

SU JIN LEE

Spatial Sciences Institute
Dana and David Dornsife College of Letters, Arts, and Sciences
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CURRENT POSITION

- 2012-present Lecturer, Spatial Sciences Institute, University of Southern California
2014-present Faculty Affiliate, Population Research Center, University of Southern California

EDUCATION

- 2012 Ph.D., Geography, University of Southern California
 Dissertation: Effects of Home Modifications and Municipal Policies on Green Space in
 Los Angeles County
- 2003 M.S., Earth and Marine Sciences, Hanyang University, Korea
 Thesis: A Study on the Precise Lineament Recovery of Alluvial Deposits Using
 Satellite Imagery and GIS
- 2000 B.S., Earth and Marine Sciences, Hanyang University, Korea

PROFESSIONAL CERTIFICATION

- 2015 GISP, GIS Certification Institute, USA
- 2007 GIS Certificate, Geography, University of Southern California, USA

HONORS AND AWARDS

- 2015 Undergraduate Research Associates Program Funding (\$3,200), Dana and David
 Dornsife College of Letters, Arts and Sciences, University of Southern California

- 2014 Dornsife NTT Faculty Development Award (\$500), Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California
- 2011 AAG Student Travel Award (\$500), Korean American Association for Geospatial and Environmental Sciences
- 2010-2011 Doctoral Merit Fellowship, Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California
- 2010-2011 Conference Travel Grant (\$500), Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California
- 2009 Best Graduate Teaching Assistant Award (Top Six at USC, \$1,000), Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California
- 2008 Graduate Teaching Assistant Award, Center for Excellence in Teaching (Department of Geography), Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California
- 2006-2007 Doctoral Merit Fellowship, Dana and David Dornsife College of Letters, Arts and Sciences, University of Southern California
- 2004 International Research Internship Program Award (\$24,000), Korea Science and Engineering Foundation
- 2000-2002 Graduate Science Scholarship, Department of Earth and Marine Sciences, Hanyang University, Korea
- 1994 Vice Departmental Students Representative, Department of Earth and Marine Sciences, Hanyang University, Korea
- 1993 Freshman Departmental Students Representative, Department of Earth and Marine Sciences, Hanyang University, Korea

PUBLICATIONS

- 2009 Sheng, J., Wilson, J.P., and **Lee, S.J.** Comparison of Land Surface Temperature (LST) Modeled with A Spatially-Distributed Solar Radiation Model (SRAD) and Remotely Sensing Data. *Environmental Modelling & Software*, 24: 436-443
- 2007 Clarke, K., and **Lee, S.J.** Spatial Resolution and Algorithm Choice as Modifiers of Down-Slope Flow Computed from Digital Elevation Models. *Cartography and Geographic Information Science*, 34: 215-230

LABORATORY BOOK CHAPTER

- 2013 **Lee, S.J.** Hurricane Katrina: Understanding Social and Physical Vulnerability. In *Spatial LABS*. Redlands, California, Esri Press, DVD (Updated Version for ArcGIS 10 and later)
- 2012 **Lee, S.J.** Hurricane Katrina: Understanding Social and Physical Vulnerability. In *Spatial LABS*. Redlands, California, Esri Press, DVD (Version for ArcGIS 9.3)

CONFERENCE AND SYMPOSIUM PROCEEDINGS

- 2010 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Identification of Municipal Polices that Influence the Distribution of Green Cover across Metropolitan Regions. In *Proceedings of the Joint International Conference on Theory, Data Handling and Modelling in Geospatial Information Science*, Hong Kong: 513-518
- 2005 **Lee, S.J.**, and Clarke, K. Assessment of Differences between Algorithms for Computing Fundamental Topographic Parameters. In *Proceedings of AutoCarto*, Las Vegas, Nevada
- 2003 **Lee, S.J.**, Hwang, J.S., Lee, D.C., Kim, J.W., and Suk, D.W. A Study on the Precise Lineament Recovery of Alluvial Deposits Using Satellite Imagery and GIS. In *Proceedings of Asian Conference on Remote Sensing and International Symposium on Remote Sensing*, Seoul, Korea: 363-368
- 2003 Hwang, J.S., Kim, S., Lee, S.H., Min K.D., Kim, J.W., and **Lee, S.J.** Observation of the Earth's 2003 Magnetic Field from KOMPSAT-1. In *Proceedings of Asian Conference on Remote Sensing and International Symposium on Remote Sensing*, Seoul, Korea: 300-307

TECHNICAL REPORTS

- 2011 Antos, M., Hogue, T., Longcore, T., **Lee, S.J.**, Kinoshita, A., Milanes, K., Morris, K., Pincetl, S., Shilling, F., Steele, N., Vos, R., and Washburn, B. Assessing Ecosystem Values of Watersheds in Southern California. Los Angeles and San Gabriel Rivers Watershed Council

PRESENTATIONS AT CONFERENCES AND WORKSHOPS

- 2015 **Lee, S.J.** Teaching Spatial Data Acquisition in Online: Maximizing the Field Component. *The Esri Education Conference*, San Diego, California

- 2015 **Lee, S.J.**, Longcore, T, Rich, C., and Wilson, J.P. Effects of Increased Home Size on Green Cover in Los Angeles County's Single Family Neighborhoods. *The Vespucci Conference*, the College of Atlantic, Maine
- 2014 **Lee, S.J.**, and Kim, K.H. GIS-Based Model Choice for Computing Solar Irradiation from DEMs. *AutoCarto 2014*, Pittsburgh, Pennsylvania
- 2013 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Estimating Land Cover Changes using Object-Oriented Image Classification and GIS-Based Spatial Analysis Techniques in Metropolitan Areas of Los Angeles County. *Annual Meeting of the Association of American Geographers*, Los Angeles, California
- 2012 **Lee, S.J.** Changing Character of Single Family Neighborhoods in Los Angeles County. *Second Annual Los Angeles Geospatial Summit*, Los Angeles, California
- 2011 **Lee, S.J.**, Longcore, T., Clarke, K., Rich, C., and Wilson, J.P. Monitoring Urban Land Cover Change Using Remote Sensing and GIS: A Case Study Los Angeles County. *Esri International User Conference*, San Diego, California
- 2011 **Lee, S.J.**, Longcore, T., and Wilson, J.P. A Study of the Ecological Consequences of Mansionization in Los Angeles County. *Annual Meeting of the Association of American Geographers*, Seattle, Washington
- 2010 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Identification of Municipal Polices that Influence the Distribution of Green Cover Across Metropolitan Regions. *Joint International Conference on Theory, Data Handling and Modelling in Geospatial Information Science*, Hong Kong
- 2010 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Modeling the Ecological Impacts of Mansionization in Metropolitan Regions. *Annual Meeting of the Association of American Geographers*, Washington, DC
- 2005 **Lee, S.J.**, and Clarke, K. Assessment of Differences between Algorithms for Computing Fundamental Topographic Parameters. *AutoCarto*, Las Vegas, NV
- 2003 **Lee, S.J.**, Hwang, J.S., Lee, D.C., Kim, J.W., and Suk, D.W. A Study on the Precise Lineament Recovery of Alluvial Deposits using Satellite Imagery and GIS. *Asian Conference on Remote Sensing and International Symposium on Remote Sensing*, Seoul, Korea

POSTER PRESENTATIONS AT CONFERENCES AND WORKSHOPS

- 2015 Cooper, J., Gilsemanm N., Reger, C., and **Lee, S.J.** Measuring Geographic Change with Geospatial Technology and Landscape Photography in Two Harbors,

California. *Annual Meeting of the Association of American Geographers*, Chicago, Illinois

2015 Park, W.J., Chiang, Y.-Y., **Lee, S.J.**, and Yu, K. Hot Spots of Tweets Related to Food, Entertainment, Work and Study in Gangnam Area of Seoul, Korea. *The Esri User Conference*, San Diego, California

MANUSCRIPTS IN PROGRESS

Expected 2016 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Effects of Increasing Home Size on Green Cover in Los Angeles County's Single Family Neighborhoods (*It will be submitted to Landscape and Urban Planning*)

Expected 2016 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Effects of Municipal Policies on the Distribution of Green Cover across Los Angeles County's Single Family Neighborhoods (*It will be submitted to Proceedings of the National Academy of Sciences*)

Expected 2016 **Lee, S.J.**, and Kyohyook Kim. GIS-based Algorithm Choice as Modifiers of Solar Radiation Computed from LiDAR (*It will be submitted to Cartography and Geographic Information Science*)

Expected 2017 **Lee, S.J.**, Longcore, T., and Wilson, J.P. Estimating Land Cover Changes in Metropolitan Areas of Los Angeles County using Object-Oriented Image Classification and GIS-Based Spatial Analysis Techniques (*It will be submitted to Journal of Geo-Inform*)

Expected 2017 Kyohyook Kim and **Lee, S.J.** Assessment of Solar Potential and Energy Saving using Detailed 3D Building Roof Models (*It will be submitted to Journal of Geographical Information Science*)

Expected 2017 **Lee, S.J.** Comparison of Assessing Comprehensive Park Needs Methods Using Geospatial Technologies in Los Angeles County (*It will be submitted to submit: Journal of Spatial Science*)

LABORATORY BOOK IN PROGRESS

Expected 2016 Vos, R., **Lee, S.J.**, and Loyola, L. Sustainability Sciences in the City: Population Modeling, Mapping Urban Footprint, Modeling Urban Forests Versus Income, Indexing Neighborhood Walkability, Mapping Toxics, and Story Mapping (*It will be submitted to SpatialLAB*)

TEACHING

GRADUATE COURSES TAUGHT AS INSTRUCTOR

Spatial Sciences Institute, University of Southern California

SSCI 581: Concepts for Spatial Thinking, Geographic Information Science & Technology Graduate Programs

SSCI 583: Spatial Analysis, Geographic Information Science & Technology Graduate Programs

SSCI 584: Spatial Modeling, Geographic Information Science & Technology Graduate Programs

SSCI 585: Geospatial Technology Project Management, Geographic Information Science & Technology Graduate Programs

SSCI 587: Spatial Data Acquisition (formerly called GPS/GIS Field Techniques), Geographic Information Science & Technology Graduate Programs

SSCI 599: Special Topics: Spatial Modeling, Geographic Information Science & Technology Graduate Programs

UNDERGRADUATE COURSES TAUGHT AS CO-INSTRUCTOR

Spatial Sciences Institute, University of Southern California

SSCI 165 Lgw: Sustainability Science in the City, General Education Course

GRADUATE COURSES TAUGHT AS TEACHING ASSISTANT

Spatial Sciences Institute/Geography, University of Southern California

SSCI/GEOG 585: Geospatial Technology Project Management

SSCI/GEOG 587: Spatial Data Acquisition (formerly called GPS/GIS Field Techniques)

SSCI/GEOG 588: Remote Sensing for GIS

UNDERGRADUATE COURSES TAUGHT AS TEACHING ASSISTANT

Spatial Sciences Institute/Geography, University of Southern California

GEOG 101Lg: Sustainability Science and Society, General Education Course

GEOG 260Lg: Natural Hazards, General Education Course

SSCI/GEOG 265Lg: The Water Planet, General Education Course

STUDENT RESEARCH SUPERVISED

MASTER'S THESIS COMMITTEE CHAIR, UNIVERSITY OF SOUTHERN CALIFORNIA, GEOGRAPHIC INFORMATION SCIENCE & TECHNOLOGY ONLINE MASTER'S DEGREE PROGRAMS

- 2015 Mark Dustin, M.S.,
Thesis Title: Monitoring Parks with Inexpensive UAVs: Cost Benefit Analysis for Monitoring and Maintaining Parks Facilities
- 2015 Dustin Reed, M.S.,
Thesis Title: A study on Historical Surface Temperature Trends in Los Angeles County and the Effect of Population Growth
- 2015 Rachel Rodriguez, M.S.,
Thesis Title: Topo/Bathy DEM Creation using ArcGIS Interpolation Methods: A Case Study of the Klamath River estuary
- 2014 Caroline Carl, M.S.,
Thesis Title: GIS-Based Decision Support System for Rooftop Solar PV Potential on the Island of Hawaii

INVITED LECTURES AND SEMINARS

- 2015 Geospatial Technologies at SSI, Coastal Impacts Visualization Environment meeting at University of Southern California (March)
- 2014 Spatial Thinking and Geographic Information System Training for the Communication, Organization, Planning and Administration (COPA) Program, USC School of Social Work (September)
- 2014 Developing Safety Contents seminar with Korea National Disaster Management Institute at University of Southern California (July)
- 2014 Introduction to GIS and GPS at USC Wrigley Institute, Catalina Island, CA (June)

- 2013 Development of Technology on Disaster Risk Assessment and Response in Korea seminar with Korea National Disaster Management Institute, University of Southern California (September)
- 2013 Using LAR-IAC data in the GIST Program at the University of Southern California, LAR-IAC4 Kick Off Meeting, Los Angeles County (September)
- 2013 Introduction to GIS and GPS, USC Wrigley Institute, Catalina Island, CA (June)
- 2013 Got Geospatial? Roles of Geospatial in Natural Hazard, Hanyang University, Korea (March)
- 2013 Got Geospatial? Sejong University, Korea (March)
- 2013 Introduction to GIS and its applications, Kongjoo National University, Korea (January)
- 2012 An Overview of GIS technology and its application across a range of disciplines, The Mork Family and Scholars, Wrigley Institute for Environmental Study, USC Wrigley Institute, Catalina Island, CA (October)
- 2012 Introduction of How to Use a Trimble GPS Unit and How to Do Post Processing, Spatial Sciences Institute, University of Southern California (February 2012)
- 2010 Introduction of GIS and Remote Sensing, Hanyang University, Korea (October 2010)
- 2009 Identification of Municipal Policies that Influence the Distribution of Green Cover across Metropolitan Regions, Korea Institute of Geoscience and Mineral Resources, Korea (December)

SHORT COURSE

- 2012-2013 GPS Short Course: One day short course offered as part of Spatial Sciences Institute, University Southern California, Los Angeles, California

SERVICE

ACADEMIC JOURNAL REVIEWS

Computers and Geosciences
Transactions in GIS

PROFESSIONAL SERVICE

DEPARTMENT OF PARKS AND RECREATION

2015-2016 Technical Advisory, Park Needs Assessment County of Los Angeles

USC POPULATION RESEARCH CENTER
2014-2015 Faculty Affiliate

USC SCHOOL OF SOCIAL WORK
2014 Instructor, Two-day GIS workshop as part of the School of Social Work, Community, Organization, Planning, and Administration (COPA) Program

USC WRIGLEY INSTITUTE FOR ENVIRONMENTAL STUDIES
2015 SSI GPS Demonstrator, USC WIES 50th Anniversary Open House
2014 Mentor, USC WIES 2014 Summer REU Program Mentor
2014 Member, USC WIES 2014 Summer REU Program' Students Search Committee
2013 Mentor, USC WIES 2013 Summer REU Program Mentor
2013 Member, USC WIES 2013 Summer REU Program' Students Search Committee

SPATIAL SCIENCES INSTITUTE
2014-2015 Thesis Jury, Geographic Information Science & Technology Master's SSCI 594a Thesis Research
2012-2013 Member, Geographic Information Science & Technology Master's Thesis Prize Committee

USC LIBRARY
2012-2013 Interviewer, USC Geographic Information System Library Fellow Search

REGIONAL GEOGRAPHIC INFORMATION SYSTEM FORUM
2013 September, LAR-IAC 4 Kick Off Meeting at Los Angeles
2013 May, The Annual South California Geographic Information System Meeting at Culver City's City Hall
2013 April, Los Angeles Regional GIS Forum Meeting at the Port of Los Angeles

USC CENTER FOR EXCELLENT TEACHING
2009-2010 TA Fellow, USC Center for Excellent Teaching

WEBINARS AND VIDEOS

- 2014 **Lee, S.J.** General Information Session: SSCI 587-GPS/GIS Field Techniques (Webinar). Geographic Information Sciences and Technology Graduate Programs, University of Southern California (February)
- 2013 **Lee, S.J.** General Information Session: SSCI 587-GPS/GIS Field Techniques (Webinar). Geographic Information Sciences and Technology Graduate Programs, University of Southern California (January)

- 2012 **Lee, S.J.** GPS Short Course (Video). Geographic Information Sciences and Technology Graduate Programs, University of Southern California (October)
- 2012 **Lee, S.J.** GIS/GPS Field Techniques on Catalina Island (Video). Geographic Information Sciences and Technology Graduate Programs, University of Southern California (October)
- 2012 **Lee, S.J.** *General Information Session: GIST Programs (Webinar)*. Geographic Information Sciences and Technology Graduate Programs, University of Southern California (September)

EXPERIENCE

University of Southern California

- 2013-2014 Mentor, NSF-funded Research Experiences for Undergraduates Program
- 2011-2012 Graduate Teaching Assistant, Spatial Sciences Institute
- 2009-2010 Graduate Teaching Assistant Fellow, Center for Excellence in Teaching
- 2008-2010 TA Mentor, Center for Excellence in Teaching
- 2007-2010 Graduate Teaching Assistant, Department of Geography

Los Angeles County

- 2015 Technical Advisory Committee, Los Angeles County Department of Parks and Recreation

University of California, Santa Barbara, California

- 2004-2006 Visiting Scholar, National Center for Geographic Information and Analysis, Department of Geography

Sejong University, Korea

- 2001-2004 Associate Researcher, Research Institute of Geoinformatics and Geophysics
- 2000-2001 Assistant Researcher, Research Institute of Geoinformatics and Geophysics

Hanyang University, Korea

- 2000-2001 Graduate Research Assistant, Department of Earth and Marine Sciences

RESEARCH INTERESTS

Climate Changes
Data Acquisition
Data Fusion
Digital Terrain Modeling
Geospatial Technologies (GIS, GPS, And Remote Sensing)
GIS-Based Solar Radiation Modeling
Image Classification
Urban Land Use/Land Cover Changes
Spatial Analysis And Modeling
Sustainability Science (Equity, Walkability, Livability)

PROFESSIONAL SOCIETY MEMBERSHIPS

Association of American Geographers
 Geographic Information Systems and Science Specialty Group
 Landscape Specialty Group
 Remote Sensing Specialty Group
 Spatial Analysis and Modeling Specialty Group
Korea-America Association for Geospatial and Environmental Sciences
Korean-American Scientists and Engineers Association
South California Geographic Information System Groups
Los Angeles Regional Geographic Information System Group