

ROBERTO DE ALMEIDA CAPISTRANO-FILHO

Associate Professor of Mathematics
Federal University of Pernambuco (UFPE), Brazil

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CV Lattes | ORCID

PROFILE

Mathematician working on the analysis and control of partial differential equations, with emphasis on well-posedness, controllability, stabilization, unique continuation, and numerical analysis for nonlinear dispersive systems and fluid models.

CURRENT APPOINTMENTS AND LEADERSHIP

2026 - present	Associate Professor, Department of Mathematics, UFPE Promoted to Associate Professor in 2026.
2015 - 2026	Assistant Professor, Department of Mathematics, UFPE Tenured in 2018; permanent member of the Graduate Program in Mathematics.
2025 - present	Coordinator, Graduate Program in Mathematics, UFPE Academic and administrative leadership of the graduate program.
2025 - present	Board Member, Center for Exact and Natural Sciences (CCEN), UFPE Institutional service and academic governance.

EDUCATION AND RESEARCH EXPERIENCE

2012 - 2014	PhD in Mathematics, Universite de Lorraine, France Thesis: Controle d'equations dispersives pour les ondes de surfaces. Advisors: Lionel Rosier and Ademir F. Pazoto.
2010 - 2014	PhD in Mathematics, Federal University of Rio de Janeiro, Brazil Thesis: Control of dispersive equations for surface waves. Advisors: Ademir F. Pazoto and Lionel Rosier.
2008 - 2010	MSc in Mathematics, Federal University of Paraiba, Brazil Dissertation on well-posedness and stability for the Kawahara equation. Advisor: Fagner D. Araruna.
2004 - 2008	BSc in Mathematics, Federal University of Paraiba, Brazil Undergraduate degree in Mathematics.
2014 - 2015	Postdoctoral Researcher, University of Cincinnati, USA Department of Mathematical Sciences.
Jan - Jul 2023	Postdoctoral Researcher, Virginia Tech, USA Department of Mathematics.

RESEARCH AREAS

Well-posedness Initial-boundary value problems and regularity for dispersive PDEs.	Controllability Boundary and internal control of nonlinear systems.
Stabilization Observability, feedback mechanisms, and long-time behavior.	Numerical analysis Approximation and computational study of nonlinear dispersive dynamics.

SELECTED PUBLICATIONS

01 / 2027 R. A. Capistrano-Filho and F. Gallego. **Another look at the control properties of the Korteweg-de Vries equation.** *Bulletin des Sciences Mathematiques*, 214, 103909. DOI

02 / 2026 R. A. Capistrano-Filho, H. Parada, and J. S. da Silva. **An analysis of the entire functions associated with the operator of the KdV equation.** *SIAM Journal on Mathematical Analysis*, 58(3), 2067-2110. DOI

03 / 2025 R. A. Capistrano-Filho, J. R. Quintero, and S.-M. Sun. **Stability of solitary waves for generalized abcd-Boussinesq system: The Hamiltonian case.** *Nonlinearity*, 38, 075034. DOI

04 / 2025 R. A. Capistrano-Filho and T. Y. Tanaka. **Controls insensitizing the norm of solution of a Schrodinger type system with mixed dispersion.** *Journal of Differential Equations*, 416, 357-395. DOI

05 / 2024 R. A. Capistrano-Filho, B. Chentouf, V. H. Gonzalez Martinez, and J. R. Munoz. **On the boundary stabilization of the KdV-KdV system with time-dependent delay.** *Nonlinear Analysis: Real World Applications*, 79, 104122. DOI

06 / 2023 R. A. Capistrano-Filho, E. Cerpa, and F. Gallego. **Rapid exponential stabilization of a Boussinesq system of KdV-KdV type.** *Communications in Contemporary Mathematics*, 25(3), 2150111. DOI

07 / 2022 R. A. Capistrano-Filho and A. Pampu. **The fractional Schrodinger equation on compact manifolds: Global controllability results.** *Mathematische Zeitschrift*, 301, 3817-3848. DOI

08 / 2019 R. A. Capistrano-Filho, A. F. Pazoto, and L. Rosier. **Control of Boussinesq system of KdV-KdV type on a bounded interval.** *ESAIM: Control, Optimisation and Calculus of Variations*, 25, 58. DOI

CURRENT FUNDED PROJECTS	SELECTED DISTINCTIONS
2026-2030 - CAPES Global.edu, Rede COONEXA. 2025-2029 - CNPq Research Productivity Fellowship, Level B. 2024-2027 - CAPES/COFECUB International Cooperation. 2023-2026 - CNPq/MCTI, Call 10/2023.	2024-2026 - Ewha Global Fellow. 2025 - Travel Grant, Mathematical Congress of the Americas. 2024 - Invited speaker, SIAM Conference on Nonlinear Waves and Coherent Structures. 2023 - Minisymposium organizer, SIAM Southeastern Atlantic Section Annual Meeting.

SUPERVISION

Current doctoral students Jefferson Henriques Bezerra and Nemuel Rocha Lima (CNPq, since 2024).	Current master's students Carlos Adrian Galeano Mendez; Luane Maria Madruga Bezerra Cavalcanti Ramalho; Lucas Gabriel Barros Dias.
Completed doctoral supervision Six PhD graduates since 2020, including Jandeilson Santos da Silva (2025) and Juan Ricardo Munoz Galeano (2024).	Postdoctoral supervision Victor Hugo Gonzalez Martinez; Ademir Benteus Pampu; Andressa Gomes.

ACADEMIC PROFILES

Website	Google Scholar	ORCID	CV Lattes
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