

GUILHERME FREDERICO LIMA DE CARVALHO E SILVA

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EDUCATION

Aug 2016 **PhD in Pure Mathematics**

Institution University of Cambridge, UK

Thesis title *Cartesian and Finite-Product-Preserving
Essential Inclusions of Grothendieck Toposes*

Supervisor Prof. Peter Johnstone.

Status Passed oral Viva subject to corrections.

Jun 2008 **Master of Mathematics**

Institution Pontifícia Universidade Católica do Rio de Janeiro - Brazil

Dissertation title *Sheaves and Topos Theory*

Supervisor Prof. George Svetlichny.

Jul 2006 **Bachelor's degree in Pure Mathematics**

Pontifícia Universidade Católica do Rio de Janeiro - Brazil

TEACHING EXPERIENCE

Jan 2010 – present **Supervisor for Cambridge Part III courses**

Tutoring individually or in classes for Masters level courses.

Courses:

- **Category Theory**, since 2010
- **Topos Theory**, since 2012

Oct 2012 – present **Supervisor for Cambridge Mathematical Tripos**

Conducting supervisions for different colleges,
teaching undergraduates in pairs, parallel to their lecture courses.

Courses:

- **Numbers and Sets** (first year), 2015
- **Metric and Topological Spaces** (second year), since 2012
- **Logic and Set Theory** (third year), 2013

Colleges:

Trinity College, Emmanuel College, Christ's College,

Churchill College, Queens' College, Newnham College,
Murray Edwards College.

Feb 2009 – Jun 2009 **Calculus Lecturer** for Pontificia Universidade Católica
do Rio de Janeiro, Brazil
Lectured first and second year undergraduate Calculus for a
term and a half (6 months), participating in exam preparation
and marking.

SCHOLARSHIPS AND AWARDS

- 2016 Cambridge Philosophical Society Research Studentship,
to conclude promising piece of research
- 2011, 2013 DPMMS travel grants for conferences in Vancouver
and Sydney
- 2010 Smith-Knight and Rayleigh-Knight essay competition 3rd prize
- 2009 Cambridge Trusts International Scholarship
3 year full PhD scholarship
- 2007 Bolsa Aluno Nota Dez (Grade A Student Scholarship)
2 year Masters scholarship

SEMINAR ORGANISATION

- Oct 2012 - Jan 2015 **Junior Category Theory Seminar**
Created and ran the weekly seminar, which was presented and attended
by Masters and PhD students of the University of Cambridge.
- Oct 2012 - Mar 2014 **Joint Category Theory and Computer Science Seminar Series**
Created and organised the seminar series in 2012 and 2013.
Talks were given by PhD students of both Pure Maths
and Computer Science departments of the University of Cambridge.

TALKS

- May 2016 **100th Peripatetic Seminar on Sheaves and Logic**
University of Cambridge, UK
Presentation: *Pullbacks of Essential Inclusions*
of Grothendieck Toposes
- Nov 2015 **Topos à l'IHES**
Institut des Hautes Études Scientifiques, Paris, France

- Presentation: *From Essential Inclusions to Local Geometric Morphisms*
- Jun 2015 **International Category Theory Conference 2015**
University of Aveiro, Portugal
Presentation: *Site characterisations for Local Geometric Morphisms*
- Jul 2013 **International Category Theory Conference 2013**
Macquarie University, Sydney
Presentation: *Surjections of Grothendieck Toposes*
- Jun 2013 **Young Researchers in Mathematics 2013**
University of Edinburgh, UK
Presentation: *Exponentiable Toposes*
- Apr 2012 **Young Researchers in Mathematics 2012**
Bristol University, UK
Presentation: *An Introduction to Classifying Toposes*
- Apr 2011 **Young Researchers in Mathematics 2011**
Warwick University, UK
Presentation: *Topos Theory*

ADDITIONAL ACTIVITIES

- 2014 Created and assumed the role of president of the **Christ's College Volleyball Club**, affiliated to the Christ's College Sports Society, in the University of Cambridge.
- 2010 Co-founded and assumed the role of vice-president in the year of 2010 of the **Cambridge University Brazilian Society**, which organises academic and cultural events promoting Brazilian culture in Cambridge.

Languages: Portuguese (native), English (fluent), French (intermediate).