

# Leilei Duan

Spatial Science Institute  
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## EDUCATION

Post-doc Teaching Fellow	Spatial Science Institute, University of Southern California, 2018 - present
Ph.D.	Design, Construction and Planning, University of Florida, 2018
M.S.	Interdisciplinary Ecology, University of Florida, 2018
M.S.	Urban and Regional Planning, University of Florida, 2014
B.S.	Urban Management, East China University of Science and Technology, 2011
B.S. (minor)	Finance, East China University of Science and Technology, 2011

## RESEARCH AND TEACHING INTERESTS

Land use planning and resource allocation  
Computer-aid urban design  
Pedagogy, methodology, and practice in Geodesign  
Urban data analysis: statistics, spatial analysis, visualization  
Application of geographic information system in urban planning  
Three-dimensional modeling system  
Quality of life and built environment  
Urban form and network analysis  
Environmental planning

## CONFERENCE PRESENTATIONS

2017	“Detecting Development Opportunities Using Quality of Life Research and Land Use Suitability Modeling: A Case Study of the City of Tampa” American Collegiate Schools of Planning Annual Conference. Denver, Colorado. Oct 12-15.
2017	“Using 3D-GIS Based Parametric Modeling to Understand the Future Growth of Cities” Urban and Regional Information Systems Association Annual Conference. Jacksonville, Florida. Oct 23-26.
2017	“Using 3D parametric modeling to understand the future growth of cities: Simulating 3D infill allocation in the City of Tampa” 8th International Visualization in Transportation Symposium: Visualization in Action. Washington, DC. July 27-28.
2016	“Exploring Volumetric Population Allocation Based on a Trend Growth Model: A Case Study of Infill Allocation in the City of Tampa” American Collegiate Schools of Planning Annual Conference. Portland, Oregon. Nov 3-6.

- 2015 “Exploring the Use of Three-Dimensional Urban Simulation to Model Development Opportunities Based on Suitability Modeling and FBC Regulations” American Collegiate Schools of Planning Annual Conference. Houston, Texas. Oct 21-25.
- 2014 “Three-Dimensional Urban Simulation for Form-Based Codes” Florida American Planning Association Conference. Jacksonville, Florida.

### **CONFERENCE PANELS ORGANIZED**

- 2017 “Pedagogy in Geodesign Education” American Collegiate Schools of Planning Annual Conference. Denver, Colorado. Oct 12-15.

### **RESEARCH EXPERIENCE**

*University of Florida, Gainesville*

- 2014 – 2018 Research assistant at College of Design, Construction and Planning  
Supervisor: Dr. Paul Zwick, Dr. Ilir Bejleri
- Explored the Geodesign workflow in population and employment allocation process
  - Analyzed statewide traffic safety data; explored the impact of land use patterns changes on traffic crashes.

### **TEACHING EXPERIENCE**

*University of Southern California, Los Angeles*

- 2018 Co-Instructor (Fall 2018)  
SSCI 214g Human Populations and Natural Hazards  
Course instructors: Dr. Jennifer Swift & Douglas Fleming
- 2018 Co-Instructor (Fall 2018)  
SSCI 301 Maps and Spatial Reasoning  
Course instructor: Dr. Laura Loyola & Xiaozhe Yin
- 2018 Co-Instructor (Fall 2018)  
SSCI 401 Geospatial Intelligence  
Course instructor: Dr. Steve Fleming

*University of Florida, Gainesville*

- 2018 Teaching assistant (Spring 2018)  
LAA 6656/ URP 6341 Environmental Design and Planning Practicum (Geodesign)  
Course instructors: Dr. Paul Zwick & Dr. Tom Hctor
- Lectured on fundamentals in ArcGIS, and helped students with questions
- 2016 – 2018 Teaching assistant (Spring 2016, Spring 2017, Spring 2018)  
URP 6272 Spatial Analysis  
Course instructor: Dr. Paul Zwick

- Helped the professor with setting up the course syllabus, lectured on GIS Spatial Analysis and Spatial Statistics tools, and provided assistance with students' assignments.
- 2017 Instructor (Fall 2017)  
URP 4230 3D Modeling, Visualization and Simulation  
Geodesign undergraduate concentration
  - Created and organized the course structure, taught this course.
- 2017 Teaching assistant (Fall 2017)  
URP 6905 Urban Coastal Analysis  
Course instructor: Dr. Paul Zwick
  - Lectured on the usage of Story Map and ArcGIS Online, and helped students with their assignments.
- 2017 Teaching assistant (Spring 2017)  
URP 6872 Planning & Design II  
Course instructor: Dr. Ilir Bejleri
  - Helped the professor with setting up the course structure, and provided assistance with students' assignments
- 2016 Teaching assistant (Fall 2016)  
URP 6905 Geodesign Studio  
Course instructor: Dr. Paul Zwick
  - Helped the professor with setting up the course structure, and lectured on demographic data analysis.
- 2016 Teaching assistant (Fall 2016)  
URP 6905 3D Geospatial Urban Modeling & Visualization  
Course instructor: Dr. Ilir Bejleri
  - Prepared the lecture and homework content for CityEngine lectures, lectured on CityEngine, and provided assistance with students' assignments.
- 2015 – 2016 Teaching assistant (Fall 2015, Fall 2016)  
URP 6871 Planning & Design I  
Course instructor: Dr. Ilir Bejleri
  - Helped the professor with setting up the course structure, lectured on 3D modeling and provided assistance with students' assignments
- 2013 Teaching assistant (Fall 2013)  
URP 6374 Geodesign Studio  
Course instructor: Dr. Paul Zwick
  - Provided assistance with students' assignments.

## **SERVICE POSITIONS**

*University of Florida, Gainesville*

2016 – 2017 ESRI Campus Ambassador

## **FELLOWSHIP, GRANTS, AND AWARDS**

*University of Florida, Gainesville*

2014 – 2018     Graduate School Fellowship

## **PROFESSIONAL AFFILIATIONS**

American Planning Association (APA)

Association of American Geographers (AAG)

Student Planning Association (SPA)

## **CREDENTIALS**

Co-founder and administrator for Geodesign Wiki website: <http://geodesignwiki.com>

## **WORKING EXPERIENCE**

- |      |  |
|------|--|
| 2016 | RS&H, Tampa, Florida (Summer 2016)<br>Visualization Intern <ul style="list-style-type: none"><li>▪ Created 3D models of the City of Tampa using CityEngine to support the Tampa Bay Expressway (TBX) project, and provided GIS demographic data and built environment data analysis support.</li></ul>   |
| 2015 | RS&H, Jacksonville, Florida (Summer 2015)<br>Transportation Planning Intern <ul style="list-style-type: none"><li>▪ Provided GIS analysis support for multiple projects, developed part of the GIS Technician Guide for RS&amp;H, and hosted two Lunch and Learn events presenting new GIS techniques that can be applied to the current workflow.</li></ul> |
| 2010 | Kunming Urban Planning and Design Institute, Kunming, China (Summer 2010)<br>Transportation Planning Intern <ul style="list-style-type: none"><li>▪ Involved in urban district reformation, and conducted relevant environment evaluations.</li></ul>  |
| 2010 | Kunming City Planning Bureau, Kunming, China (Summer 2010)<br>Transportation and Environmental Planning Intern <ul style="list-style-type: none"><li>▪ Participated in green field planning of Panlong District</li></ul>  |

## **SKILLS AND METHODS**

### **Statistical and Computational Methods**

Multi-level statistics, multivariate statistics, data mining, data analysis with Python and R.

### **Three-dimensional Modeling Methods**

Computer Generated Architecture (CGA) language creation and editing, CityEngine, SketchUp, 3D GIS.

**Web Developing Methods**

HTML5, CSS

**Geospatial Methods**

GIS, spatial analysis, ArcGIS, network analysis, spatial network analysis

**Language Skills**

Fluent in English and Chinese.

Updated August 2018