Elohim Fonseca dos Reis
Curriculum Vitae

PERSONAL DETAILS

Address	Department of Mathematics
	Mathematics Building, 129
	State University of New York at Buffalo
	Buffalo, NY, USA
Phone	+01 716 3980678
E-mail	elohimfo@buffalo.edu

EDUCATION

PhD in Mathematics   2019-present
STATE UNIVERSITY OF NEW YORK AT BUFFALO, NEW YORK - UNITED STATES
> Title: "Epidemic Spreading in Temporal Networks"
> Advisor: Naoki Masuda

PhD in Engineering Mathematics   2018-2019
UNIVERSITY OF BRISTOL, BRISTOL - UNITED KINGDOM
> Title: "Epidemic Spreading in Temporal Networks"
> Advisor: Naoki Masuda

PhD in Physics   2016-2017
STATE UNIVERSITY OF CAMPINAS (UNICAMP), SÃO PAULO - BRASIL
> Title: "Dynamics, Evolution and Adaptation on Complex Networks"
> Advisor: José Antônio Brum
> Co-supervisor: Marcus Aloízio Martinez Aguiar

Masters in Physics   2013-2015
STATE UNIVERSITY OF CAMPINAS (UNICAMP), SÃO PAULO - BRASIL
> Title: "Criticality in Neural Networks"
> Advisor: José Antônio Brum
> Co-advisor: Marcus Aloízio Martinez Aguiar

Bachelor in Physics   2007-2011
STATE UNIVERSITY OF CAMPINAS (UNICAMP), SÃO PAULO - BRASIL

WORK EXPERIENCE

Internship in risk management consulting   2011
ACCENTURE
> Development and testing of new business processes, assistance in the implementation
> of activities related to new solutions, risk mapping.

Credit risk model analyst   2011-2012
Itaú Unibanco Bank
    Validation of credit risk models (PD, LGD, EAD, etc.) and implementation of RAROC calculators.

TEACHING EXPERIENCE

Teaching assistant and grader   Fall 2021
State University of New York at Buffalo
    Introduction do Differential Equations

Instructor   Summer 2021
State University of New York at Buffalo
    College Calculus 3

Teaching assistant   Spring 2021
State University of New York at Buffalo
    College Calculus 2

Grader   Spring 2021
State University of New York at Buffalo
    Network Theory

Grader   Fall 2020
State University of New York at Buffalo
    Mathematical Analysis for Management

Grader   Fall 2020
State University of New York at Buffalo
    Introduction to Differential Equations

Grader   Summer 2020
State University of New York at Buffalo
    College Calculus 2

Teaching assistant and grader   Spring 2017
State University of Campinas
    General Physics II

Teaching assistant and grader   Fall 2016
State University of Campinas
    General Physics II

Teaching assistant and grader   Spring 2016
State University of Campinas
    Physics Laboratory I

Teaching assistant   Fall 2015
State University of Campinas

Structure and Properties of Materials

CONFERENCE PRESENTATIONS

- <u>Elohim Fonseca dos Reis</u>, Aming Li, Naoki Masuda.
  Interacting human dynamics as a mixture of Poisson processes
  Northeast Regional Conference on Complex System
  Buffalo, NY (online), 1-3 April, 2020.
  (Oral presentation)

- <u>Elohim Fonseca dos Reis</u>, Aming Li, Naoki Masuda.
  Human dynamics as mixture of Poisson processes
  International School and Conference on Network Science (NetSci-X)
  Tokyo, Japan, 20-23 January, 2020.
  (Poster presentation)

- <u>Elohim Fonseca dos Reis</u>, Mark Viney, Naoki Masuda.
  Network structure of wild and laboratory mice immune states
  International Joint Conference on AI & Data Science: Mathematics and
  Applications
  Suwon, Korea, 4-5 November, 2019.
  (Oral presentation)

- <u>Elohim Fonseca dos Reis</u>, Mark Viney, Naoki Masuda.
  Network structure of wild and laboratory mice immune states
  Threshold Networks
  Nottingham, UK, 22-24 July, 2019.
  (Poster presentation)

- <u>Elohim Fonseca dos Reis</u>, Mark Viney, Naoki Masuda.
  Immune state networks of wild and laboratory mice
  10th International Conference on Complex Networks (COMPLENET'19).
  Tarragona, Spain, 18-19 March, 2019.
  (Oral presentation)

PUBLICATIONS

Preprint

- <u>Reis, E. F.</u>; M.; Masuda, N. *Metapopulation models imply non-Poissonian statistics of interevent times.* Preprint: arXiv:2106.10348, 2021.

Refereed Journal Papers

- <u>Reis, E. F.</u>; Viney, M.; Masuda, N. *Network analysis of the immune state of mice.* Scientific Reports, 11(1):1-8, 2021.

- <u>Reis, E. F.</u>; Li, A.; Masuda, N. *Generative models of simultaneously heavy-tailed distributions of interevent times on nodes and edges.* Physical Review E, 102(5):052303, 2020.

- Ezaki, T.; <u>Reis, E. F.</u>; Watanabe, T.; Sakaki, M.; Masuda, N. *Closer to critical resting-state neural dynamics in individuals with higher fluid intelligence.* Communications biology, 3(1):1-9, 2020.

- Valine, F.; Barea, L.; <u>Reis, E. F.</u>; Von Zuben, A. A.; Frateschi, N.C. *Induced Optical Losses in Optoelectronic Devices due Focused Ion Beam Damages.* Journal of Integrated Circuits and Systems, 7:87-91, 2012.

Conference proceedings

- Valine, F.; Barea, L. A. M.; <u>Reis, E. F.</u>; Von Zuben, A. A. G.; Frateschi, N. C.. *Analysis of Focused Ion Beam Damages in Optoelectronic Devices Fabrication.* In: 26th 26th SBMICRO Chip on the Clifs, 2011, João Pessoa PB Brazil. ECS Transactions - Microelectronics Technology and Devices - SBMICRO 2011. Pennington NJ: The Electrochemical Society, 2011. v. 39. p. 299-303.

FELLOWSHIPS AND SCHOLARSHIPS

Doctoral Dissertation Fellowship   Spring 2022
STATE UNIVERSITY OF NEW YORK AT BUFFALO

MacGillivray Scholarship   Summer 2021
STATE UNIVERSITY OF NEW YORK AT BUFFALO

Masters research fellowship - FAPESP   2014-2015
ÉCOLE NORMALE SUPÉRIEURE - PARIS
    Title: Modeling study of criticality in neural networks
    Advisor: Thierry Mora

Undergraduate research fellowship - FAPESP   2010-2011
STATE UNIVERSITY OF CAMPINAS
    Title: Fabrication and characterization of InGaAsP/InP microdisk resonators with platinum bridges by focused ion beam system (FIB)

Undergraduate research fellowship - CNPq   2009-2010
STATE UNIVERSITY OF CAMPINAS
    Title: Fabrication and characterization of InGaAsP/InP microdisk lasers
    (Honorable mention, PIBIC/CNPq Conference)

GRANTS

09/2016–03/2017
University of Bristol, UK
EPSRC Institutional Sponsorship
Project title: Phase Transitions in Neuroimaging Data
Amount: £7,234
Role: Co-I (PI: Naoki Masuda, University of Bristol, UK)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

- Society for Industrial and Applied Mathematics (SIAM)

- SIAM student chapter at SUNY at Buffalo

EXTRA-CURRICULAR COURSEWORK

- *Summer School on Physics and Neuroscience*, International Institute of Physics - UFRN (2014);

- *Introduction to C programming language*, CENAPAD-SP (2014);

- *Introduction to MPI*, CENAPAD-SP (2014);

- *Introduction to OpenMP*, CENAPAD-SP (2014);

- *Credit Scoring*, Fundação Getúlio Vargas SP (2011);

- *SAS Programming Fast Track*, SAS Institute Brasil Ltda. (2011);

- *Credit Risk Management*, Siacorp (2011);

- *Why Finance Matters*, Accenture (2011);

- *Fundamental Process Analytics – Lean Six Sigma*, Accenture (2011);

SKILLS

Languages	Portuguese (fluent)
	English (fluent)
	Italian (intermediate)
	French (basic)
Programming	C, Python, Matlab, LaTeX, SAS