

Ginaldo S. Sá

Department of Mathematical Engineering
Center for Mathematical Modeling
University of Chile
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Personal Information

- ◇ Date of Birth: June 10th, 1993
- ◇ Nationality: Brazilian

Research Interests

- ◇ Analysis of PDEs
- ◇ Calculus of Variations
- ◇ Regularity Theory
- ◇ Free boundary problems
- ◇ Elliptic and parabolic PDE

Education

- ◇ **Ph.D. in Mathematics** 2018 – 2023
Federal University of Paraíba - Brazil
Advisor: [Prof. Dr. Damião Araújo](#)
Co-Advisor: [Prof. Dr. José Miguel Urbano](#)
- ◇ **M.Sc. in Mathematics** 2016 – 2018
Federal University of Sergipe - Brazil
Advisor: [Prof. Dr. Disson Soares dos Prazeres](#)
Co-Advisor: [Prof. Dr. José Anderson Valença Cardoso](#)
- ◇ **B.Sc. in Mathematics** 2012 – 2016
Federal University of Sergipe - Brazil
Advisor: [Prof. Dr. José Anderson Valença Cardoso](#)

Postdoctoral

- ◇ **University of Chile** 2025–
Santiago, RM - Chile
Supervision: [Prof. Dra. Gabrielle Saller Nornberg](#)
- ◇ **State University of Campinas** 2024 – 2025
Campinas, SP - Brazil
Supervision: [Prof. Dr. João Vitor da Silva](#)
- ◇ **University of Central Florida** 2023 – 2024
Orlando, Florida - USA
Supervision: [Prof. Dr. Eduardo Teixeira](#)

Publications

1. Costa, R. R, Sá, G. S. *Regularity Estimates for Fully Nonlinear Dead-Core Problems with a Hamiltonian Term*. Submitted, 2025.
2. Alcantara, C. S, da Silva, J. V., Sá, G. S. *Geometric regularity estimates for quasi-linear elliptic models in non-divergence form with strong absorption* . Submitted, 2025.
3. Bessa, daS. J., da Silva, J. V., Sá, G. S. *Regularity estimates to quasi-linear parabolic equations in non-divergence form with non-homogeneous signature* . Submitted, 2025.
4. Bezerra Junior, E. C., da Silva, J. V., Nascimento, T. M., Sá, G. S. *Improved regularity estimates for Hardy-Hénon-type equations driven by the Infinity-Laplacian*. Submitted, 2024.
5. da Silva, J. V., dos Prazeres, D. S., Ricarte, G. C., SÁ, G. S. *Sharp and improved regularity estimates for weighted quasilinear elliptic equations of p -Laplacian type and applications*. Submitted, 2024.
6. Araújo, D. J.; Sá, G. S.; Teixeira, E. V.; Urbano, J. M.: *Oscillatory free boundary problems in stochastic materials*. Submitted, 2024.
7. Thialita, M. N.; Sá, G. S.; Sobral, A. O.; Teixeira, E. V.: *Higher regularity to fully nonlinear elliptic equations*. Submitted, 2024.
8. Araújo, D. J.; Sá, G. S.; Urbano, J. M.: *Sharp regularity for a singular fully nonlinear parabolic free boundary problem*. **Journal of Differential Equations**, Volume 389, 2024.
9. Araújo, D. J.; Sá, G. S.: *Infinity Laplacian equations with singular absorptions*. **Calc. Var. Partial Differential Equations**. 61 (2022), no. 4, Paper No. 132, 16 pp.

Talks at Conferences

- ◇ Improved regularity estimates for Hénon-type equations driven by the ∞ -Laplacian, Federal University of Paraíba, João Pessoa, Brazil, 2025.
- ◇ Free boundary problem with oscillatory singularities, University of São Paulo, São Carlos - Brasil, 2025.
- ◇ Oscillatory free boundary problems in heterogeneous media, Federal University of Sergipe, Aracaju, Brazil 2025.
- ◇ Optimal regularity for a singular problem ruled by Infinity-Laplacian, Federal University of Belo Horizonte, Belo Horizonte, Brazil, 2024.
- ◇ Sharp regularity for a singular fully nonlinear parabolic free boundary problem, Federal University of Paraíba, João Pessoa, Brazil, 2024.
- ◇ A free boundary problem involving the infinity Laplacian, Federal University of Paraíba, João Pessoa, Brazil, 2022.
- ◇ The regularity theory for some classes of PDEs, XI UFS Summer School, Federal University of Sergipe, Aracaju, Brazil, 2022.
- ◇ A geometric approach to infinity laplacian with singular absorptions (poster section–online), XIV National Meeting on Mathematical Analysis and Applications, Federal University of Paraíba, João Pessoa, Brazil, 2021.
- ◇ Some Results on Infinity Laplacian Equation with Strong Absorptions (oral presentation–online), X UFS Summer School, Federal University of Sergipe, Aracaju, Brazil, 2021.
- ◇ Infinity Laplacian with singular absorptions (oral apresentação–online), II Workshop de Teses e Dissertações da UFPB, Federal University of Paraíba, Brazil, 2020.

Participation in events

- ◇ 10th UFPB Summer Conference in Mathematics, Federal University of Paraíba, João Pessoa, Brazil, 2025.
- ◇ ICMC Summer Meeting on Differential Equations – 2025 Chapter, University of São Paulo, São Carlos - Brasil, 2025.
- ◇ V Congresso Brasileiro de Jovens Pesquisadores em Matemática Pura, Aplicada e Estatística, Federal University of Belo Horizonte, Belo Horizonte, Brazil, 2024.
- ◇ Congresso Latino-Americano e do Caribe de Matemática, Federal University of Paraíba, João Pessoa, Brazil, 2024.
- ◇ Analysis of PDEs: Theory and Applications, Federal University of Paraíba, João Pessoa, Brazil, 2024.
- ◇ IV Congresso Brasileiro de Jovens Pesquisadores em Matemática Pura, Aplicada e Estatística, Federal University of Paraíba, João Pessoa, Brazil, 2022.
- ◇ Fortaleza Conference on Analysis and PDE, Fortaleza, Brazil, 2022.
- ◇ Advanced school II $[B_1^-]$: Analysis and PDE from the south, 2022.
- ◇ 33º Colóquio Brasileiro de Matemática, IMPA, Rio de Janeiro, Brazil, 2021.
- ◇ IX WENLU. 2021.
- ◇ VI Colóquio de Matemática da Região Centro-Oeste. 2021.
- ◇ XIV ENAMA - Encontro Nacional de Análise Matemática e Aplicações, João Pessoa, Brazil, 2021.
- ◇ II Workshop de Teses e Dissertações da UFPB, 2020.
- ◇ VIII Workshop in Nonlinear Partial Differential Equations and Geometric Analysis, João Pessoa-PB, Brazil, 2019.
- ◇ VII Workshop in Nonlinear Partial Differential Equations and Geometric Analysis, João Pessoa-PB, Brazil, 2018.
- ◇ IV Summer School - Department of Mathematics, Federal University of Sergipe, Aracaju, Brazil, 2015.
- ◇ III Escola de Verão - Departamento de Matemática, Federal University of Sergipe, Aracaju, Brazil, 2014.
- ◇ I Workshop de Matemática de Sergipe, Federal University of Sergipe, Aracaju, Brazil, 2014.

Jury Participation

- ◇ Ph.D. defense of Romário Tomilheiro Frias, supervised by João Vitor da Silva, *Resultados de regularidade para problemas do tipo obstáculo não-lineares*, IMECC-UNICAMP. 2025
- ◇ Undergraduate thesis defense of Lucio Santos Machado, supervised by Jonison Lucas dos Santos Carvalho, *O Teorema de Banach-Steinhaus e algumas consequências*, U. Sergipe. 2025
- ◇ Master defense of Jefferson da Silva Farias, supervised by Anselmo Baganha Raposo Junior, *A Construção de Cantor dos Números Reais e os Números Hiperreais*, U. of Maranhão 2023
- ◇ Undergraduate thesis defense of Manoel Rodrigues dos Santos Neto, supervised by Disson Soares dos Prazeres, *As Equações de Hamilton-Jacobi-Bellman*, U. Sergipe. 2023

- ◇ Undergraduate thesis defense of Renan Silva Santos, supervised by Damião Júnio Gonçalves Araújo, *O Teorema de Hahn-Banach*, U. Paraíba. 2022
- ◇ Undergraduate thesis defense of Rodrigo Araujo Santos, supervised by Wilberclay Gonçalves Melo, *Representação de Riesz e Separabilidade dos Espaços de Lebesgue Generalizados*, U. Sergipe. 2021