

FRANCESCA BALESTRIERI, MA (CANTAB), MSc (OXON), DPhil (OXON)

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POSTDOC POSITIONS AND EMPLOYMENT

- **Post-Doc Fellowship, Max-Planck-Institut für Mathematik** 2017–2019
Mentors: Prof Yuri I Manin, Prof Pieter Moree
- **Stipendiary Lecturer in Pure Mathematics, Pembroke College, University of Oxford** 2016–2017
- **Freelance Editor, Oxford University Press** 2015–2016

EDUCATION

- **DPhil in Number Theory, University of Oxford** 2013–2017
Research Interests: Number Theory, Arithmetic Geometry
Supervisor: Prof E Victor Flynn
- **MSc Mathematics and the Foundations of Computer Science, University of Oxford** 2012–2013
Result: Distinction
- **BA (Hons) Mathematical Tripos, University of Cambridge** 2009–2012
(Upgraded to MA in 2016)
Result: Class I (each year)

ACADEMIC VISITS

- **University of Washington, Seattle, USA** Sep–Dec 2015
Visiting: Prof Bianca Viray

PAPERS AND PREPRINTS

- *Brauer-Manin obstruction and families of generalised Châtelet surfaces over number fields*
Preprint.
- *Elliptic fibrations on covers of the elliptic modular surface of level 5*
with J. Desjardins, A. Garbagnati, C. Maistret, C. Salgado.
WINE II: Contributions to Number Theory and Arithmetic Geometry, AWM Springer Series 11 (2018).
- *Iterating the algebraic étale-Brauer set*
Journal of Number Theory 182 (2018), 284–295
- *Obstruction sets and extensions of groups*
Acta Arithmetica 173 (2016), 151–181.
- *Insufficiency of the Brauer-Manin obstruction for rational points on Enriques surfaces*
with J. Berg, M. Manes, J. Park, B. Viray.
Directions in Number Theory: Proceedings of the 2014 WIN3 Workshop, AWM Springer Series 3 (2016), 1–32.

SCHOLARSHIPS AND PRIZES

- **EPSRC Studentship**, fees & maintenance, Mathematical Institute (University of Oxford). 2013–2017
- **Jex-Blake Scholarship**, LMH (University of Oxford) 2013–2014
- **Academic Development Grant (Ginsberg Fund)**, LMH (University of Oxford) 2013
- **Anne Jemima Clough Prize**, Newnham College (University of Cambridge) 2012
- **Chadburn Third-Year Scholarship**, Newnham College (University of Cambridge) 2011–2012
- **Marjorie Stewart Tunnicliffe Prize**, Newnham College (University of Cambridge) 2011
- **Anne Jemima Clough Prize**, Newnham College (University of Cambridge) 2011
- **Mathilde Blind Second-Year Scholarship**, Newnham College (University of Cambridge) 2010–2011
- **Jane Dora Archibald Prize**, Newnham College (University of Cambridge) 2010

TEACHING (UNIVERSITY OF OXFORD)

- **Stipendiary Lecturship**, Pembroke College. 2016–2017
M1 Groups and group actions. First year course. Trinity Term 2017
A.S.O Group Theory. Second year. Trinity Term 2017
A4 Integration. Second year course. Hilary Term 2017
M1 Groups and group actions. First year course. Hilary Term 2017

M2 Analysis II: Continuity and Differentiability. First year course.	Hilary Term 2017
A0 Linear Algebra. Second year course.	Michaelmas Term 2016
A2 Metric Spaces and Complex Analysis. Second year course.	Michaelmas Term 2016
M2 Analysis I: Sequences and Series. First year course.	Michaelmas Term 2016
• A.SO Graph Theory , Tutor for New College. Second year course.	Trinity Term 2016
• C2.6 Introduction to Schemes , Consultation Sessions Tutor.	Trinity Term 2016
• C2.6 Introduction to Schemes , Class Tutor. Fourth year/graduate course.	Hilary Term 2016
• A.SO Graph Theory , Tutor for New College. Second year course.	Trinity Term 2015
• B3.4 Algebraic Number Theory , Consultation Sessions Tutor.	Trinity Term 2015
• C3.7 Elliptic Curves , Consultation Sessions Tutor (2 Sets).	Trinity Term 2015
• B3.4 Algebraic Number Theory , Class Tutor. Third year course.	Hilary Term 2015
• C3.7 Elliptic Curves , Class Tutor (2 Sets). Fourth year/graduate course.	Hilary Term 2015
• C3.4 Algebraic Geometry , Class Tutor. Fourth year/graduate course.	Michaelmas Term 2014
• B3.1 Galois Theory , TA (2 sets). Third year course.	Michaelmas Term 2014
• B9b Algebraic Number Theory , TA. Third year course.	Hilary Term 2014
• C9.1b Elliptic Curves , TA. Fourth year/graduate course.	Hilary Term 2014
• C9.2a Analytic Number Theory , TA. Fourth year/graduate course.	Michaelmas Term 2013

TEACHING (UNIVERSITY OF WASHINGTON)

• Algebraic Number Theory , 2 lectures (substituting Prof Viray). Graduate course.	Fall Quarter 2015
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COMMITTEES AND SERVICE

• Reviewer for the Mathematical Reviews of the AMS.	2017–
• Peer-reviewer for the Tunisian Journal of Mathematics.	2017
• Organiser of the Junior Number Theory seminar, University of Oxford.	2015–2016
• Undergraduate admissions interviewer at New College, University of Oxford.	Michaelmas Term 2014
• Organiser of the Young Researchers in Mathematics 2015 conference, University of Oxford.	2013–2015
• Undergraduate admissions interviewer at New College, University of Oxford.	Michaelmas Term 2013
• Facilitator for the Good Practices Steering Group, Mathematical Institute, University of Oxford.	2013–2017

TALKS

• TBA	TBA
XIV Giornate di Geometria Algebrica ed Argomenti Correlati, Università di Genova, Italy.	
• TBA	28 Mar 2018
Number Theory Lunch Seminar, Max-Planck-Institut für Mathematik, Bonn, Germany.	
• <i>Categorie: un cambiamento di paradigma in matematica</i> (in Italian)	7 Dec 2017
Seminario di Logica, Università Ca' Foscari, Venice, Italy.	
• <i>Studying arithmetic properties of rational points on varieties</i>	26 Oct 2017
MPI-Oberseminar, Max-Planck-Institut für Mathematik, Bonn, Germany.	
• <i>Iterating the algebraic étale-Brauer obstruction</i>	19 May 2017
Number Theory Seminar, University of Cambridge, UK.	
• <i>When do rational points on varieties exist?</i>	15 Mar 2017
Pure Mathematics Seminar, University of Reading, UK.	
• <i>Iterating the algebraic étale-Brauer obstruction</i>	17 Feb 2017
RTG Lectures in Arithmetic Geometry at Rice, Rice University, Houston, USA.	
• <i>Iterare l'insieme di étale-Brauer algebrico</i> (in Italian)	22 Dec 2016
Algebraic Geometry and Representation Theory in Rome, Università Sapienza, Rome, Italy.	
• <i>Iterating the algebraic étale-Brauer obstruction</i>	27 Oct 2016
Number Theory Seminar, University of Manchester, UK.	
• <i>Iterating the algebraic étale-Brauer obstruction</i>	12 Oct 2016
Linfoot seminar, Bristol University, UK.	
• <i>Obstructions to the existence of rational points on Enriques surfaces</i>	13 Jun 2016
GAEL XXIV, Nesin Mathematics Village, Turkey.	
• <i>Iterating the algebraic étale-Brauer obstruction</i>	23 May 2016
Leibniz Universität Hannover, Hannover, Germany.	
• <i>Modular methods for Diophantine equations</i>	25 Apr 2016
Junior Number Theory seminar, University of Oxford, UK.	
• <i>Iterating the algebraic étale-Brauer obstruction</i>	25 Jan 2016

- Junior Number Theory seminar, University of Oxford, UK. 17 Nov 2015
- *Iterating the algebraic étale-Brauer obstruction* 17 Nov 2015
AGNT Seminar, Rice University, Houston, USA.
- *Belyi's Theorem* 12 Nov 2015
Dessins d'enfants seminar, University of Washington, Seattle, USA.
- *Iterating the algebraic étale-Brauer obstruction* 10 Nov 2015
UW Number Theory Seminar, University of Washington, Seattle, USA.
- *Obstructions: a dictionary* 19 Aug 2015
Young Researchers in Mathematics 2015, University of Oxford, UK.
- *Insufficiency of the Brauer-Manin obstruction for Enriques surfaces* 13 Apr 2015
TCC Number Theory day, Imperial College, London, UK.
- *Insuffisance de l'obstruction de Brauer-Manin pour les surfaces d'Enriques* (in French) 10 Apr 2015
Séminaire "Variétés Rationnelles", Institut Henri Poincaré, Paris, France.
- *Obstruction sets and extensions of groups* 9 Feb 2015
Junior Number Theory seminar, University of Oxford, UK.
- *Ranks of elliptic curves* 24 Nov 2014
Junior Number Theory seminar, University of Oxford, UK.
- *How badly can the Hasse principle fail?* 22 Oct 2014
Kinderseminar, University of Oxford, UK.
- *On the existence of rational points: an introduction to obstructions* 4 Sep 2014
NATO ASI, Ohrid, FYROM.
- *Obstructions!* 2 Jul 2014
Young Researchers in Mathematics 2014, University of Warwick, UK.
- *Obstructions to the Hasse principle* 25 Nov 2013
Junior Number Theory seminar, University of Oxford, UK.

CONFERENCES AND WORKSHOPS

- **Rational Points on Schiermonnikoog** 2 – 6 Jul 2018
Schiermonnikoog, Netherlands.
- **XIV Giornate di Geometria Algebrica ed Argomenti Correlati** 29 May – 1 Jun 2018
Università di Genova, Genova, Italy.
- **Rational Points 2017** 2–8 Jul 2017
Franken-Akademie Schloss Schney, Schney, Germany.
- **RTG Lectures in Arithmetic Geometry at Rice** 17–19 Feb 2017
Rice University, Houston, USA.
- **Algebraic Geometry and Representation Theory in Rome** 22 Dec 2016
Università Sapienza, Rome, Italy.
- **Women In Numbers Europe 2** 25–30 Sep 2016
Lorentz Center, Leiden, Netherlands.
- **GAeL XXIV** 13–17 Jun 2016
Nesin Mathematics Village, Turkey.
- **Fundamental groups in Arithmetic Geometry** 26 May – 3 Jun 2016
Institut Henri Poincaré, Paris, France.
- **Explicit Methods in Number Theory (in honour of John Cremona's 60th Birthday)** 4–8 Apr 2016
University of Warwick, UK.
- **Sage Days 71: Explicit p-adic methods in number theory** 20–24 Mar 2016
University of Oxford, UK.
- **Oxford Cryptography Day** 17 Mar 2016
University of Oxford, UK.
- **Western Algebraic Geometry Symposium** 17–18 Oct 2015
University of Washington, Seattle, USA.
- **LMS-CMI summer school on Diophantine Equations** 15–19 Sep 2015
Wales, UK.
- **Young Researchers in Mathematics 2015** 17–20 Aug 2015
University of Oxford, UK.
- **Rational Points 2015** 28 Jun – 5 Jul 2015
Franken-Akademie Schloss Schney, Schney, Germany.
- **Rational Points/ Pontos Racionais** 25–29 May 2015
IMPA, Rio de Janeiro, Brazil.

- **Elliptic Curves, Modular Forms and Iwasawa Theory** 25–27 Mar 2015
In honour of J Coates' 70th Birthday, University of Cambridge, UK.
- **Arizona Winter School 2015: Arithmetic and Higher-Dimensional Varieties** 14–18 Mar 2015
The Southwest Center for Arithmetic Geometry, University of Arizona, USA.
- **Algebraic Geometry and Representation Theory in Rome** 18–19 Dec 2014
Università Roma 3, Rome, Italy.
- **Comptage d'objets arithmétiques (rangs des courbes elliptiques)** 10–14 Nov 2014
CRM, Université de Montréal, Canada.
- **Analytic Number Theory** 29 Sep – 3 Oct 2014
Clay Research Conference and Workshops, University of Oxford, UK.
- **Bounded Gaps Between Primes** 22–26 Sep 2014
LMS-CMI Research School, University of Oxford, UK.
- **Arithmetic of Hyperelliptic Curves** 25 Aug – 5 Sep 2014
NATO Advanced Study Institute, Ohrid, FYROM.
- **Young Researchers in Mathematics 2014** 30 Jun – 3 Jul 2014
University of Warwick, UK.
- **Women in Numbers 3** 20–25 Apr 2014
Banff International Research Station, Canada.
- **Model theory and its interactions with NT and arithmetic geometry** 10–11 Feb 2014
MSRI, University of California, Berkeley, USA.
- **Introductory Workshop: Model Theory, Arithmetic Geometry and NT** 3–7 Feb 2014
MSRI, University of California, Berkeley, USA.
- **Number Theory and Physics** 29 Sep – 4 Oct 2013
Clay Research Conference and Workshops, University of Oxford, UK.
- **Rational Points - Geometric, Analytic and Explicit Approaches** 27–31 May 2013
EPSRC Warwick Number Theory Symposium, University of Warwick, UK.
- **Women in Mathematics** 18–19 Apr 2013
Organised by the LMS. Newton Institute, University of Cambridge, UK.
- **Foundations of Mathematics: What are they and what are they for?** 10–12 Jul 2012
Department of Philosophy, University of Cambridge, UK.

OTHER RESEARCH EXPERIENCES

- **Research Assistant in Numerical Analysis** Summer 2012
DAMTP, University of Cambridge.
Undergraduate summer research project funded by MathWorks.
Supervisors: Prof A Iserles, Dr C-B Schoenlieb, and Dr S J Cowley.

LANGUAGES

- **Italian:** Native speaker
- **English:** Fluent
- **French:** Fluent