

AELSON SOBRAL

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sobral-aelson.github.io

RESEARCH INTEREST

Primarily interested in analysis of elliptic, parabolic and nonlocal PDE's, focusing on free boundary problems and their regularity theory.

EXPERIENCE

POSTDOCTORAL FELLOW, King Abdullah University of Science and Technology, Saudi Arabia
September 2024 - Current
Supervisor: José Miguel Urbano

EDUCATION

Universidade Federal da Paraíba, João Pessoa — Ph.D in Mathematics, 2024
Advisor: Damião Araújo
Co-Advisor: Eduardo Teixeira

Universidade Federal de Sergipe, São Cristóvão — M. Sc. in Mathematics, 2020

Universidade Federal de Sergipe, São Cristóvão — B. Sc. in Applied Mathematics, 2018

PUBLICATIONS

2. D. Dos Prazeres, A. Sobral and J. M. Urbano, *Cordes-Nirenberg type results for nonlocal equations with deforming kernels*, **J. Func. Anal.** 287 (2024), no. 9, Paper No. 110593, 33 pp.
1. D. dos Prazeres and A. Sobral, *Regularity estimates for nonlocal equations with an asymptotic property*, **Partial Differ. Equ. Appl.** 2 (2021), no. 3, Paper No. 33, 13 pp.

PREPRINTS

1. A. Sobral, E. Teixeira, J.M. Urbano, *Degenerate free boundary problems with oscillatory singularities*, **Submitted**, 2024.
2. T. Nascimento, G. Sá, A. Sobral, E. Teixeira, *Higher regularity of solutions to fully nonlinear elliptic equations*. **Submitted**, 2023
3. D. Araújo, A. Sobral, J.M. Urbano, E. Teixeira, *On free boundary problems shaped by oscillatory singularities*. **Submitted**, 2023
4. D. Araújo, A. Sobral, E. Teixeira, *Regularity in diffusion models with gradient activation*. **Submitted**, 2023

CONFERENCES & SEMINARS

- 2024** - INVITED SPEAKER AT MOSTLY MAXIMUM PRINCIPLE CONFERENCE
- INVITED SPEAKER AT ICMC SUMMER MEETING
- 2023** - ANALYSIS SEMINAR AT UFPB
- ANALYSIS SEMINAR AT WAYNE STATE UNIVERSITY
- POSTER PRESENTATION AT XII WORKSHOP ON NONLINEAR DIFFERENTIAL EQS
- INVITED SPEAKER AT SPECIAL SESSION OF 13TH AIMS CONFERENCE
- INVITED SPEAKER AT SPECIAL SESSION OF CBM
- 2021** - XIV ENAMA
- POSTER PRESENTATION AT MCA
- CONTRIBUTED TALK AT $[B_1^-]$: ANALYSIS AND PDE FROM THE SOUTH

ORGANIZING COMMITTEES

2024 - SPECIAL SESSION AT THE AIMS CONFERENCE

- ABU DHABI, UAE

- FREE BOUNDARY PROBLEMS: THEORY & APPLICATIONS

-JOÃO PESSOA, PARAÍBA

- ANALYSIS OF PDES: THEORY & APPLICATIONS

- JOÃO PESSOA, PARAÍBA

SKILLS

Python programming