

# Curriculum Vitae

## Eunmok Lee

Dept. of Geography, Miami Univ., Oxford Ohio  
(<http://miamioh.edu/cas/academics/departments/geography/index.html>)

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### Personal Data Visualization Web Site & Links

- <http://www.users.miamioh.edu/lee5/Menu/index.htm>
  - <https://em-lee.github.io/firstPage/>
- <https://lee5.gitbooks.io/new-techniques-in-giscience/content/>
  - <http://www.citeulike.org/user/emLee>

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## **Research Interest**

- GIS (ArcGIS, Python, VBA)
- Remote Sensing (ERDAS Imagine, eCognition)
- Cartography/Geovisualization (R, MapBox, CARTO)
- Data Exploration and Visualization (R, MATLAB, CARTO)
- Spatial Statistics (R)
- Land Cover / Land Use Change
- Climate Change and Landscape Evolution
- Human-Environmental Interactions

## **Education**

Ph.D. (Aug. 2014)

Advisor: Stephen Egbert

**Geography, University of Kansas**

Dissertation: *Analysis of MODIS 250m NDVI Using Different Time-Series Data for Crop Type Separability*

MA in Education (Aug. 1999)

Advisor: Manik Hwang

**Social Studies Education/Geography Major,  
Seoul National University (Seoul, Korea)**

Thesis: *A Research on Thematic Map Layer Extraction using High Resolution Satellite Images*

BA (Feb. 1995)

**Geography Education, Seoul National University  
(Seoul, Korea)**

## **Invited Talk**

- Dept. of Geography & Geology, University of Wisconsin at Whitewater  
: <http://www.uww.edu/cls/geography-geology>  
: March 5<sup>th</sup>, 2014
- Dept. of Geography & GIS, University of Northern Colorado  
: <http://www.unco.edu/hss/geography-gis/>  
: March 8<sup>th</sup>, 2017  
: Spatial data visualization and my recent RS researches

## **Teaching Experience**

2017 (Spring)

**Visiting Assistant Professor, Department of Geography,  
Miami University, Oxford OH**

GEO101 (3): Global Forces, Local Diversity

GEO242 (3): Mapping a Changing World

GEO460/560 (3): New Techniques in GIScience

**Guest Lecturer, Geography, Miami University**

GEOG 308: Geography of East Asia

- Hell Joseon: looking at Korea through maps (80 mins)

2017 (Winter)

**Visiting Assistant Professor, Department of Geography,  
Miami University, Oxford OH**

*Online* GEO101 (3): Global Forces, Local Diversity

2016 (Fall)

**Visiting Assistant Professor, Department of Geography,  
Miami University, Oxford OH**

GEO101 (3): Global Forces, Local Diversity

GEO242 (3): Mapping a Changing World

Geo460/560 (3): Course Development – Data Visualization

(<http://www.users.miamioh.edu/lee5/Menu/index.htm>)

2016 (Spring)

**Visiting Assistant Professor, Department of Geography,  
Miami University, Oxford OH**

GEO101 (3): Global Forces, Local Diversity

GEO242 (3): Mapping a Changing World

GEO460/560 (3): New Techniques in GIScience

2015 (Fall)

**Visiting Assistant Professor, Department of Geography,  
Miami University, Oxford OH**

GEO101 (3): Global Forces, Local Diversity

GEO242 (3): Mapping a Changing World

GEO460/560 (3): GeoVisualization

2015 (Spring)

**Lab Instructor, Department of Geography,  
University of Kansas**

GEOG726 (4): Remote Sensing of Environment II

2014 (Fall)

**Lecturer, Department of Geography,  
University of Kansas**

GEOG526 (4): Remote Sensing of Environment I

- 2014 (Spring)                      **Visiting Instructor, Department of Geography, Kansas State University**  
GEOG302 (3): Cartography and Thematic Mapping  
GEOG508 (4): Geographic Information System I
- 2013 (Fall)                         **Visiting Instructor, Department of Geography, Kansas State University**  
GEOG100 (3): World Regional Geography  
GEOG302 (3): Cartography and Thematic Mapping  
GEOG508 (4): Geographic Information System I
- 2011 (Fall) -2012 (Spring)       **GTA, Geography, Univ. of Kansas**  
GEOG 105 (3): Introductory Laboratory in Physical Geography  
GEOG 358 (3): Geographic Information Systems Labs  
GEOG 558 (3): Geographic Information Systems Labs
- 2012 (Spring)                      **Guest Lecturer, Geography, Univ. of Kansas**  
GEOG 358: Principles of GIS  
  - Remote Sensing Applications (2 hrs)
  - DBMS - Attribute Management in GIS (1 hr)
- 2011 (Fall)                         **Guest Lecturer, Geography, Univ. of Kansas**  
GEOG 358: Principles of GIS  
  - Remote Sensing Applications (2 hrs)
  - DBMS - Attribute Management in GIS (1 hr)

## **Research Experience**

2017 (Summer)

### **Managing Course Materials using GitHub/GitBook**

Testing to put together the complete course on GitHub/GitBook

- <https://lee5.gitbooks.io/new-techniques-in-giscience/content/>
- <https://github.com/lee5/Summary-of-Geo460-560-Spr.-2017->

2014 - 2015 (Spring)

### **Testing Climate Classifications Using Global Climate Data**

Testing different climate classifications including Thornthwhite, Koppen, New and time series info for the New using Python codes

2014 - 2015 (Spring)

### **Research for Native American Land Allotments**

Mapping PLSS (Public Land Survey System) tracts onto a map using TractBuilder for ArcView to study Native American Land Allotments

2012 – 2015 (Spring)

### **Geospatial Genealogy**

Research of residential, business, and kinship patterns in a mixed-ethnic settlement in pre-Holocaust Eastern Europe by combining data from historical records with the mapping and analytical power of GIS

2011 – 2015 (Spring)

### **BACC: FLUD Project, Kansas Applied Remote Sensing (<http://kars.ku.edu/>)**

Biofuels and Climate Change: Farmers' Land Use Decisions funded by a five year grant from the National Science Foundation

([http://www.ipsr.ku.edu/CEP/BACC/symposium\\_info.shtml](http://www.ipsr.ku.edu/CEP/BACC/symposium_info.shtml))

2012 (Fall) – 2013 (Summer)

### **GRA, Geology**

Remote sensing using LiDAR imagery: developing and running flood and landscape models for arid lands in the Middle East and East Africa

2011 (Spring - Summer)

**Technical Research Assistance, Kansas Geological Survey (<http://www.kgs.ku.edu/>)**

- Develop and maintain GIS database interfacing ArcGIS, GPS, and in-house software into ongoing water level support operations
- Read, organize, and catalog; performing all necessary librarian and archival functions on current and future CD and DVD libraries, of water level program data
- Provide support as requested for water level program
- Perform independent analysis of data acquired and processed associated with water level program to ensure a consistent and highly accurate yearly data set
- Design field routes, maintain fluency with guidance systems, interact with other Survey sections as they relate to GPS needs
- Assist with posting material on professional web page

2010 (Fall)

**Research Assistant, Dept. of Geography, Dept. of Ecology & Evolutionary Biology, Univ. of Kansas**

Sea level rise effects on coastal ecosystem distributions and biodiversity status in the lower 48 United States,

- Creating land use maps and simulating sea level rise using GIS

2007 (Summer) - 2010 (Summer)

**GRA, Center for Remote Sensing of Ice Sheets (<https://www.cresis.ku.edu/>)**

- Analysis of Climate Data
- Modeling & Mapping Dynamics of Ice Sheet

2006 (Summer)- 2007 (Spring)

**GRA, Kansas Geological Survey**

NATCARB project, National Carbon Sequestration Database and GIS

([http://www.netl.doe.gov/technologies/carbon\\_seq/natcarb/index.html](http://www.netl.doe.gov/technologies/carbon_seq/natcarb/index.html))

## **Fellowships, Grants & Scholarships**

- NSF (BACC: FLUD Project), Kansas Applied Remote Sensing, 2011 – 2015 (Spring)
- Kollmorgen Graduate Research Scholarship, Department of Geography, University of Kansas, 2012

## **Service**

- GIS Day @KU Planning Committee Members (<http://gis.ku.edu/gisday/>), 2014
- KU Geography Department, GIScience Graduate Student Representative, 2012
- GIS Day @KU Planning Committee Members (<http://gis.ku.edu/gisday/>), 2009
- GIS Day @KU (<http://www.gis.ku.edu/>), Student volunteer, 2008-2010
- KU Kumdo/Kendo sport club  
([http://recreation.ku.edu/programs/sport\\_clubs/current\\_clubs.shtml#kumdo](http://recreation.ku.edu/programs/sport_clubs/current_clubs.shtml#kumdo)), A founding member (2006) / President (2006-2007) / Instructor (2008 – Present)

## **Professional Affiliations**

- Association of American Geographers
- American Geophysical Union
- AmericaView (<http://www.americaview.org/>)
- East Asian Studies Committee, Miami University, Oxford OH (2015 Fall – present)

## **Publications**

- Lee, E., J Kastens & S Egbert, 2016. “[Investigating collection 4 versus collection 5 MODIS 250 m NDVI time-series data for crop separability in Kansas, USA](#)” in *International Journal of Remote Sensing*
- Lee, E., J Kastens, S Egbert & B Wardlow, 2017. “Analysis of MODIS 250m Collection 6 NDVI Using Different Compositing Periods of Time-Series Data for Crop Type Separability” (In review)
- Lee, E., J Kastens & S Egbert, 2017. “Investigating collection 6 versus previous collections MODIS 250 m NDVI time-series data for crop separability in Kansas, USA” (In preparation)
- Lee, E., J Kastens, & S Egbert, 2017. “Understanding Different Characteristics of Terra & Aqua MODIS 250 m NDVI for Crop Separability” (In preparation)

## **Ad-Hoc Reviewer**

Geographical Review, 2014

Remote Sensing, 2016 – present

## **Presentations & Posters**

Eunmok Lee, 2017, Comparing JM Distance & Random Forest Models to classify Crops using Terra and Aqua MODIS, 2017 AAG Annual Meeting, Apr. 5-9<sup>th</sup>, Boston, Massachusetts.

Eunmok Lee, 2016, Looking at Korea through maps, 2016 East Asian Studies Committee: A Faculty Forum on Korea, Sep. 28<sup>th</sup>, Miami University, Oxford, OH.

Eunmok Lee, 2016, Comparison of Terra & Aqua MODIS 250 m NDVI for Crop Separability, 2016 AAG Annual Meeting, Mar. 29-Apr. 2<sup>nd</sup>, San Francisco, California.

Eunmok Lee, 2014, Analysis of Different Versions of MODIS 250 m NDVI for Crop Separability, 2014 AAG Annual Meeting, Apr. 8-12<sup>th</sup>, Tampa, Florida.

Melissa Goldade, Eunmok Lee, Jude Kastens, William C. Johnson and Gwendolyn L. Macpherson, 2013, Modeling Past and Present Flood Water Inundation in the Middle East. 2013 GSA Annual Meeting, Oct. 27-30<sup>th</sup>, Denver, Colorado.

William C. Johnson, Jude Kastens, Eunmok Lee, Kevin E. Dobbs and Gwendolyn L. Macpherson, 2012, Modeling Extreme Flood Events in Afghanistan. 2012 GSA Annual Meeting & Exposition, Nov. 4-7<sup>th</sup>, Charlotte, North Carolina.

Eunmok Lee, Stephen L. Egbert, Jude Kastens and Brian D. Wardlow, 2012. Analysis of MODIS 250m NDVI Using Different Time-Series Data for Crop Type Separability. AmericaView Fall Technical Meeting, Sep. 24<sup>th</sup> and 25<sup>th</sup>, USGS EROS Center, Sioux Falls, South Dakota.

Dana Peterson, Jude Kastens, Chris Brown, Stephen L. Egbert, Kevin E. Dobbs, Vijay Barve, Eunmok Lee and Ryan Surface, 2012. Infrastructure and Capacity Building: Creating an Enterprise GIS for Multi-scale, Interdisciplinary Analysis of Farmer's Land Use Decisions. AmericaView Fall Technical Meeting, Sep. 24<sup>th</sup> and 25<sup>th</sup>, USGS EROS Center, Sioux Falls, South Dakota.

Eunmok Lee, 2008. LiDAR Technology and the Ghost Road at KU. Kansas Academy of Science 140th Annual Meeting, Mar. 2008, Emporia, Kansas.



## **Research Award Proposal**

Eunmok Lee, Jude Kastens and Stephen L. Egbert. 2017. Examining AVHRR VPM data (1989-2015) for CONUS for trends in greenup onset and growing season length to evaluate the impacts of LULC and climate change. The Critical Zone Observatory, National Science Foundation (<http://criticalzone.org/national/about/>). (In Preparation)

## **Professional Experience**

6/2000 - 5/2005

**GIS (Geographic Information System) Engineer,  
Samsung SDS (<http://www.sds.samsung.com>)**

- Jeju City GIS Project (QAO, 2002-2004)
- Jeju Province Web GIS (PL, 2001-2002)
- Gas-line Network GIS (PM, 2001)
- Power-line GIS (System Design, 2000)

12/1997 - 12/1999

**Remote Sensing (Satellite Image Processing)  
Engineer, Cheong-O Geodesy & Geography**

- Research on Digital Ortho-image (1998)

01/1995 – 07/1996

**GIS Engineer,  
PanAsia Engineering (<http://www.panasia.co.kr/>)**

- Taebaek City Water Supply Management System (Developer, 1996)
- Changwon City Road Network GIS (Developer, 1995)

## **Professional Certification**

Jan. 2005

**Project Management Professional (PMP)**, a credential offered by Project Management Institute (PMI, <http://www.pmi.org/>) : expired on Jan. 2009 while pursuing Ph.D.

Feb. 1995

**Teachers' License** (1995), issued by Korean Government

## **Language**

Korean

Native language

English

Fluent in both spoken and written English

Chinese

Intermediate level in reading comprehension

Python / R

Fluent

JavaScript / SQL

Intermediate level