#### Marcelo Gallardo

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Department of Mathematics Pontificia Universidad Católica del Perú Lima, Pe. marcelo.gallardo@pucp.edu.pe

#### Education

B.s. and Lic. in Mathematics 2020-2025 (E). Pontificia Universidad Católica del Perú.

Summer School 2022, 2023, 2024. QLab.

Cycle Propédeutique, Physique 2019-2020. École Polytechnique Fédérale de Lausanne.

## **Academic Statement**

Relevant coursework at PUCP here.

# Experience

Research Assistant (2021-)

UNSW Sydney, Au. Working with PhD Juan Carlos Carbajal. 2024-.

GRADE, Lima, Pe. Working with PhD Juan León Jara-Almonte. 2022-.

PUCP, Lima, Pe. Working with PhD Jorge Richard Chávez Fuentes. 2021-.

Teaching Assistant (2022-)

Mathematics for Economics and Finance 3. With PhD Jorge Richard Chávez Fuentes.

Mathematics for Economists. With PhD Jorge Richard Chávez Fuentes.

Optimization I. With PhD Jorge Richard Chávez Fuentes.

Functional Analysis. With PhD Percy Fernández.

Microeconomics 2. With PhD Pavel Coronado Castellanos.

Financial Microeconomics. With PhD (a.b.d.) José Gallardo Kú.

# Working papers, publications and lecture notes

Harnessing Twitter and GPT for a Novel Political Uncertainty Index for Peru: Implications for USD/PEN Exchange Rate Fluctuations. With Manuel Loaiza and PhD Gabriel H. Rodriguez. Working paper.

Innovation and overeducation in Peruvian universities. With PhD Juan León Jara-Almonte. Working paper.

Econometric Theory (Lecture Notes). With PhD Juan León Jara-Almonte. Lecture notes.

About Brouwer fixed point theorem and its applications in general equilibrium. With Carlos Cosentino and Eduardo Llamoca. Lecture notes.

## **Books**

Linear Algebra and Optimization for Economists. With PhD Jorge Richard Chávez Fuentes. Pre-published.

Optimal Control Theory and Dynamics for Economic Analysis in Continuous Time. With PhD Jorge Richard Chávez Fuentes. Working book.

#### Awards

Mention d'excellence au BAC (19.91/20). Colegio Franco Peruano, Lima PE, 2018.

Admission to l'X Bachelor Program. Paris, Fr, 2019.

Winner of the contest initiation to scientific research. PUCP, Lima, Pe, 2020.

Winner of the contest initiation to scientific research. PUCP, Lima, Pe, 2021.

Top 1% Faculty of Sciences and Engineering. PUCP, Lima, Pe.

Ranked first in my class in the Mathematics major. PUCP, Lima, Pe.

# Skills

Programming: Python, LATEX, STATA.

Languages: Spanish (Native), French (Advanced), English (Proficient), Portuguese (Basic).

# Research interests

Convex optimization. Matching theory. Microeconomic Theory. Optimal Control Theory. Optimal Transport Applied to Economics.

## References

Jorge Richard Chávez. Professor of the Mathematics Department at Pontificia Universidad Católica del Perú.

Juan León Jara. Associate Professor of the Economics Department at Pontificia Universidad Católica del Perú and Research Associate at GRADE.

Juan Carlos Carbajal. Associate Professor and Post-Graduate Coordinator of the School of Economics at the UNSW Sydney.

Alfredo Bernardo Poirier. Professor of the Mathematics Department at Pontificia Universidad Católica del Perú.

Johel Victorino Beltrán. Professor of the Mathematics Department at Pontificia Universidad Católica del Perú and Visiting Professor at Fundação Getulio Vargas.

Pavel Coronado. Associate Professor of the Economics Department at Pontificia Universidad Católica del Perú and Q-LAB ex-director.

Percy Braulio Fernandez. Professor and Graduate School Director of the Mathematics Department at Pontificia Universidad Católica del Perú.