

# ARIANNA SALAZAR MIRANDA

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MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
DEPARTMENT OF URBAN STUDIES AND PLANNING  
77 MASSACHUSETTS AVENUE  
CAMBRIDGE, MA 02139

OFFICE: 9-569  
EMAIL: [ariana@mit.edu](mailto:ariana@mit.edu)  
HOMEPAGE: <http://ariana.scripts.mit.edu>

## EDUCATION

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- 2017–Present Ph.D. Candidate in URBAN INFORMATION SYSTEMS  
**Massachusetts Institute of Technology**  
Research Interests: urban form, neighborhood change, geographic data science, sensing technologies to design and evaluate urban environments.
- 2014–2016 Master Degree in CITY PLANNING  
**Massachusetts Institute of Technology**  
Thesis: “The Shape of Segregation” | Advisor: Albert SAIZ
- 2006–2012 Licentiate Degree with High Honors in ARCHITECTURE  
**Veritas University**  
Thesis: “Translations of Narrative into Space” | Advisor: Juan Carlos SANABRIA

## PUBLICATIONS

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Salazar Miranda, A. (2020). The shape of segregation: The role of urban form in immigrant assimilation. *Cities*, 106, 102852.

Saiz, A., Salazar Miranda, A., & Bernard, J. (2018). Crowdsourcing architectural beauty: Online photo frequency predicts building aesthetic ratings. *PLoS ONE*, 13(7), 1–15.

Saiz, A., & Salazar Miranda, A. (2017). Real Trends: The Future of Real Estate in the United States.

J. Eager, Salazar Miranda, A. *Book Chapter* “Metabolic Reveal.” In *Infrastructure in Medellin. Planning Practice: Studios + Workshops*, 2016.

## WORKING PAPERS

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Salazar Miranda, A., Claudel M. (2019). Spatial Proximity Matters: A Study on Collaboration.

Salazar Miranda, A., Fan, Z., Duarte, F., & Ratti, C. (2020). Desirable Streets : Using Deviations in Pedestrian Trajectories to Measure the Value of the Built Environment (revise and resubmit).

## HONORS, AWARDS, AND COMPETITIONS

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- 2017 MIT Innovators Under 35 | Latin America, *MIT Technology Review*
- 2016 MIT Outstanding Master Thesis Award, *Department of Urban Studies and Planning*
- 2016 NIST and NSF Competition, *Global City Teams Challenge Leadership Prize*.
- 2015 Boston Climathon Finalist, *Tufts Institute of the Environment*.
- 2012 Second Place in International Design Competition, *Latin American Architecture Biennale*.
- 2011 LEED Associate Certification, *New York*.
- 2010 Finalist in IV Student Architecture Biennale, *College of Architects of Costa Rica*.

## GRANTS AND FELLOWSHIPS

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- 2020 American Economic Association Summer Fellow, *Federal Reserve Bank of Richmond*
- 2020 Sagalyn and Hack Dissertation Research Award, *Department of Urban Studies and Planning, MIT*
- 2020 Harold Horowitz Research Fund, *School of Architecture and Planning, MIT*
- 2019 Global Challenges Research Fund, UK
- 2018 Summer Intern PEAK-URBAN, *Urbam EAFIT, Medellin, Colombia*
- 2017 Presidential Doctoral Fellowship, MIT
- 2016 DesignX Entrepreneurship Fellow, *School of Architecture and Planning, MIT*
- 2016 Sandbox Entrepreneurship Grant, *School of Engineering, MIT*
- 2015 Bill Mitchell Research Grant, *School of Architecture + Planning, MIT*
- 2014 Graduate Academic Fellowship, *Department of Urban Studies and Planning, MIT*

## COURSES AND TRAINING

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- 2018 Social Urbanism Workshop, *EAFIT, Medellin, Colombia*
- 2016 Metropolitan Urbanism Workshop, MIT
- 2015 Summer Fabrication Workshop, *IAAC, Barcelona, Spain*
- 2012 LEED Certification Course, *Copper Union, Manhattan, New York*
- 2012 Mixed Media Workshop, *3rd Ward, Brooklyn, New York*
- 2011 Algorithmic Design Workshop, *University of Costa Rica + Architectural Association (AA)*

## RESEARCH EXPERIENCE AND LAB AFFILIATIONS

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SUMMER 2020	FEDERAL RESERVE BANK OF RICHMOND. Richmond, VA. <i>Summer Economics Fellow</i>
2019 - PRESENT	SENSEABLE CITY LAB. Cambridge, MA. <i>Graduate Researcher</i> Studying how people value the built environment using data collected using sensor technologies.
2014 - PRESENT	MIT URBAN ECONOMICS LAB. Cambridge, MA. <i>Graduate Researcher</i> Studying how the physical pattern of urban development affects the social, and economic quality of urban environments.
SUMMER-FALL 2015	MIT MEDIA LAB. Cambridge, MA. <i>Changing Places Group</i> Research focused on using new technologies for real-time data visualization using the CityScope platform –an urban simulation tool, which consists of Lego models and image projections.

## PROFESSIONAL EXPERIENCE

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2016 - PRESENT	<p>Co-founder of BITSENCE. Cambridge, MA. <i>Chief Scientist</i></p> <p>An MIT-based startup that collects sensor data on human movement and behavior in physical space to deliver insights about activity over time to help improve cities, architecture, and real-estate developments.</p>
2016 - PRESENT	<p>Co-founder of LOCAL SENSE LAB. Cambridge, MA. <i>Researcher</i></p> <p>Joint with the City of Boston Mayor's Office of New Urban Mechanics, Local sense lab uses sensor data to measure human activity and environmental quality. Part of the Global Cities Team Challenge Action Cluster.</p>
2015 - 2017	<p>Research Assistant at MIT CENTER FOR REAL ESTATE. Cambridge, MA. <i>Project Manager</i></p> <p>Wrote and developed the content of a new model for case study-based learning about the built environment. Analyzed the historic district of Panama as a case to study the impact of private-sector-led sustainable neighborhood revitalization.</p>
2013 - 2014	<p>Project Lead at FUNDACION ACCION JOVEN. San Jose, Costa Rica. <i>NGO</i></p> <p>Provided guidance on community transformation projects, which included public space regeneration. Worked with high-ranking government officials and key stakeholders in order to redesign policies for youth in conditions of high social risk.</p>
2012 - 2014	<p>Architect at MATERIA STUDIO. San Jose, Costa Rica. <i>Architectural Designer and Co-Founder</i></p> <p>Performed applied research on institutional, public projects, and competitions.</p>
2010 - 2014	<p>Architect at GARNIER ARQUITECTOS. San Jose, Costa Rica. <i>Project Manager and Architectural Designer</i></p> <p>Collaborated as a lead designer of quality retail and residential projects.</p>

## TEACHING EXPERIENCE

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- FALL 2019 | Teaching Assistant, INTRODUCTION TO SPATIAL ANALYSIS.  
*Massachusetts Institute of Technology*  
The class teaches master students how to use Geographic Information Systems (GIS). Led weekly lab sessions and taught students how to use spatial analysis tools.
- FALL 2019 | Teaching Assistant, WORKSHOP ON GEOGRAPHIC INFORMATION SYSTEMS.  
*Massachusetts Institute of Technology*  
The class teaches masters students how to implement a research project using spatial data. Led weekly lab sessions and provided individual feedback on projects.
- SUMMER 2018 | Instructor, WORKSHOP ON URBAN INFORMATICS AND VISUALIZATION.  
*EAFIT*  
This hands-on class teaches masters students to analyze urban data, develop environmental and accessibility indicators, and create visualizations.
- FALL 2018 | Teaching Assistant, CITY PLANNING THESIS PREPARATION.  
*Massachusetts Institute of Technology*  
The class teaches master students how to build a complete thesis proposal. Lead weekly workshops on how to craft a research question, quantitative and qualitative methods, and theory.
- FALL 2014 | Teaching Assistant, SITE AND ENVIRONMENTAL SYSTEMS PLANNING STUDIO.  
*Massachusetts Institute of Technology*  
In collaboration with the World Bank and the University of the Philippines, produced replicable resettlement and upgrade strategies for residents vulnerable to flooding. Facilitated field observations, stakeholder interviews, and design charrettes. Designed the studio exhibit and developed content for the studio book publication.
- FALL 2014-2015 | Teaching Assistant, URBAN DESIGN SKILLS.  
*Massachusetts Institute of Technology*  
The class examined the morphology of the city and the relationship between built form and natural systems. Oversaw management of class: crafted weekly 3d modeling, CAD and mapping software tutorials, and provided individual feedback on projects.

## TECHNICAL SKILLS

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Code and Parametric: Stata, R, Python, Grasshopper, SQL  
3D modeling: Rhinoceros, Sketchup  
CAD: AutoCAD, Vectorworks  
Fabrication: CNC, Laser, 3D printing  
Mapping: ArcGIS, QGIS, PostGIS, CartoDB, Leaflet, Mapbox  
Graphics and Video: AdobeCC Photoshop, Indesign, Illustrator, AfterEffects, LightRoom, Gephi  
Web: HTML, CSS

## REVIEWER

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JOURNALS: Environment and Planning B, Applied Spatial Analysis and Policy,  
Papers in Regional Science

## LANGUAGES

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SPANISH: Native  
ENGLISH: Fluent  
GERMAN: Basic Knowledge