

CONTACT ADDRESS: Geospatial Information Sciences
School of Economic, Political and Policy Sciences
University of Texas at Dallas
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■ EDUCATION

- 2021-Present **Ph. D. Student in Geospatial Information Sciences**
School of Economic, Political and Policy Sciences
The University of Texas at Dallas, United States
- 2015 **Master of Arts, Geography Education**
Department of Geography Education– Seoul National University,
Seoul, South Korea
Study Fields: Geographic Information Science, Remote Sensing, and Spatial
Statistics
- Thesis: An Analysis of Correlation between Intra-urban Land Surface
Temperature Distribution and Socio-economic Indexes: An application of
Seoul area census output statistics and Landsat 7 ETM+ imagery
- 2013 **Bachelor of Arts, Geography Education**
Kyungpook National University, Daegu, South Korea
- 2013 **Bachelor of Science, Geology**
Kyungpook National University, Daegu, South Korea

■ RESEARCH INTERESTS

- Topics GISciences, Urban Planning, Human-Environment Interactions, Climate
Change, Natural Hazards, Geovisualization, BigData
- Methods Spatial Statistics, Remote Sensing, SAR Interferometry, Geospatial
Technology, Machine Learning, Computer Programming (R, Python, Java),

■ PROFESSIONAL EXPERIENCE

- Research Assistant**
01/21 – present University of Texas at Dallas, United States
- Integration of spatial autocorrelation into location-allocation problems:
Enhancing solving capabilities and heuristics
- Researcher**
10/18 – 12/19 Suwon Research Institute, South Korea
- Evaluation of the Growth and Health of Street Trees in Suwon

- The Study on Designation of Wildlife Protection Districts in Suwon
- Ecosystem Research and Producing the Biotope Map in Suwon
- Provincial Environment Administration Plan: Developing Ecological Network
- The Countermeasure for the Sunset Provision on Urban Parks in Suwon
- A Vision and Strategies of Urban Parks and Green Spaces for Suwon 2030

09/15 – 08/17 Gyeonggi Research Institute, South Korea

- Investigation and Management Methods of Modern Architectural Assets in Gyeonggi-Do
- Outcomes and Development Measures of Gyeonggi-Do's Architectural Master Plan
- Improvement Methods for the Management of the Royal Tombs of the Joseon Dynasty located in Gyeonggi Province
- Policy Improvement for Earthquake Disaster Response in Gyeonggi-Do

Administrative Assistant

02/17 – 03/18 Korea Neutrino Research Center, Seoul National University, South Korea
 09/13 – 08/15 Department of Geography Education, SNU, South Korea

Spatial Data Management (Sergeant)

01/09 – 11/10 Korea National Defense Geospatial-Intelligence Agency, South Korea

- Military Analyses on Physical and Cultural Data in South and North Korea

■ CERTIFICATIONS

- 2018 **JAVA and R Developer for BigData Analysis**
 National Competency Standards Program, Ministry of Employment and Labor
- 2013 **Secondary School Teacher (Grade II) - Geography**
 Certificate issued by Ministry of Education, Republic of Korea

■ PUBLICATIONS AND PRESENTATIONS

Academic Publications

Griffith, D. A., Agarwal, K., Chen, M., Lee, C., Panetti, E. A., Rhyu, K., ... Yu, X., 2021, Geo spatial socio-economic/demographic data: The existence of spatial autocorrelation mixtures in georeferenced data—Part I. *Transactions in GIS*, 00, 1– 16. <https://doi.org/10.1111/tgis.12826>

Griffith, D. A., Agarwal, K., Chen, M., Lee, C., Panetti, E. A., Rhyu, K., ... Yu, X., 2021, Geo spatial socio-economic/demographic data: The existence of spatial autocorrelation mixtures in georeferenced data—Part II. *Transactions in GIS*, 00, 1– 12. <https://doi.org/10.1111/tgis.12834>

Nam, J.H., Cho, H.E. and Lee, C.H. 2019, Analysis and Evaluation on the Surrounding Urban Environment of The Royal Tombs of the Joseon Dynasty for Maintenance and Local Utilization: focusing on The Royal Tombs of the Joseon Dynasty located in Gyeonggi Province, *Journal of the Korean Association of Regional Geographers* 25(4): 463-479. (<http://dx.doi.org/10.26863/JKARG.2019.11.25.4.463>)

Lee, C.H., Kim, E.Y. and Jeon, C.W. 2019, Analysis of Land Cover Changes using Landsat Satellite Imagery of Suwon, South Korea: from 1972 to 2017, *Suwon Studies* 15: 243-

271. (https://www.suwon.re.kr/board/downloadv.php?bo_table=suwon_research&wr_id=37&no=0)

Nam, J.H., Cho, H.E. and Lee, C.H. 2019, A Study on the Analysis of the Distribution Status and Regional Characteristics of Modern Architecture in Gyeonggi and Incheon : Focusing on Modern Architecture near Railroads in Operation Constructed under Japanese Rule, *Journal of the Korean Association of Regional Geographers* 25(1): 118-135. (<http://dx.doi.org/10.26863/JKARG.2019.02.25.1.118>)

Nam, J.H., Han, J.A. and Lee, C.H.* 2016. The Reason of 'Vacant Houses' Formation and the Method of Management in Gyeonggi Province, Korea. *Sustainability* 8(4)**: Article number 367. *Correspondence **SCIE (<http://dx.doi.org/10.3390/su8040367>)

Kim, M.S. and Lee, C.H. 2015. A Service Learning Project Using Geospatial Technologies: Community Participation from the Perspective of Geotourism. *Journal of the Korean Cartographic Association* 15(3): 63-77. (<http://dx.doi.org/10.16879/jkca.2015.15.3.063>)

Lee, C.H. 2014. An Analysis on Landslide in Jeonwon Town around Mt. Woomyeon through Hydrology Tool in GIS. *Social Science Education* 17: 71-81. (<http://kiss.kstudy.com/thesis/thesis-view.asp?key=3375593>)

Lee, C.H. and Kim, H.D. 2013. Emerging Web2.0 Period and Expectation of GIS Application with Smart Grid System. *Social Science Education* 16: 93-112. (<http://kiss.kstudy.com/thesis/thesis-view.asp?key=3375588>)

Lee, C.H. 2012. Producing Outline Maps for Effective World Geography Education. *Journal of Geography Education* 56: 43-53. (<http://kiss.kstudy.com/thesis/thesis-view.asp?key=3213776>)

Professional Presentations

“Time varying delineation of police patrol areas: A p-median problem approach for daytime and nighttime patrolling” The American Association of Geographers 2022 Virtual Annual Meeting, February 25, 2022.

“An Exploratory Analysis of Methane (CH₄) in the Permian Basin Using Zonal Statistics for Remotely Sensed Data” The GIS Day 2011, The University of Texas at Dallas, Texas, United States, November 17, 2021.

“Delineating police patrol areas using a p-median location problem.” The 68th North American Meetings of the Regional Science Association International, Grand Hyatt Hotel, Denver, Colorado, United States, November 12, 2021.

“An Analysis on Small-Scale Topographic Maps Issued by Impervious Countries' Government: from Production to Application.” The Korean Cartographic Association, Semiannual Conference, Seoul National University, Seoul, Korea, June 2, 2018.

“The Displacement Measurement for the Pohang Earthquake on 15th Nov through the Differential Interferometry SAR method.” The Korean Geomorphological Association, Semiannual Conference, Seoul, Korea, February 9, 2018.

“The Reason of Vacant Houses Formation and the Method of Management in Gyeonggi Province,” Korean Cartographic Association, Semiannual Conference, Seoul, Korea, June 11, 2016.

“Topographic Change Detection by Using Synthetic Aperture Radar Interferometry,” Association of Korean Geographers, Semiannual Conference, Seoul, Korea, May 28, 2016.

“An Analysis on Correlation between Intra-Urban Land Surface Temperature Distribution and Socio-Economic Indexes,” Korean Cartographic Association, Semiannual Conference, Korea University, Seoul, Korea, 1 PM December 13, 2014.

“Creating Geotourism Contents for Mt. Gwanak based on Web GIS,” Korean Association of Geographic and Environmental Education, Semiannual Conference, Korea University Seoul, Korea, 3 PM December 13, 2014.

Lectures

“Geospatial Technology: Sense of Place Mapping,” Dongtan Global high school, (8hrs) Oct 28-Nov 5, 2020

“Field Trip for Participatory GIS: Barrier Free Mapping,” Seoul Sung Bo high school, (25hrs) Aug 12-16, 2019

“GIS Methods for Regional Research,” Suwon Sustainable City Foundation, (16hrs) May 24-Jun 21, 2019

“Field Trip for Participatory GIS,” Seoul Sung Nam high school, (30hrs) Dec 24, 2018-Jan 12, 2019

“Introduction to Active RS and Exercises,” Korea Military Academy, (2hrs) May 28, 2018

“Applied GIS Lab: Public Health GIS,” School of Public Health, SNU, (12hrs) Sep 1-Oct 30, 2013

“Lab: Cartography,” Department of Geography Education, SNU, (9hrs) Mar 1-Aug 31, 2013

■ GRANTS AND AWARD

Mar 24, 2022 [\$2100, granted] Pioneer Scholarships Award

Sep 7, 2020 [\$300, awarded] Encouragement Award, Idea Competition, Korea Agency for Infrastructure Technology Advancement

Sep 7, 2013 [\$900, awarded] Best Volunteer Award, UNEP Korea

2013 [\$5500, granted] Lecture & Research Scholarship, Seoul National University

2011-2012 [\$9,000, granted] Korea Scholarship Foundation for Future Leaders

Dec 1, 2008 [\$900, awarded] Third Place, Suwon Student Research Competition

■ PROFESSIONAL SERVICE

Volunteer Leadership

08/13 – 01/14 **Vice President, UNEP Angel**

- Projects: 350ppm Carbon Campaign Playground with UNEP Angel, Green Market, Clean up the World in Yeosu with GS Caltex

02/13 – 07/13 **Division Head, Academic Affairs Division in UNEP Angel**

- Projects: Environment Reports Competition, Conference on Environment

07/12 – 02/13 **Provincial Head, Daegu Provincial Division in UNEP Angel**

- Projects: Green Market with Beautiful Reuse Store, Forum about UNEP

Angel in Daegu

UNEP Angel: Students group in United Nations Environment Programme National Committee for South Korea

Volunteer Activities

03/16 – present **Instructor, geospatial technologies**

Department of Geography Education, Seoul National University, Korea
• GIScience, WebGIS, Community Engagement by GIS, Map Creation

03/12 – present **Environmental conservation activities**

Students group in UNEP National Committee for the Republic of Korea &
Korean Federation for Environmental Movement in Daegu

• Cleaning, Recycling, Education, and Environmental Campaigns, Donations