#### Luís Alexandre Meira Fernandes Alves Pereira

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#### Research interests

 Algebraic topology. Homotopy theory. Operads. Koszul duality of operads. Goodwillie Calculus. Equivariant homotopy theory. Equivariant operads. Equivariant dendroidal sets.

#### Education

• Ph.D. in Mathematics

2013

Massachusetts Institute of Technology

Thesis title: Goodwillie calculus and algebras over a spectral operad

Advisor: Mark Behrens

• Mestrado em Matemática Aplicada e Computação

2008

Instituto Superior Técnico Advisor: Rui Loja Fernandes

• Licenciatura em Matemática Aplicada e Computação

2006

Instituto Superior Técnico

#### Positions

• Mary Ann Pitts Postdoctoral Fellow University of Virginia Fall 2013-Spring 2017

• Visiting Assistant Professor University of Notre Dame

Fall 2017-Spring 2018

### Publications

• Equivariant dendroidal sets

https://arxiv.org/abs/1702.08119

(53 pages; to appear in Algebraic & Geometric Topology)

• Operad bimodules and composition products on André-Quillen filtrations of algebras (joint with Nick Kuhn)

Algebraic & Geometric Topology, vol.17(2), 2017, pp.1105-1130

• Cofibrancy of operadic constructions in positive symmetric spectra Homology, Homotopy and Applications, vol.13(2), 2016, pp.133-168

#### Submitted

• Genuine equivariant operads (joint with Peter Bonventre) https://arxiv.org/abs/1707.02226

(83 pages; submitted to Advances in Mathematics)

#### **Preprints**

• Graph stable equivalences and operadic constructions in equivariant spectra (joint with Markus Hausmann)

http://faculty.esc.nd.edu/lpereira/research.html

• Filtrations of colored operadic constructions and excisiveness of truncated operadic functors

http://faculty.esc.nd.edu/lpereira/research.html

- Goodwillie calculus in algebras over a spectral operad http://faculty.esc.nd.edu/lpereira/research.html
- A general context for Goodwillie Calculus https://arxiv.org/abs/1301.2832

#### Research Talks

- Genuine equivariant operads
  Fall 2017 at University of Kentucky
- Genuine equivariant operads
  Summer 2017 at University of Illinois at Urbana-Champaign
- A (equivariant) tree description of (genuine equivariant) operads Spring 2017 at University of Virginia
- Genuine equivariant operads
  Spring 2017 at University of Louisiana
- Genuine equivariant operads
  Fall 2016 at Notre Dame University
- Genuine equivariant operads Fall 2016 at University of Virginia
- $N_{\infty}$ -operads and equivariant trees Spring 2016 at Johns Hopkins University
- $N_{\infty}$ -operads and equivariant trees Spring 2016 at University of Virginia
- Cofibrancy of operadic constructions in spectra Fall 2014 at University of Virginia
- Goodwillie Calculus in algebras over a spectral operad Fall 2014 at Ohio State University
- Goodwillie Calculus in algebras over a spectral operad Fall 2014 at University of Virginia
- Goodwillie Calculus in algebras over a spectral operad Spring 2013 at Massachusetts Institute of Technology
- Goodwillie Calculus in algebras over a spectral operad Fall 2012 at University of Chicago

#### Teaching Experience

- Calculus A Fall 2017
- Math 1320 Spring 2017 Calculus II
- Math 1310 Fall 2016 Calculus I
- Math 8850 Spring 2016

  Topics in Algebraic Topology
- Math 3351 Spring 2015, Fall 2015 Linear Algebra
- Math 3100 Spring 2014, Fall 2014, Spring 2015, Summer 2015, Fall 2015 Introduction to Probability Theory
- Math 2310 Fall 2013

  Multivariable Calculus

### Advisory experience

 part of the Ph.D. Thesis Dissertation Committee for Peter Bonventre Spring 2017 at University of Virginia

# Community service

- organized the Topology Seminar Fall 2017 at Notre Dame University
- administered an RGT grant Fall 2017 at Notre Dame University

# Schools and focused periods

 $\bullet$  MIT Talbot Workshop on  $\it Calculus$  of  $\it Functors$  Garden City, UT

Spring 2012