Patricio Guzmán
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1 Personal Information

Nationality	Chilean.
Born	November 7, 1986.
Address	Avenida España 1680, Valparaíso, Chile.

2 Academic Positions

Position	Assistant Professor (Since March 2019).
Institution	Departamento de Matemática, UTFSM, Valparaíso, Chile.

Position	Postdoctoral Researcher (March 2018 - February 2019).
Institution	Centro de Modelamiento Matemático, Universidad de Chile, Santiago, Chile.
Supervisor	Axel Osses.

3 Education

Diplomado en Docencia de Educación Superior (Abril 2024 - Diciembre 2024).
Centro de Desarrollo Docente, Pontificia Universidad Católica de Chile, Santiago, Chile (Online).

Diplomado en Medición y Evaluación de Aprendizajes (Septiembre 2023 - Mayo 2024).
Escuela de Psicología, Pontificia Universidad Católica de Chile, Santiago, Chile (Online).

4 Education

Degree	PhD in Mathematics (August 2013 - August 2017).
Institution	UTFSM, Valparaíso, Chile.
Advisors	Eduardo Cerpa and Lionel Rosier.

Degree	MSc in Mathematics (September 2012 - June 2013).
Institution	Université Pierre et Marie Curie, Paris, France.
Advisor	Sergio Guerrero.

Degree	MSc in Mathematics (August 2010 - August 2012).
Institution	UTFSM, Valparaíso, Chile.
Advisors	Eduardo Cerpa and Alberto Mercado.

Diploma	Mathematical Engineer (March 2005 - December 2011).
Institution	UTFSM, Valparaíso, Chile.
Advisors	Alberto Mercado and Eduardo Cerpa.

5 Research Grants

[5] Project Fondecyt Iniciación 11240290 (March 2024 - March 2027).
Title Rapid Stabilization of Partial Differential Equations with Disturbances.
Role Responsible.

[4] Project MATH-AMSUD AMSUD220023 (January 2023 - December 2024).
Title Stabilization, Control and Inverse Problems in PDEs.
Role National Coordinator.

[3] Project MATH-AMSUD MATH190008 (January 2020 - December 2021).
Title Analysis, Control and Inverse Problems for Partial Differential Equations.
Role Researcher.

[2] Project Fondecyt Postdoctorado 3180363 (March 2018 - March 2021).
Title Control of High-Order Partial Differential Equations.
Role Responsible.

[1] Project ECOS-CONICYT C16E06 (January 2017 - December 2019).
Title Control of Distributed Systems with Applications in Physical Networks.
Role Researcher.

6 Journal Papers

[13] with C. Calle and H. Parada.
Rapid stabilization of the heat equation with localized disturbance.
Submitted 2025.

[12] with F. Labra and H. Parada.
Feedback stabilization of some fourth-order nonlinear parabolic equations with saturated controls.
Submitted 2025.

[11] with A. Huerta and H. Parada.
Rapid stabilization for a wave equation with boundary disturbance.
Submitted 2025.

[10] with E. Hernández.
Rapid stabilization of an unstable heat equation with disturbance at the flux boundary condition.
System and Control Letters 196 (2025) article 105973.

[9] with E. Hernández.
Stabilization of the heat equation with disturbance at the flux boundary condition.
Mathematical Methods in the Applied Sciences 46 (17) (2023) 18035-18043.

[8] with L. Rosier.
Null controllability of the structurally damped wave equation on the two-dimensional torus.
SIAM Journal on Control and Optimization 59 (1) (2021) 131-155.

[7] Local exact controllability to the trajectories of the Cahn-Hilliard equation.
Applied Mathematics and Optimization 82 (1) (2020) 279-306.

[6] Boundary stabilization of a microbeam model.
Mathematical Methods in the Applied Sciences 43 (9) (2020) 5979-5984.

[5] Energy decay of a microbeam model with a locally distributed nonlinear feedback control.
Journal of Mathematical Analysis and Applications 467 (1)(2018) 238-252.

[4] with E. Cerpa and A. Mercado.
On the control of the linear Kuramoto-Sivashinsky equation.
ESAIM: Control, Optimisation and Calculus of Variations 23 (1) (2017) 165-194.

[3] with N. Carreño.
On the cost of null controllability of a fourth-order parabolic equation.
Journal of Differential Equations 261 (11) (2016) 6485-6520.

[2] with J. Zhu.
Exact boundary controllability of a microbeam model.
Journal of Mathematical Analysis and Applications 425 (2) (2015) 655-665.

[1] Lipschitz stability in an inverse problem for the main coefficient of a Kuramoto-Sivashinsky type equation.
Journal of Mathematical Analysis and Applications 408 (1) (2013) 275-290.

7 Conference Papers

[2] with Christophe Prieur.
Rapid stabilization of a reaction-diffusion equation with distributed disturbance.
59th Conference on Decision and Control; Jeju Island, Korea, 2020 (Online).

[1] with Eduardo Cerpa and Swann Marx.
Stabilization of the linear Kuramoto-Sivashinsky equation with a delayed boundary control.
3rd IFAC Workshop on Control of Systems Governed by Partial Differential Equations
and XI Workshop Control of Distributed Parameter Systems; Oaxaca, México, 2019.

8 Scientific Community Service

I have been reviewer for the journals:
IEEE Transactions on Automatic Control
Applied Mathematics and Computation
SIAM Journal on Control and Optimization
Nonlinear Analysis: Real World Applications
Mathematical Methods in the Applied Sciences
Automatica
Mathematics of Control, Signals and Systems
IEEE Control System Letters
Inverse Problems
Evolution Equations and Control Theory
System and Control Letters
Advances in Continuous and Discrete Models: Theory and Applications

9 Current and Former Students at UTFSM

[7] Renata Córdova (Since 2025) / Codirected with Hugo Parada.
Mathematical Engineering and MSc in Mathematics

[6] Christian Calle (Since 2025) / Codirected with Hugo Parada.
PhD in Mathematics.

[5] Agustín Huerta (November 21, 2024) / Codirected with Hugo Parada.
Rapid stabilization for a wave equation with boundary disturbance.
Mathematical Engineering and MSc in Mathematics.

[4] Felipe Labra (August 22, 2024) / Codirected with Hugo Parada.
Feedback stabilization of the linear Kuramoto-Sivashinsky equation with saturated controls.
Mathematical Engineering.

[3] Tomás Cortés (January 13, 2023) / Codirected with Rodrigo Lecaros.
On the null controllability of parabolic equations and applications.
Mathematical Engineering and MSc in Mathematics.

[2] Gonzalo Arias (January 20, 2021) / Codirected with Eduardo Cerpa.
Stabilization of a microbeam model with distributed disturbance.
Mathematical Engineering and MSc in Mathematics.

[1] Hugo Parada (September 1, 2020) / Codirected with Eduardo Cerpa.
Feedback stabilization of some unstable elliptic-parabolic systems.
Mathematical Engineering and MSc in Mathematics.

10 Teaching at UTFSM

Since March 2019:
MAT061. Álgebra Lineal (Coordinator: 2026-1).
MAT070. Introducción al Cálculo (Coordinator: 2024-1 and 2024-2).
MAT379. Optimización y Control (2019-2021 and 2025-2026).
MAT436. Control de Ecuaciones en Derivadas Parciales (2020-2024 and 2026).

2012-2017 (Part-Time Lecturer):
MAT-021. Matemática I (2012-1, 2014-1, 2014-2, 2015-1 and 2017-1).
MAT-022. Matemática II (2013-2).
MAT-023. Matemática III (2016-2 and 2017-2).
MAT-024. Matemática IV (2015-1).

11 University Service

[4] Encargado de Prácticas en Valparaíso para Ingeniería Civil Matemática.
Desde Julio 2025.

[3] Miembro del Comité Académico del Magíster en Ciencias mención Matemática.
Desde Diciembre 2024.

[2] Miembro de la Comisión de Docencia del DMAT.
Desde Septiembre 2020.

[1] Coordinador Docente en Valparaíso del DMAT.
Septiembre 2020 a Septiembre 2024.