

Natália da Silveira Arruda

Arizona State University • School of Geographical Sciences and Urban Planning
976 S. Forest Mall Office 5643 Tempe, AZ, Zip code: 85281– United States

EDUCATION

- 2025 (anticipated) **Ph.D. in Urban Planning**
The College of Liberal Arts & Sciences, Arizona State University, Tempe, AZ, United States
Advisor: David King
- 2013 **Master of Science in Territorial, Urban, Environmental, and Landscape Planning**
Polytechnic of Turin, Turin, TO, Italy
Thesis title: Urban regeneration through the renewal of residual spaces. From the experience of Urban Barriera di Milano to a preliminary study of neighbourhoods residual areas
Advisor: Alfredo Mela
- 2010 **Bachelor in Architecture and Urbanism**
College of Architecture and Urbanism, Federal University of Rio Grande do Sul, Porto Alegre, RS, Brazil
Final project title: Porto Alegre High Promenade, a new use for the Aeromóvel's elevated lane
Advisor: Leandro Andrade
- 2008 - 2009 **One-year Exchange (no degree awarded)**
École Nationale Supérieure d'Architecture Paris La Villette - ENSAPLV, Paris, France
Accepted for validation of claims in the third and final year of "Licence", the first level of the LMD system, equivalent to the last year of a bachelor.

RESEARCH INTERESTS

- Urban planning, land use and transportation integration, transit-oriented development (TOD), community development, neighbourhood change, urban mobility and accessibility
- Participatory mapping (PM), public/participation GIS (P/PGIS), Volunteered geographic information (VGI)
- Institutional and governance planning and policy integration

PUBLICATIONS

Peer-reviewed Articles

- 2016 **da Silveira Arruda, N.**, & Yances, H. (2016). MAP Cartagena: metodología para el mapeo de asentamientos precarios usando OpenStreetMap. *Revista Cartográfica*, (93), 97-116. [In Spanish] <https://doi.org/10.35424/rcarto.i93.430>
- 2017 da Silveira-Arruda, Natália, Aldana-Ramirez, Claudia Marcela, Palacio-Tobón, Carlos Alberto, & Moreno-Palacio, Diana Patricia. (2017). Transit-oriented Development in the metropolitan governance: a comparison between the Colombian case and the South Korean experience. *Revista Facultad de Ingeniería Universidad de Antioquia*, (85), 53-69. <https://doi.org/10.17533/udea.redin.n85a06>

Book chapters

- 2021 Da Silveira-Arruda, N., Gonzalez-Zapata, Hernan D., Navia-Hermida Ana M. (2021). Sustainable Mobility through Knowledge Exchange and Collaborative Mapping of Cycling Infrastructure: SIGenBici in Medellín, Colombia. In: Solis P. & Zeballos M.(Eds.) *Open Mapping towards Sustainable Development Goals - Voices of YouthMappers on Community Engaged Scholarship*, Springer. (in revision)
- 2021 De los Ríos Olarte, Yéssica, Peña Valencia María F., **Da Silveira-Arruda, N**, Blanco Libreros, Juan F. (2021). Sustainable Coastal Communities in the Anthropocene: Lessons from Crowd-Mapping Projects in Colombia. In: Solis P. & Zeballos M.(Eds.) *Open Mapping towards Sustainable Development Goals - Voices of YouthMappers on Community Engaged Scholarship*, Springer. (in revision)

Blogs

- 2020 Peña V. María F., **Da Silveira A., Natalia**, Kintu, Ingrid. How to easily use Open Source software technologies to face COVID-19 in your region. Medium: 06/26/2020 [Online]: <https://medium.com/@fernanda.pena/how-to-easily-use-open-source-software-technologies-to-face-covid-19-in-your-region-5a873e5afb7c>

TEACHING & ADVISING EXPERIENCE

- 2016 – 2021 **Assistant Professor**
Environmental School, University of Antioquia - Medellin, Colombia
 Design the syllabus, planned and taught the courses: Social Urbanism (1st and 2nd semester/2016), Building Infrastructure (1st semester/2018), Transportation, Mobility, and Infrastructure (1st semester/2018 to 2nd semester/2020), Urban Mobility and Accessibility (1st semester/2016 to 1st semester/2020)
- 2017 –2020 **International Exchange Study Advisor** for students of Environmental School, University of Antioquia - Medellin, Colombia
- 2016 –2021 **Coordinator** of the academic research lab GeoLab, Environmental School, University of Antioquia
- Jun. 2015 **Visiting Professor**
Faculty of Architecture, Universidad Jorge Tadeo Lozano, Caribbean Sectional - Cartagena de Indias, Colombia
 Visiting Professor in the Heritage Inter-semester Workshop
 Assistant reviewer and participation in committees evaluating student projects.
- Feb. 2015 – Dec. 2015 **Adjunct Professor**
Faculty of Architecture, Universidad Jorge Tadeo Lozano, Caribbean Sectional - Cartagena de Indias, Colombia
 Planned and taught the courses: History and Theory of Architecture I (2nd semester), History and Theory of Architecture II (1st Semester), Workshop 4: Urban Design (1st and 2nd semester), and Final Design for Graduation (2nd semester).
- 2015 – 2018 **Adjunct Professor**
Master in Development and Environment at the Universidad Tecnológica de Bolívar (UTB) - Cartagena de Indias, Colombia
 Planned and taught the Sustainable Transport elective course (1st semester/2015 and 2016), and the course of Sustainable Urban Development (2nd semester/ 2016 and 2018).

RESEARCH EXPERIENCE

- May 2021 - Present *Position: Graduate Research Student Assistant*
Advancing Women's Prosperity in the Workplace through Technical and Soft Skills in Environmental Science and Geospatial Technologies
 NASA's SERVIR program in partnership with USAID. ASU PI: Patricia Solís.
- 2019 – 2021 *Position: Main researcher*
SIGenBici: Collaborative Cartography of Cycling Infrastructure For Route Optimization And Thematic Maps In Medellin, Colombia
 Project created from the cooperation between GeoLab (Universidad de Antioquia), and SiCLas (group of cyclists), proposes a collaborative mapping by bicycle users as an urban transport mode.
- 2017 – 2019 *Position: Co-researcher*
COASTMAP – URABÁ: Humanitarian Mapping of Coastal Wetlands and Fishing Livelihoods for Resilience to Climate Change and Variability (Urabá Gulf, Southern Caribbean, Colombia)
 Research collaboration between GeoLab research lab and PEEP Research Group, University of Antioquia. Awarded with the HOT Microgrant Program 2017 in its first version, with the 2018 YouthMappers Research Fellowship in its second version and with the 2020 YouthMappers Research Fellowship in its third version.
- 2016 – 2017 *Position: Main researcher*
Transport-oriented development in metropolitan governance. Comparison between the Colombian context and the experience of South Korea.
 Research project selected in the 2016 BID-KRIHS Visit Scholarship Program and funded by the GIGA Environmental Sustainability Research Group Universidad de Antioquia.
- 2007 –2008 *Position: Scientific Initiation Fellowship*
Self-sustainable and inclusive pilot factory project in Tapes-RS
 A self-sustainable and inclusive pilot factory project, of multi-disciplinary character, aiming at the establishment of a factory from natural resources and residues from the region, prioritizing the economical, ecological, cultural and space sustainability, in which I was involved in the responsible team for the architectural design of the factory. Main Researcher: Professor Lia Buarque de Macedo Guimarães, Universidade Federal do Rio Grande do Sul (NDES – Núcleo de Design, Ergonomia e Segurança - Design, Ergonomics and Safety Nucleus) - Porto Alegre (Brazil)

Outreach projects

- 2019 – 2020 *Position: Coordinator*
Sustainable University Mobility Plan (PUMA) of Universidad de Antioquia
 University impact project No. IV92180105. The project complies with metropolitan agreements of the Aburrá Valley for the creation of sustainable mobility business plans (PEMS).
- 2017 –2018 *Position: Urban planning and GIS advisor*
General guidelines for the selection and establishment of Mining Industrial Zones – ZIMAS
 Inter-administrative collaboration agreement No. 4600007519 of 2017 between the Universidad de Antioquia, Government of Antioquia, and Mines department of Colombia.

PROFESSIONAL EXPERIENCE

- 2019 – 2021 **YouthMappers Regional Ambassador**
Regional Ambassador Program, YouthMappers
 Selected in the cohorts 2019-2020 and 2020-2021 as Regional Ambassador for Brazil and Colombia
 Part-time position contributing to the growth of the network by recruiting and training highly motivated students to organize, create, and formally establish university-based YouthMappers chapters in the region.
 Conducted training on free and open source (FOSS) geospatial technologies.
 Contributed to create and develop activities oriented to gender equity within the chapters.
<https://www.youthmappers.org/regional-ambassadors>
- Oct. 2015 – Nov. 2015 **Urban Accessibility Consultancy**
Serena del Mar – Novus Civitas Colombia Branch, Cartagena de Indias, Colombia
 Development of the content and design for a manual of open space accessibility.
- 2014 – 2015 **Project Coordinator (Volunteer position)**
NGO TECHO, Cartagena, Colombia
 Project Coordinator of MAP Cartagena Pilot Project, a community development project of TECHO Cartagena' social research program. The project aimed at identifying, locating, and georeferencing the settlement as a whole and each house, creating a mapping settlement, and involving the residents in the project, with the purpose of social denunciation and community resilience
<http://colombia.techo.org/mapcartagena/>
- Apr. 2013 – Jun. 2013 **Urban Planning Intern**
Servizio Arredo Urbano, Ufficio Rigenerazione Urbana, Turin, Italy
 Curricular Internship related to the Master thesis.
 Supervisor: Arc. Loredana di Nunzio
 Supported the coordination and planning in public urban renewal projects and specifically in the PISU (Integrated Program for Urban Development) called "Urban III Barriera di Milano".
<http://www.comune.torino.it/urbanbarriera/>
- Feb. 2011 – Jul. 2011 **Junior Architect**
André Petracco Arquitetura, Architecture Office, Porto Alegre, Brazil
 Assisted with architecture drawings in AutoCad
<http://andrepetracco.com.br/>
- Jul. 2010 – Nov. 2010 **Intern architect and urbanist**
RSP Arquitetura e Consultoria, Architecture and Urbanism Planning Office, Porto Alegre, Brazil
 Participation in the Team Responsible for PPCUB – Preservation Plan of the Town Planning of Brasilia. Created georeferenced maps in ArcGis, and drawings in AutoCad.
 Designed and implemented the final layout and organization of the cover of the final volumes through software for book publishing Adobe Indesign.
- 2009 – 2010 **Intern architect**
MooMAA - Moojen & Marques Arquitetos Associados, Architecture Office, Porto Alegre Brazil
 Participation in the detailed design phase of the Araújo Vianna Auditorium Recovery in Porto Alegre among other projects.
 Created architectural drawings, architectural details, layouts, 3D modelling, and presentations.
 Reviewed the compatibility of architectural, structural, and hydrosanitary projects
<https://www.moomaa.net/>
- Feb. 2009 **Intern architect**
GEA - Groupement d'Etudes Architecturales, Architecture Office, Paris, France
 Created architectural drawings with AutoCad

- 2006 – 2007 **Intern architect**
Schaan Arquitetura e Soluções, Architecture Office, Porto Alegre, Brazil
 Created Graphics, 3D models and rendering in AutoCAD and SketchUP.
 Visited construction sites to measure and audit.
 Prepared presentations.

INVITED LECTURES & PRESENTATIONS

- 2021 **UNal Lecture:** Lecturer with “Mobility and Public Space” held virtually to the Elective Course: Public space: theories, methods and projects taught by Dr. Armando Arteaga. At the School Of Regional Urban Planning, National University of Colombia, Medellín Campus, on May 10th, 2021.
- 2020 **UNal Lecture:** Lecture with “Mobility and Public Space” held virtually to the Elective Course: Public space: theories, methods and projects taught by Dr. Armando Arteaga. At the School Of Regional Urban Planning, National University of Colombia, Medellín Campus, on December 14th, 2020.
- 2020 **HOT Summit 2020:** Humanitarian OpenStreetMap Team Annual Meeting. Speaker with the conference “Collaborative cartography of cycling infrastructure for route optimization and thematic maps with FOSS and open data in the metropolitan area of Medellín, Colombia”. Event hold virtual on December 4th, 2020.
- 2020 **GISDay UdeA 2020:** Speaker with the conference “YouthMappers - How the global student movement creates geospatial data, knowledge and community”. Event organized by the University of Antioquia (virtual). In Medellín, on November 18th, 2020. [In Spanish]
- 2019 **2019 International School of Sustainable Development: Road Ecology + II CIBIV:** Speaker with the conference Participatory mapping of waterways, dynamics and environmental impacts in the Ayapel complex wetland ecosystem, Colombia at the International School of Sustainable Development about Road Ecology, and the II Ibero-American Congress on biodiversity and road infrastructure. Organized by Instituto Tecnológico Metropolitano (ITM) and Universidad de Antioquia. In Medellín, from November 25th to 30th, 2019. [In Spanish]
- 2019 **Sustainable Mobility Symposium 2019:** Speaker with the conference “PUMA - Sustainable University Mobility Plan”. Event organized by Universidad de Antioquia, from October 16th to 18th, 2019. [In Spanish]
- 2019 **Forum El Colombiano 2019:** Ecomobility - A way of solutions. Speaker in the forum organized by the newspaper El Colombiano, on September 18th, 2019 [In Spanish]
- 2019 **CIISOL 2019:** International Engineering Congress with Social Impact. Speaker with the conference “Transit-oriented metropolitan governance. Learning from South Korean experiences”. Event organized by the Cooperative University of Colombia. In Medellín, on September 5th and 6th, 2019. [In Spanish]
- 2018 **FOSS4G 2018:** Free and Open Source Software for Geospatial Global Event. Speaker with the talk Mapping of fishing communities and coastal wetlands in the Urabá Gulf - Colombia. In Dar es Salaam, Tanzania, from August 24 to September 3rd, 2018.
- 2016 **GISDay UdeA 2016:** Speaker with the conference “MAP Cartagena Pilot Project – A Methodology to give visibility to informal settlements”. Event organized by the University of Antioquia. In Medellín, on November 23th, 2016. [In Spanish]
- 2015 **SUI 2015 –** Speaker with conference at the International Seminar of Urbanism, organized by the Universidad San Buenaventura, held on 12th, 13th and August 14th, 2015 in Cartagena de Indias, Colombia. [In Spanish]
- 2015 **TEDxUTB 2015:** Speaker at the TEDxUTB organized by the Technological University of Bolívar, with the talk: MAP Cartagena, the project that seeks to map those that are not being counted. Cartagena, August 6th, 2015. [In Spanish]
 Link: <https://www.youtube.com/watch?v=8pzS7quXzAo&feature=share>

GRANTS, HONORS & AWARDS

Scholarship/Fellowship

- 2021-2022 **Interdisciplinary Enrichment Fellowship (IEF)** from the School of Geographical Sciences and Urban Planning of Arizona State University for the 2021-22 academic year.
- 2021-2022 **University Graduate Fellowship (UGF)** from the School of Geographical Sciences and Urban Planning of Arizona State University for the 2021-2022 academic year.
- 2018 **OpenStreetMap Foundation Scholarship:** to participate at the State of the Map global event organized by the OpenStreetMap Foundation. In Milan, Italy, from July 28 to 30, 2018.
- 2016 **Visiting Scholarship Program IDB – KRIHS:** selected researcher in the research program of the Inter-American Development Bank in collaboration with the Korean Research Institute of Human Settlements for the year 2016.

2011 **Beneficiary of Sergio Carestiato Scholarship:** to pursue the MSc program at Politecnico di Torino, Italy, from September 2011 to August 2013.

Awards

2018 **OpenStreetMap Awards 2018:** category Improving the Latin America Award.

Grants

2022 **Graduate College Travel Award:** to cover the costs of your registration fees for the American Association of Geographers (AAG) Annual Meeting 2022. Award amount: \$245.00.

2018 **FOSS4G Travel Grant:** to participate at the Free and Open Source Software for Geospatial Global Event provided by The Open Source Geospatial Foundation. In Dar es Salaam, Tanzania, from August 24 to September 3rd, 2018. Grant amount: \$1650.00.

TRAINING EXPERIENCE & CERTIFICATIONS

- Aug. 2020 – Nov. 2020 **Certificate in Citizen Participation, the Right to the City and the Territories**
Personería de Medellín and Universidad de Medellín, Medellín, Colombia
Certification course with a duration of 92 hours
- Jun. 2018 **YouthMappers'2018 Summer Fellowship Symposia**
YouthMappers, Texas Tech University, and USAID GeoCenter
Workshop and community-building event in Washington, DC, and Morgantown, West Virginia for students and mentors selected as Research Fellows, from June 1st to June 15th, 2018.
- Oct. 2017 – Nov. 2017 **2017 International School of Sustainable Development: Air Quality**
Instituto Tecnológico Metropolitano (ITM) and Universidad de Antioquia
Participation as an assistant in an exchange seminar and good practices in sustainability.
- Nov. 2016 **International Certification Course on Cadastre**
Undersecretary of Cadastre of the Mayor's Office of Medellín and Institución Universitaria Pascual Bravo, Medellín, Colombia
Certification course with a duration of 105 hours.
- Jul. 2016 **Social planning in Medellín: Processes for reconciliation**
EAFIT - Summer School and Center for Urban and Environmental Studies (URBAM), Medellín, Colombia
A course of 40h of academic activities.
- May 2013 – Nov. 2013 **Sunlice team Polito Solar Decathlon Europe 2014**
Politecnico di Torino, Turin, Italy
Solar Decathlon is an international competition open to universities and institutions of higher education worldwide, giving them an opportunity to compete in meeting a challenge: "Design and build a solar house that is energy independent". Participating in the category "Urban Design, Transportation & Affordability".
- Apr. 2012 – Jun. 2012 **Workshop Costruire con la Comunità**
Organizers and Promoters: Associazione ARCHINTORNO e ONG CAMPO a.c.
In collaboration with: CRD-PVS, Centro di Ricerca e Documentazione in tecnologia architettura e città nei Paesi in Via di Sviluppo, Politecnico di Torino; LATEC-CISDA, Laboratorio Tecnologico di Autocostruzione del Centro Interdipartimentale Servizi per la Didattica dell'Architettura, Politecnico di Torino; Taller "Max Cetto", Università Nazionale Autonoma del Messico.
Workshop for the realization of a micro-regional center of technological innovation in the indigenous community of Pensamiento Liberal Mexicano, Mexico, and presentation of the seminar for returning results.

STUDENTS SUPERVISED

Graduated Students

- 2021 Andrés Felipe Arango Castañeda, B.S. Urban Engineering, University of Antioquia, Colombia.
Dissertation title: *Articulación de los insumos técnicos para el saneamiento predial del proyecto vial "Frontino – La Herradura – La Balsa (FHB)" empleando un sistema de gestión espacial.* [In Spanish]
- 2021 Daniela Restrepo Escobar, B.S. Urban Engineering, University of Antioquia, Colombia.
Dissertation title: *Procedimiento técnico del saneamiento predial para el proyecto de infraestructura vial "San José de la Montaña-Llanos de Cuivá" con información de la Gobernación de Antioquia.* [In Spanish]
- 2021 Diana Carolina Ortega Espinosa, B.S. Environmental Engineering, University of Antioquia, Colombia. Dissertation title: *Caracterización del sistema de transporte acuático a través del mapeo participativo e identificación cualitativa de impactos ambientales en el sistema cenagoso de Ayapel, Córdoba, Colombia.* [In Spanish] (Co-advisor)

- 2021 Jhon Alejandro López Gallo, B.S. Civil Engineering, University of Antioquia, Colombia.
Dissertation title: Documentación del proceso de actualización de la información en la plataforma SGVial, Módulo Inventario, de los contratos de obra para la gestión de la malla vial en la Alcaldía de Medellín. [In Spanish]
- 2021 Sara Elorza Gómez, B.S. Environmental Engineering, University of Antioquia, Colombia.
Dissertation title: *Plan piloto para el levantamiento de catastro de usuario y micro rutas de recolección para la Corporación Copresap, Comuna 1 de Medellín, utilizando metodologías y herramientas SIG colaborativas.* [In Spanish] (Co-advisor)
- 2020 Angie Arroyave Arias, B.S. Civil Engineering, University of Antioquia, Colombia.
Dissertation title: *Lineamientos para formular un Plan Integral Universitario de Movilidad Sostenible.* [In Spanish]
- 2019 Julio César Cadavid Marín, B.S. Environmental Engineering, University of Antioquia, Colombia. Dissertation title: *Mocoa: Territorio, biodiversidad y turismo.* [In Spanish]
- 2018 Isabel Cristina Franco Hernández, B.S. Civil Engineering, University of Antioquia, Colombia.
Dissertation title: *Análisis y lineamientos que permitan mejorar la movilidad frente al desarrollo urbanístico presentado en los barrios San Juan, Machado y Simón Bolívar del municipio de Copacabana.* [In Spanish]
- 2017 Santiago Montoya Arteaga, B.S. Civil Engineering, University of Antioquia, Colombia.
Dissertation title: *Análisis de las condiciones de accesibilidad del desarrollo urbanístico "Plan Parcial Indural": propuesta de señalización vial.* [In Spanish]
- 2017 Alex Javier Barreto Contreras, B.S. Civil Engineering, University of Antioquia, Colombia.
Dissertation title: *Análisis y recomendaciones para la optimización del proceso constructivo de los proyectos de Placa Huella en el Departamento de Antioquia, en la Dirección de Proyectos Especiales de la Secretaría de Infraestructura Física.* [In Spanish]

Students in Specialization

- 2020 John Faber Ibarra Bedoya, Environmental Management Specialist, University of Antioquia, Colombia.
Monograph title: *Evaluación de estrategias de movilidad sostenibles para la implementación de sistemas integrados de transporte masivo en América Latina y el Caribe.* [In Spanish]
- 2018 Carolina Monsalve Moreno & Luisa María Jiménez Henao, Specialization in Environment and Geoinformatics, University of Antioquia, Colombia.
Monograph title: *Identificación de ecosistemas de humedal mediante imágenes de satélite y Sistemas de Información Geográfica-SIG en el municipio de Rionegro Antioquia.* [In Spanish]
- 2018 Wilfer Alberto Gaviria Cardona, Specialization in Environment and Geoinformatics, University of Antioquia, Colombia.
Monograph title: *Análisis de metodologías de mapeo participativo del servicio ecosistémico cultural en América Latina y el Caribe, y una propuesta de aplicación al contexto colombiano.* [In Spanish]

PROFESSIONAL ASSOCIATIONS

- 2021 - Present Transportation Geography Specialty Group (TGSG), Latin American Specialty Group (LASG), and Graduate Student Group of American Association of Geographers (AAG)
- 2021 - Present Association of Collegiate Schools of Planning (ACSP)
- 2016 - Present Professional Registration of Architect - Colombia

TECHNICAL SKILLS

Data analysis	Excel, SPSS
Programming language	IBM ILOG CPLEX Optimization Studio
Computer aided design	AutoCad, Sketchup
GIS Software	ArcGIS, QGIS
Others	Windows OS, Adobe InDesign, Adobe Photoshop, Adobe Illustrator, CorelDraw

LANGUAGE SKILLS

Mother tongue	Portuguese
Other languages	
English	Advanced user *TOEFL IBT – October, 14nd 2020 – Total Score: 99
Spanish	Proficient user
Italian	Proficient user
French	Independent user