

*Internet version*

## Employment

- **Research Fellow** *University of Warwick, July 2016–Present*
  - Postdoctoral study, supervised by Jose Rodrigo
  - Subjects include:
    - \* Evolution of vortex filaments in the incompressible Euler equations and model systems
    - \* Convex integration and  $\Lambda$ -convexity in 2D
  - Upgraded from “Research Associate” as of October 2016

## Education

- **Mathematics Ph.D.** *University of Warwick, 2012–2016*
  - Thesis title: *On some alternative formulations of the Euler and Navier–Stokes equations*
  - Advised by Professor James Robinson.
  - Research focused on reformulations of certain classical PDEs of fluid mechanics – the Euler, Navier–Stokes and Burgers equations.
- **MMath** *University of Warwick, 2008–2012*
  - Graduated with first class.
  - Research dissertation on “Upper Bounds on the Cross-Sectional Volumes of Cubes”.

## Teaching

- **Small group teaching** *University of Warwick, 2011–2016*
  - Responsible for encouraging and monitoring the progress of one to two groups of four to five first-year mathematics undergraduates.
  - Regular marking approximately 20 scripts per week.
  - Two contact hours per week per group.
- **Teaching Assistant: Measure Theory** *University of Warwick, 2013, 2014*
  - During one term in each of these years, I ran weekly support classes to help third-year undergraduates with assignments from the introductory Measure Theory module.
  - Marked approximately 200 scripts over the course of the term.

## Publications

- W.S. Ozanski, B.C. Pooley. Leray’s fundamental work on the Navier–Stokes equations: a modern review of “*Sur le mouvement d’un liquide visqueux emplissant l’espace*” *In preparation*
- B.C. Pooley. On a model for the Navier–Stokes equations using magnetization variables. *Submitted*, arXiv:1601.04968.
- B.C. Pooley and J.C. Robinson. Well-posedness for the diffusive 3D Burgers equations with initial data in  $H^{1/2}$ . In W. Sadowski J.C. Robinson, J.L. Rodrigo and A. Vidal-López, editors, *Recent Progress in the Theory of the Euler and Navier–Stokes Equations*. Cambridge University Press, 2016.
- B.C. Pooley and J.C. Robinson. An Eulerian-Lagrangian form for the Euler equations in Sobolev spaces. *J. Math. Fluid Mech.*, 18:783–794, 2016.

## Selected Talks Delivered

- *A model for the Navier–Stokes equations using magnetization variables*, Analysis seminar, Regensburg, February 2017
- *A model for the Navier–Stokes equations in magnetization variables*, PDEs in Fluid Mechanics, September 2016
- *A model for the Navier–Stokes equations in magnetization variables*, Postgraduate seminar, University of Warwick, January 2016
- *Global well-posedness for the diffusive 3D Burgers equations*, YRM 2015, University of Oxford, August 2015
- *Global well-posedness for the diffusive 3D Burgers equations*, Postgraduate seminar, University of Warwick, May 2015
- *On an Eulerian-Lagrangian formulation of the Euler equations*, SW PDE Winter School, University of Oxford, January 2014
- *On an Eulerian-Lagrangian formulation of the Euler equations*, Postgraduate seminar, University of Warwick, November 2013
- *Upper bounds on the cross-sectional volume of a hypercube*, Postgraduate seminar, University of Warwick, May 2013

## Conferences Organised

- **YRM 2014** *University of Warwick, June/July 2014*
  - Young Researchers in Mathematics, a conference designed for and run by Mathematics Ph.D. students and early career researchers.
  - I was on a committee with five other organisers
  - There were 151 attendees including 17 invited speakers from a cross-section of mathematical disciplines.

## Conferences and Events Attended

- School in Analysis and PDEs (University of Warwick, June 2017)
- Non-local Equations and Fractional Diffusion (University of Warwick, May 2017)
- One day meeting in Nonlinear PDEs (University of Warwick, May 2017)
- BMC 2017 (Durham University, April 2017)
- NBFAS meeting (University of Warwick, November 2016)
- PDEs in Fluid Mechanics (University of Warwick, September 2016)
- LMS Network Meeting on Harmonic Analysis & PDEs (University of Warwick, December 2015)
- YRM 2015 (University of Oxford, August 2015)
- BMC/BAMC 2015 (University of Cambridge, March/April 2015)
- Oxbridge PDE Workshop (University of Oxford, March 2015)
- LMS Network Meeting on Harmonic Analysis & PDEs (University of Warwick, December 2014)
- YRM 2014 – Organiser (University of Warwick, June/July 2014)
- South West PDE Winter School (University of Oxford, January 2014)

- Clay Institute workshop on Navier-Stokes/Andrew Wiles Building opening conference (University of Oxford, September-October 2013)
- Recent trends in classical and complex fluids (University of Sussex, September 2013)
- YRM 2013 (University of Edinburgh, June 2013)
- Navier-Stokes in Venice (Venice, April 2013)

## **Journals/Refereeing**

- Acted as referee for Nonlinearity (2017)