

# Benjamin Ralph

PhD Candidate in Computer Science  
University of Bath

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## Academic

### Postgraduate Degree

2014–Autumn 2018 (expected date for viva)

#### PhD (ongoing), University of Bath

Fully funded by EPSRC Doctoral Training Grant (Fees and Stipend)

#### A Natural Proof Theory for First-Order Logic

supervised by Alessio Guglielmi

### Undergraduate Degree

2010–2014

#### MMathPhil (Masters in Mathematics and Philosophy), University of Oxford

First Class in Honour Moderations, Parts A and B, and Part C

## Publications

#### A Natural Proof System for Herbrand's System

awarded the Rosser Prize for Best Student Paper

LFCS 2018, Florida

[people.bath.ac.uk/bdr25/files/prfsysht.pdf](http://people.bath.ac.uk/bdr25/files/prfsysht.pdf)

#### Removing Cycles from Proofs

with Andrea Aler Tubella and Alessio Guglielmi

CSL 2017, Stockholm

[people.bath.ac.uk/bdr25/files/RCP.pdf](http://people.bath.ac.uk/bdr25/files/RCP.pdf)

## Conference Presentations

#### Decomposing First Order Proofs using Deep Inference

PCC 2016, Munich

#### Decomposing First Order Proofs

ALCOP 2016, Vienna

#### A Natural Cut Elimination Procedure for First Order Logic

ENPS 2015, Bath

#### Natural and Confluent Cut Elimination in Classical Logic

PCC 2015, Oslo

## Grants

*Support from:*

### **EPSRC Project EP/K018868/1**

*Efficient and Natural Proof Systems*

### **ANR project FISP ANR-15-CE25-0014-01**

*The Fine Structure of Formal Proof Systems and their Computational Interpretations*

## Other

2017–2018 - **Peer Reviewer** - CSL & Logique et Analyse

2016–2017 - **Convener** - Mathematical Foundations Seminar, University of Bath

2016 - **Volunteer** - LICS 2016

2015 - **Attendee** - Midlands Graduate School in the Foundations of Computer Science

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## Teaching

*All at the University of Bath*

## Computer Science

2017–2018 - **Analytic Mathematics For Computation**

2016–2018 - **Functional Programming**

2016–2018 - **Artificial Intelligence**

2016 - **Guest Lecture: What is a proof?**

2014–2018 - **Discrete Mathematics For Computation**

2014–2016 - **Foundations of Computation II**

2014–2016 - **Advanced Programming Principles**

## Mathematics

2016–2017 - **Programming and Discrete Mathematics**

2014–2016 - **Algebra I**

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## Other Work

### Voluntary

2012–2013 - **Secretary & President** - Socrates Society, University of Oxford

2012 - **Male Welfare Rep and Peer Supporter** - Brasenose College

### Paid

2014 - **Residential Dean** - Oxford Tutorial College

2013 - **Hospitality Assistant** - Brasenose College Conferences

2008–2012 - **Common Ground Cafe** - Barista