Francesca Balestrieri, MA (Cantab), MSc (Oxon), DPhil (Oxon)

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Nationality: Italian

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

- *Elliptic fibrations on covers of the elliptic modular surface of level 5*
  with J. Desjardins, A. Garbagnati, C. Maistret, C. Salgado.
  Accepted for publication in Directions in Number Theory: Proceedings of the 2016 WINE2 Workshop.
- *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 Lectureship**, Pembroke College.   2016–2017
  - **M1 Groups and group actions**. First year course.   Trinity Term 2017
  - **A.SO 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

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