management (Fall 2015/Spring 2016/Summer 2016/Fall 2016/Spring 2017/Fall 2017 online/Spring 2018 online/Fall 2018 online) – Undergraduate

MGMT 511 Seminar: Management Science (Spring 2017/Summer I 2017/Spring 2018) - Undergraduate

BUSI 612 Global Strategic Management (Summer 2016) - Master of Business Administration (MBA)

BUSI 613 Decision Analysis (Summer 2016) - Master of Business Administration (MBA)

Department of Industrial and Manufacturing Engineering, North Dakota State University

Operations Research I (Spring 2014, Spring 2015) – Undergraduate, Graduate

Logistics Engineering and Management (Fall 2014) – Undergraduate, Graduate

Quality Assurance and Control (Spring 2013) – Undergraduate, Graduate

Transportation and Logistics Program, North Dakota State University

Context Sensitive Solutions (Spring 2013/2014/2015) – Graduate, Online Graduate, Certificate, Distant & Continuous Education

Transportation Planning and Environmental Compliance (Fall 2012/2013/2014) 2014 Graduate, Online Graduate, Certificate, Distant & Continuous Education

Transportation System Modeling (Summer 2013) – Graduate, Online Graduate, Certificate

Spatial Analysis in Transportation (Spring 2013/2014/2015) - Graduate

APPLIED RESEARCH ACTIVITIES

- 2018 ACBSP Student Showcase, "Cross Sectional Study of Promoting and Supporting Young Entrepreneurial Leaders," Advising the project with a team of undergraduate students.
- 2016 Hudson-Bergen Light Rail (HBLR) System, "Service Improvement," Guiding the project with an undergraduate student.

- 2016 Port Jersey Logistics, Cranbury, NJ, "Shipping Palletized Containers vs. Ocean Containers," Guiding the project with a team of undergraduate students.
- 2015 North Dakota State University, "Improving crossing in campus," Leading Charrette, leading the project team and providing guidance
- 2015 Fargo-Moorhead Ambulance in Fargo, North Dakota, "Applying Control Charts for Improving Service Quality," Developing and guiding the project with one undergraduate student.
- 2014 North Dakota Department of Transportation, "State Highway Needs Study," Spatial analysis, developed CUBE transportation planning template, and advised research assistants
- 2014 Upper Great Plains Transportation Institute, "Grain Storage and Transportation," Developed and led the project with two groups of ten students and one program director from UGPTI
- 2014 North Dakota Legislative Assembly, "County and Township Road Infrastructure Investment Needs," Spatial analysis and co-principal investigator
- 2014 North Dakota Department of Transportation, "Factors Affecting Severe Highway Crashes in North Dakota," Developing algorithms of calculating horizontal curvatures and guiding graduate research assistant to develop a regression model
- 2012 The 63'rd North Dakota Legislative Assembly, "Study of County and Local Roadway Needs 2011-2013," Spatial analysis and co-principal investigator
- 2012 Karma, Lee, and Jackson (KLJ) in Bismarck, North Dakota, "Little Missouri River Crossing Study," Developed and guided the class project with two groups of eight students with three employee from KLJ.
- 2011 Upper Great Plains Transportation Institute in Fargo, North Dakota, "Rural Road Investment Needs to Support Agricultural Logistics and Economic Development in North Dakota,
- 2010 Upper Great Plains Transportation Institute in Fargo, North Dakota, "Additional Road Investments Needed to Support Oil and Gas Production and Distribution in North Dakota," Created maps for counties using final investment allocation and pavement types
- 2006 North Dakota Department of Transportation, District 8-Fargo, "Simulation of Snow Removal Planning," developed simulation modeling and led the project team
- 2004 Swanson Health Products in Fargo, North Dakota, "Developing Forecasting Methods for Production Improvement," Developed and led the project with five other graduate students and one employee from Swans Health Product

DEPARTMENTAL SERVICE

University-wide Committee / Involvement

General Education Assessment (2015-2017) – Quantitative / Information Technology Literacy Sophomore Success Initiative Task Force (2016-2018)

SBR Review Committee and Task Force (2017 – 2018) / SBR Steering Committee (2018 -)

Communication across the Curriculum (CXC) Liaison (Management Department) (2016-2018)

Task Force on Separately Budgeted Research (SBR) (AY 2017)

University Senate

- Member of the Standing Committee on Instructional Technology (2017 2019)
- Chair of the Standing Committee on Instructional Technology (2018 Present)

MSCHE (Middle States Commission on Higher Education) Self-study Team (2018- Present)

• Group III for Criteria 3: A Plan for Assessing Student Learning and Evidence – Co-chair

School of Business Committee / Involvement

Search Committee

- Member of Search Committee on Financial Technology / Data Science (AY 2018)
- Member of Search Committee on Data Science / Financing Department (AY 2017)
- Member of Search Committee on Data Science / Financing Department (AY 2016)

Program and Honors Program

- Member of Honors Program Committee (2015-Present)
- Member of the Ad Hoc Data Science Program Committee (2015-2016)

Student Experiential Learning

- Founding Chair of the Standing Committee on Economics and Business Research (2017 2019)
- Chair of the Business Student Research Showcase (2016-2017)
- Gothic Research Forum **Initiative Chair** (September, 2017)

Management Department Committee / Involvement

Management Curriculum and Assessment Committee – **Co-chair** (2017- Present)

Management Curriculum Development Committee (2015-2017)

Management Assessment Committee – Co-chair (2016-2017)

Upper Great Plains Transportation Institute, North Dakota State University

Search Committee at Upper Great Plains Transportation Institute (2012, 2014)

Strategic Planning Committee at Upper Great Plains Transportation Institute (2014)

PROFESIONAL MEMBERSHIPS/AFFILIATIONS

International and National Affiliations

Transportation Research Board, Since 2011 (ABJ30-Urban Transportation Data and Information Systems; ABJ60-Geographic Information Science and Applications; ABJ95-Visualiation in Transportation; ADA10-Statewide Multimodal Transportation Planning; ADD40-Transportation and Sustainability; AT045-Intermodal Freight Transport; ABE80-Native American Transportation Issues; AT020-International Trade and Transportation)

Transportation Research Forum (TRF), Since 2009.

Association for Operations Management (APICS), Since 1998.

Korean-American Scientists & Engineers Association (KSEA), Since 2010.

Institute for Operations Research and Management Science (INFORMS), Since 2009.

Urban & Regional Information Systems Association (URISA), Since 2010

Korean Transportation Association in America (KOTTA), Since 2006

Council of Supply Chain Management Professionals (CSCMP)

Institute of Supply Management (ISM), Since 2018

Regional Affiliations

INFORMS New Jersey Chapter, 2015 - 2016

CSCMP New Jersey Chapter, Since 2015

Greater North New Jersey APICS (GNJ), Since 2015

Red River Valley APICS Chapter (RRIV), 2011-2015 Fargo-Moorhead Transportation Club (FMTC), 2013-2015

COMPUTER SOFTWARE

Statistical Software: SAS, SPSS, R, & MiniTab

Database Software: Microsoft SQL and Access, Oracle, BaaN ERP, & Sybase

Operating Systems: Window 2000, Windows-NT, Linux, UNIX-AIX

Programming Languages: PowerBuilder, Visual Basic, C++, Fortran, BASIC, & Matlab

Simulation: ProModel® for Discrete Event Simulation and FlexSim® for 3D Discrete Event Simulation,

AnyLogic®-Agnet-Based Modeling and System Dynamics

Optimization Software: SAS Optimization, Lingo® and LINDO®, & Excel Solver

Freight Demand Modeling: CUBE 6.x, MOVES2014, HERS-ST

Business Analytics: Boomberg® Visualization Tool: Tableau