### Marcelo Gallardo

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### Education

B.s. in Mathematics 2020-2025 (E) and M.A. (c) in Economics and Applied Mathematics (2023-2025). Pontificia Universidad Católica del Perú.

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

# Summer and winter school

QLab Summer School, Lima, Pe. Jan-Feb. 2022, 2023, 2024.

QLab Winter School, Lima, Pe. Aug. 2024.

Harvard University, Ethics of Artificial Intelligence in Business, MA. Aug. 2024.

# **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 Braulio Fernández.

Microeconomics 2. With PhD Pavel Coronado Castellanos.

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

# Working papers and publications

Rethinking Optimal Transport in Discrete Settings. With PhD Jorge Richard Chávez Fuentes and Manuel Loaiza.

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 Rodriguez Briones. Working paper.

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

### **Books**

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

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

Fundamentals of Econometric Theory. With PhD Juan León Jara-Almonte. Lecture notes.

### Awards

Mention Très Bien au BAC (19.91/20). Lycée Franco Péruvien, 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.

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

Excellence Scholarhsip PUCP, Lima, Pe, 2024.

### Skills

Programming: Python, IATEX, STATA.

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

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

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