

Felipe Santos-Marquez

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EDUCATION

- Technische Universität Dresden** Dresden, Saxony, Germany
PhD candidate (Economics). Advisor: Prof. Christian Lessmann April 2021–2025
– Dissertation: “Interdisciplinary Essays in Regional and Development Economics”
- University of Oxford, Lady Margaret Hall** Oxford, UK
Summer program: Advanced Applications of Neural Networks and Deep Learning July–August, 2023
- Nagoya University** Nagoya, Aichi, Japan
MA in International Development 2019–2021
– Thesis: “Achieving Peace and the SDGs in Colombia: Municipal Convergence, Crime, and the Role of Conditional Cash Transfers”
- Tafe institutions EAA & AITM** Melbourne & Brisbane, Australia
Certificate III and IV in hospitality and Management (commercial cookery) 2013–2014
- Universidad Nacional de Colombia** Bogota, Colombia
5-year Pregrado in Physics (German equivalent = Diplom programme) 2007–2012

ACADEMIC AND RESEARCH EXPERIENCE

- Technische Universität Dresden** Dresden, Saxony, Germany
Research Associate at the Chair of Economics esp. International Economics 04/2021- 2025
- Nagoya University** Nagoya, Aichi, Japan
Research Assistant at the QuaRCS lab 04/2020- 08/2020
– Creation and Maintenance of databases
– Creating shapefiles and data-sets of income and well-being related variables across the world, and Sustainable Development Goals data for Bolivia
- Nagoya University** Nagoya, Aichi, Japan
Academic Tutor at the Graduate School of International Development 09/2019- 02/2021
– Tutoring of research, Master’s and PhD students
– Helping students to organize research data and to analyze it using a variety of econometric methods and statistical software
- National University of Colombia** Bogota, Colombia
Mathematics (Topology and Analysis) tutor at the School of Mathematics, Faculty of Science 01/2008- 07/2008
– Tutoring of physics undergraduate students
– Preparing and facilitating tutoring workshops and academic support sessions for small groups of students

TEACHING EXPERIENCE

- **Guest lecturer** at Nagoya University January 2025
AI and Deep Learning
- **Technische Universität Dresden** winter 2021 - present
Empirical Economics course programming and replication tutorials - introduction to R - AI and Deep Learning in Python - international trade: theory and policy Tutorials
- **Guest lecturer** at Nagoya University summer 2022
Causal Inference and Policy Evaluation in R
- **Teaching Assistant** at Nagoya University fall 2020
GSID Open Webinar Series and Spanish
- **English Teacher** at Alive English School, Nagoya city, Japan 2017-2021
Preschool, elementary and secondary classes

PUBLICATIONS (PEER-REVIEWED ARTICLES)

- [1] C. Mendez and **F. Santos-Marquez**, “Economic and social disparities across subnational regions of south america: A spatial convergence approach”, *Comparative Economic Studies*, pp. 1–24, 2022, Available at <https://doi.org/10.1057/s41294-021-00181-0>.
- [2] A. Domínguez, **F. Santos-Marquez**, and C. Mendez, “Sectoral productivity convergence, input-output structure and network communities in japan”, *Structural Change and Economic Dynamics*, 2021, Available at <https://doi.org/10.1016/j.strueco.2021.10.012>.
- [3] **F. Santos-Marquez**, “Spatial beta-convergence forecasting models: Evidence from municipal homicide rates in colombia”, *Journal of Forecasting*, 2021, Available at <https://doi.org/10.1002/for.2816>.
- [4] **F. Santos-Marquez**, A. B. Gunawan, and C. Mendez, “Regional income disparities, distributional convergence, and spatial effects: Evidence from indonesian regions 2010–2017”, *GeoJournal*, pp. 1–19, 2021, Available at <https://doi.org/10.1007/s10708-021-10377-7>.
- [5] C. Mendez and **F. Santos-Marquez**, “Regional convergence and spatial dependence across subnational regions of asean: Evidence from satellite nighttime light data”, *Regional Science Policy & Practice*, 2020, Available at <https://doi.org/10.1111/rsp3.12335>.
- [6] **F. Santos-Marquez** and C. Mendez, “Regional convergence, spatial scale, and spatial dependence: Evidence from homicides and personal injuries in colombia 2010-2018”, *Regional Science Policy & Practice*, 2020, Available at <https://doi.org/10.1111/rsp3.12356>.

MASTER THESIS SUPERVISION (TU DRESDEN)

- Lisa-Marie Muller (Dresden, 2021)
Tracing Human Light Investigation of low-intensity nightlight satellite data in rural areas of Rwanda
- Arik Dinesen (Dresden, 2022)
The Economic Impact of Large scale Oil Discovery in Norway
- Kyra F. Riederer (Dresden, 2022)
The effects of the New Rural Pension System on labour supply in China
- Paavo Maria Brummer (Dresden, 2023)
Mobile Internet Coverage and Its Effects on Education Outcomes in Colombia

- Paul Fischer (Dresden, 2023)
Network-centrality and market access of cities – an empirical analysis
- Isabel Knippel (Dresden, 2024)
The effect of the automatic information exchange on economic activity of offshore financial centers
– a view from outer space

CONFERENCE & WORKSHOP PRESENTATIONS

- EEA-ESEM September –2024
Rotterdam, Netherlands
- Japanese Economic Association, spring meeting May –2024
Tokyo, Japan
- 20th World Congress International Economic Association, EAFIT December –2023
Medellin, Colombia
- 62nd ERSA Congress, University of Alicante August–2023
Alicante, Spain
- 4th Swiss Workshop on Local Public Finance and Regional Economics, University of Bern October–2022
Bern, Switzerland
- 1st International Workshop on the Chinese Development Model, IQS School of Management July–2022
Barcelona, Spain
- Young Scholars Initiative meeting at International University College of Turin June–2022
Torino, Italy
- 60th Annual ERSA Congress “Territorial Futures – Visions and Scenarios for a resilient Europe” August–2021
Bolzano, Italy
- ERSA Summer School 2021 - Spatial Analysis of Regional Inequalities June-July–2021
Groningen, Netherlands
- XV World Conference of Spatial Econometrics Association May–2021
Tokyo, Japan
- 57th Conference of the Japan Society of Social Science on Latin America November–2020
Nagoya, Japan
- Bolivian Conference on Development Economics August–2020
La Paz, Bolivia
- Applied Regional Science Conference November–2019
Saga University, Saga, Japan

RESEARCH VISITS

- Graduate School of International Development, University of Nagoya, Japan About twice a year from –2021
- Asian Growth Research Institute (AGI), Kitakyushu, Japan September –2022
- AQR Research Group, University of Barcelona, Spain July –2021
- Universidad de los Andes, Bogota, Colombia December –2019

AWARDS

- Prize of the Deutsche Bundesbank for support for international research cooperation June –2021
- Travel award for a workshop given by the TU Dresden Graduate Academy January –2023
- Travel award for a summer school given by the TU Dresden Graduate Academy July –2023
- Travel award for transportation expenses for a summer school given by the Association of Friends and Sponsors of TU Dresden e. V. July –2023
- Lecture award given by the German Economic Association (Verein für Socialpolitik) December –2024

COMPUTER SKILLS

- **Programming:** R, Python, c++, Stata and Matlab
- **User:** GitHub, Geoda and QGIS

LANGUAGES

- **Spanish:** Native proficiency level
- **English:** Native proficiency level
- **Japanese:** Limited working proficiency
- **German:** Limited proficiency

FIRM VISITS

As part of the Deep Learning course, I organized student visits to firms in the semiconductor industry and Silicon Saxony to show students how AI methods are used in industry.

- Student visit to Bosch Dresden January –2025
https://tu-dresden.de/bu/wirtschaft/vwl/iwb/die-professur/news/student-visit-to-bosch-dresden?set_language=en
- Student visit to Infineon Dresden February –2024
https://tu-dresden.de/bu/wirtschaft/studium/news-1/student-visit-to-infineon-dresden?set_language=en

EXTRACURRICULAR AND ACADEMIC ACTIVITIES

- Data@ANZ ANZ virtual experience Program August–2020
Completed two practical task modules in Exploratory Data Analysis Predictive Analytics.
- DataCamp courses- completed several online courses in: 2019 –present
*Multiple and Logistic Regressions in R
Cluster Analysis in R
Supervised Learning in R: Regression
Supervised Learning in R: Classification
Unsupervised Learning in R
Spatial Analysis with sf and raster in R.*

Visualizing Geospatial Data in R
Working with Web Data in R
Intermediate Python
Data Manipulation with pandas
Joining data with pandas
Network Analysis in R
Introduction to Data Visualization with Matplotlib
Machine Learning in the Tidyverse
Introduction to Functions in Python
Python Toolbox
Introduction to Data Visualization with Seaborn
Fundamentals of Bayesian Data Analysis in R
Supervised Learning with scikit-learn
Introduction to Deep Learning with Pytorch