

## EDUCATION

**Universidad Nacional Mayor de San Marcos**  
B.A. in Economics | *Ranked in the top quintile of the class*

Lima, Peru  
2016

## WORK EXPERIENCE

### Economics Consultant - Research Department

Inter-American Development Bank

*Supervisor: Juan Pablo Chauvin, Ph.D (Dec 2020 – Present)*

May 2020 – Present  
Remote, part-time

- Generation and analysis of high-frequency indicators: mobility, visits to points of interest and migration
- Processing of geo-referenced data of mobile phones in Latin American and Caribbean using AWS
- Implementing the AWS architecture to process mobile phones data obtained through the Data Development Partnership

*Supervisor: Julián Cristia, Ph.D (May 2020 – Apr 2021)*

- Analysis and discussion of a pilot to promote the use of the ConectaIdeas platform in Chile
- Supported the implementation of a field experiment (RCT) to promote math learning using the ConectaIdeas platform in Peru
- Analysis and discussion of visits to schools using data at the geohash level in Chile
- Processing of geo-referenced data of mobile phones in Latin American and Caribbean using Amazon Web Services (AWS)

### Senior Research Assistant - Macroeconomics and International Policy

Research Center of Universidad del Pacífico

*Supervisor: Bruno Seminario, Ph.D.*

Aug 2017 – Feb 2021  
Lima, Peru

- Led the coordination of research projects with multidisciplinary teams
- Prepared research proposals, drafted research papers, reports, and presentations
- Designed algorithms for computer simulations
- Processed and analyzed satellite and geo-referenced information
- Processed and analyzed different types of data employing advanced econometric methods

### Senior Research Assistant - Marketing Group

Universidad Carlos III de Madrid

*Supervisor: Jaime Rivera, Ph.D.*

Jan 2016 – Dec 2019  
Remote, part-time

- Verification of hypotheses of theoretical models using different statistical methods
- Instrumentalization of theoretical model variables using data from primary or secondary sources
- Design of surveys to executives of companies that operate in different industrial sectors
- Literature review and development of theoretical research frameworks

### Internship - Macroeconomic Models Department

Central Bank of Peru

*Supervisor: Marco Ortiz, Ph.D.*

Jul 2015 – Dec 2015  
Lima, Peru

- In charge of analyzing and programming algorithms to solve Dynamic and Stochastic General Equilibrium Models
- Supported research staff in drafting academic articles
- Updated the Quarterly Projection Model database and running the General Equilibrium Model with Dollarization

## TEACHING EXPERIENCE

### Teaching Assistant - Department of Economics (undergraduate)

Universidad del Pacífico

Aug 2018 – Jul 2022  
Lima, Peru

- International Macroeconomics - *Professor: Marco Ortiz (2020-I, 2020-II, 2021-I, 2021-II, 2022-I)*
- Advanced Macroeconomics - *Professor: Marco Ortiz (2018-II, 2019-I, 2019-II, 2020-I)*
- Economic Growth - *Professor: Marco Ortiz (2019-I, 2019-II)*
- Introductory Macroeconomics - *Professor: Jorge Marcelo Franco (2018-II)*

### Teaching Assistant - Faculty of Economic Sciences (undergraduate)

Universidad Nacional Mayor de San Marcos

Mar 2016 – Jul 2017  
Lima, Peru

- Advanced Macroeconomics - *Professor: Juan Mendoza (2016-I, 2017-I)*
- International Monetary Theory - *Professor: Juan Mendoza (2016-II)*
- Advanced Microeconomics - *Professor: Derry Quintana (2016-II)*

## PUBLICATIONS

### Refereed journal articles

“Determinants of the evolution of the number of COVID-19 cases and deaths in Peru: Mobility, geography and economic development” (with Bruno Seminario, Vanessa Berrocal & Analucía Gastiaburú), *Apuntes*, 91, 4-45, 2022. *(Original in Spanish)*

## Books

“Estimation of GDP at the subnational level using satellite data of night lights: Peru 1993-2018” (with Bruno Seminario), *Universidad del Pacífico, Research Document*, 2022. ([Original in Spanish](#))

## Book chapters

“Concentration of economic activity and population in Peru, 1795-2018” (with Bruno Seminario). In *A search of integral development: 20 essays on the bicentennial of Peru*, Arlette Beltrán, Cynthia A. Sanborn & Gustavo Yamada (editors), Lima: Universidad del Pacífico, 2021. ([Original in Spanish](#))

“Peruvian regional inequality: 1847–2017” (with Bruno Seminario & María Alejandra Zegarra). In *Time and Space: Latin American Regional Development in Historical Perspective*, Daniel A. Tirado-Fabregat, Marc Badia-Miró & Henry Willebald (editors), London: Palgrave Macmillan, 2020.

## Working papers

“Socioeconomic status and mobility during the COVID-19 pandemic: An analysis of eight large Latin American cities” (with Daniel Aromí, M. Paula Bonel, Julián Cristia & Martín Llada), *Inter-American Development Bank, Working Paper 1184*, 2021.

“How can we promote the use of learning platforms? Results of a pilot study in Chile” (with Elena Arias Ortiz & Julián Cristia), *Inter-American Development Bank, Technical Note 2403*, 2021. ([Original in Spanish](#))

“The Macro-Economic Effects of Hurricanes in The Bahamas: A Case Study Using Satellite Night Light Luminosity” (with María Alejandra Zegarra, Laura Giles & Mikael Gartner), *Inter-American Development Bank, Catalogs and Brochures*, 2021

“Impact of Hurricane Dorian in The Bahamas: A view from the sky” (with María Alejandra Zegarra, Juan Pedro Schmid & Bruno Seminario), *Inter-American Development Bank, Technical Note 1857*, 2020.

“Estimation of departmental GDP and analysis of regional inequality in Peru: 1795-2017” (with Bruno Seminario & María Alejandra Zegarra), *Inter-American Development Bank, Working Paper 1016*, 2019. ([Original in Spanish](#))

## RESEARCH IN PROGRESS

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“Development and long-term cycles in Peru, 1700-2020” (with Bruno Seminario & Vanessa Berrocal).

“Extractive industries, inequality and welfare in developing countries: Mining industry in Peru” (with Gonzalo Delgado, Álvaro Paredes & Bruno Seminario).

“Pension coverage in Chile, Colombia and Peru: Demography, migration and labor” (with María Amparo Cruz-Saco, Mirian Gil & Bruno Seminario).

“Evolution of the economic space in Peru since 1795” (with Bruno Seminario & María Alejandra Zegarra).

“Use of Satellite Images and Machine Learning to estimate indicators of economic activity at the subnational level in Peru”.

“Social license in extractive industries in Peru: Determinants and effects on financial performance” (with Robert McDonald & Jhinia Garcia).

“How to develop sustainable agriculture and livestock in the different regions of Peru?” (with Jhinia Garcia).

## PROFESSIONAL ACTIVITIES

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### Presentations

XIX World Economic History Congress - WEHC 2022 Jul 2022  
*Session organizer and speaker*

VII Latin American Congress of Economic History - CLADHE 2022 Mar 2022  
*Session organizer and speaker*

### Affiliations

Research Center of Universidad del Pacífico (CIUP) Jun 2022 – Present  
Center for Mining and Sustainability Studies of Universidad del Pacífico (CEMS-UP) May 2022 – Present

## GRANTS AND AWARDS

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University of Connecticut 2022-2024  
Graduate Assistantship (MA in Latino & Latin American Studies) - *El Instituto & Department of Economics*

XIX World Economic History Congress - WEHC 2022 2021  
*Grant of 1500 EUR to participate as a speaker in the congress*

## SKILLS

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**Software:** Matlab, Stata, Eviews, Python, R, ArcGIS, QGIS, SQL, JavaScript, Julia, Fortran, C++, GitHub, HTML, Excel,  $\LaTeX$

**Cloud computing:** Amazon Web Services (S3, Glue, Athena, EMR, SageMaker, CloudFormation, IAM)

## OTHER TRAINING AND VOLUNTEER ACTIVITIES

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### Training

Stanford University & University of British Columbia - Coursera <i>Game Theory, Game Theory II - Advanced Applications</i>	2021
Instituto de Matemática y Ciencias Afines - IMCA <i>Linear algebra, real analysis</i>	2020
Central Bank of Peru <i>Macroeconomic Models with Financial Frictions</i>	2015
Pontificia Universidad Católica del Perú (postgraduate) (free student per semester) <i>Topics in Advanced Macroeconomics, Advanced Macroeconomics, Advanced Microeconomics, Advanced Econometrics</i>	2014-2015
Pontificia Universidad Católica del Perú (undergraduate) (free student per semester) <i>International macroeconomics, Monetary theory, Econometrics (Cross Section, Time Series), International microeconomics, Financial and Banking Economics</i>	2013-2014
Universidad Nacional de Ingeniería (undergraduate) (free student per semester) <i>Seminar on Economic Research, Capital Markets, Macrodynamics</i>	2013-2015

### Volunteer

Crea+ (*teaching math for secondary school students*)

Universidad Nacional Mayor de San Marcos (*teaching math and macroeconomics for admitted students*)