Diogo de Castro Lobo

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Born: 22nd July, 1992
Nationality: Portuguese

Education

2017-	PhD Program in Mathematics UC|UP
2017-2018	Advanced Mathematics, Faculty of Sciences of the University of Porto
2014-2016	Master in Mathematics - Applied Analysis and Computation, Faculty of Sciences and Technology of the University of Coimbra. Dissertation: *The fractional heat equation*
2010-2014	Bachelor in Mathematics, Faculty of Sciences and Technology of the University of Coimbra

Professional experience

2017-	Centre for Mathematics of University of Coimbra *Numerical Analysis and Optimization* research group member, Coimbra, Portugal
2017	Research Fellow at Instituto de Telecomunicações, Aveiro, Portugal
2015	Summer internship at Eneida Wireless & Sensors, Coimbra, Portugal

Funding

2018-	PhD Scholarship PD/BD/142956/2018
2018	Travel and registration aid for *SIAM Summer School on Mathematics in Imaging Science 2018* and *SIAM Conference on Imaging Science 2018*
2017-2018	Research Scholarship PD/BI/135318/2017
2017	Research scholarship under project SPINE-MUSCLES of reference POCI-01-0145-FEDER-017787

Publications

Peer-reviewed

2021 Diogo Lobo. *Fast stable finite difference methods for nonlinear cross-diffusion.* Submitted to Computers & Mathematics with Applications

2021 Sílvia Barbeiro, Ricardo Enguiça, Lobo, Diogo Lobo. *Automatic generation of conformal cooling channels in injection moulding.* Submitted to Computer-Aided Design

2020 Roham Torabi, Alvaro Gomes, Diogo Lobo, Fernando Morgado-Dias. *Modelling demand flexibility and energy storage to support increased penetration of renewable energy resources on Porto Santo.* Greenhouse Gases Science and Technology 0, 1-15(2020). https://doi.org/10.1002/ghg.2005

2020 Sílvia Barbeiro, Diogo Lobo. *Learning Stable Nonlinear Cross-Diffusion Models for Image Restoration.* Journal of Mathematical Imaging and Vision 62, 223–237 (2020). https://doi.org/10.1007

Preprints

2021 Diogo Lobo. *Fast stable finite difference methods for nonlinear cross-diffusion.* Technical Report arXiv:2105.04043

2019 Barbeiro, Sílvia, Lobo, Diogo. *Improved PDE models for image restoration through backpropagation.* Pré-publicações DMUC 19-24 (2019)

Others

2019 Sílvia Barbeiro, Ricardo Enguiça, Diogo Lobo. *Automatic generation of optimized conformal cooling channels.* Portuguese Study Groups Reports (2019)

Scientific community

Presentations

2019 Image Restoration Models through Backpropagation on Medical Imaging. *4th International Conference on Numerical and Symbolic Computation Developments and Applications.* ISEC, Porto, Portugal

2019 Image Restoration Models through Backpropagation on Medical Imaging. *PhD program in Mathematics UC|UP Research Seminar Program.* DMUC, Coimbra, Portugal

2018 Escolha automática de filtros baseados em modelos de difusão-reação não lineares. *Mathematical Portuguese Society National Encounter 2018.* IPB, Bragança, Portugal

Posters

2020 Learning Optimized Partial Differential Equation Models for Image Restoration. *SIAM Conference on Imaging Science 2020*

Reviewer

2020 Journal of Mathematics in Industry

Meetings organizer

2019　Challenges in Healthcare - The Role of Mathematics. *PT-MATHS-IN*. DMUC, Coimbra, Portugal

Meetings participation

2020　SIAM Conference on Imaging Science 2020
2019　European Study Group with Industry 155. IPLeira-CDRSP, Leiria, Portugal
2018　Encontro Nacional da Sociedade Portuguesa de Matemática 2018, IPB, Bragança, Portugal
2018　SIAM Conference on Imaging Science, Università di Bologna, Bologna, Italy
2018　SIAM Summer School on Mathematics in Imaging Science, Università di Bologna, Bologna, Italy
2015　Autumn School in Nonlinear Science - UT Austin | Portugal CoLab Program, IST, Lisbon, Portugal
2015　Summer School in Computational Biology, FCTUC, Coimbra, Portugal
2014　I Iberian Modelling Week, DMUC, Coimbra, Portugal

Teaching

2020-2021　Invited lecturer DMUC
Calculus I (Bachelor in Physics, Integrated Masters on Biomedical Engineer eand Integrated Masters on Physics Engineer)