

CURRICULUM VITAE

Petra Staynova

Contact information:

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Current Position:

September 2018 – Teaching Assistant at Leeds University, Leeds, UK.

Education:

September 2014 – started PhD at University of Leicester funded by the EPSRC,
Supervisor: Professor Alex Clark (Queen Mary's University of London)
Thesis Title: ‘The Two-Headed God Janus, or, What does n-Hausdorffness have to do with Dynamics and Topology?’
Viva: Passed with Minor Corrections (pending)

2013-2014 – Master by Research in Mathematics, Durham University

2008-2012 – Master in Mathematics and Philosophy, Oxford University, Pembroke College

List of Publications:

In Mathematics:

1. **2018** – “Ellis Semigroup of Constant Length Substitution Dynamical Systems”, in preparation
2. **2018**- “About the Ellis Semigroup of a Generalized Morse System”, on the ArXiv: <https://arxiv.org/pdf/1711.10484.pdf>
3. **2018** – “On the Number of Ideals in Enveloping Semigroup”, in preparation
4. **2018** – “Using Python in Substitution Dynamical Systems”, in preparation
5. **2017**- “Separation and Cardinality – Some New Results and Old Questions” (with Maddalena Bonanzinga and Dimitrina Stavrova) *Topology and Its Applications*, Vol 221, 2017, 556-569, <http://www.sciencedirect.com/science/article/pii/S0166864117300494>

6. **2016** - “Combinatorial Separation Axioms and Cardinal Invariants”, joint work with Maddalena Bonanzinga and Dimitrina Stavrova, *Topology and Its Applications*, Vol 201, 2016, 441-451,
<http://www.sciencedirect.com/science/article/pii/S0166864115005866?via%3DiHub>
7. **2013** - “A Note on the Hausdorff Number of Topological Spaces”, *Mathematics and Mathematical Education*, 2013, *Proceedings of the 42nd Spring Conference of the Union of Bulgarian Mathematicians*, 2013, 248-253,
http://www.math.bas.bg/smb/2013_PK/tom_2013/pdf/248-253.pdf
8. **2012** - “A Note on Quasi-Lindelöf Spaces”, *Mathematics and Mathematical Education*, 2012, *Proceedings of the 41st Spring Conference of the Union of Bulgarian Mathematicians*, 197-201, http://www.math.bas.bg/smb/2012_PK/tom_2012/pdf/197-201.pdf
9. **2011** - “A Comparison of Lindelöf-type Covering Properties of Topological Spaces”, *Rose-Hulman Undergraduate Journal of Mathematics*, Vol 12, no2, 2011, 162-204,
<http://www.rose-hulman.edu/mathjournal/v12n2.php>

In Mathematical Education:

1. **2011** - “Demonstrating the Birth of an Idea to a High School Student”, *Mathematics and Mathematical Education*, 2011; *Proceedings of the 40th Spring Conference of the Union of Bulgarian Mathematicians*, 2011, 363-366,
http://www.math.bas.bg/smb/2011_PK/tom/pdf/363-366.pdf ;
http://www.math.bas.bg/smb/2011_PK/index.html
2. **2010** - “A Problem on Infinite Series: Difficult or Easy?”, *Mathematics and Mathematical Education*, 2010; *Proceedings of the 39th Spring Conference of the Union of Bulgarian Mathematicians*, 2010, 237-242,
http://www.math.bas.bg/smb/2010_PK/tom/pdf/237-242.pdf

Journals refereed

Serdika

Selected Mathematical Conferences and Seminars:

Organised:

2016 – “19th Galway Topology Colloquium”, principal organiser, University of Leicester, August 1st, <https://sites.google.com/site/summertopology/galway-colloquium>

Invited semi-plenary:

2019 – 34th Summer Conference on Topology and Applications, University of the Witwaterstrand, in Johannesburg, SA, 1--4 July

With talks given:

2018 – “The Ellis Semigroup of Constant Length Substitution Systems,” – Galway Topology Colloquium, University of Birmingham, July 23-25

2018 – “On The Ellis Semigroup of Certain Constant Length Substitution Dynamical Systems,” – invited talk at the Birmingham Topology Seminar, University of Birmingham, April

2018 – “Ellis Semigroup of Constant Length Substitution Dynamical Systems,” – Invited talk for the Algebraic Topology Session at the 52nd Spring Topology Conference in Auburn, AL, USA, March 14-17

2018 – “Teaching Bachelor’s and Master’s SpLD Students in Mathematics,” – talk at the Teaching Workshop, 52nd Spring Topology Conference in Auburn, AL, USA, March 14-17

2017 – “Around the Furstenberg Topology” – Workshop on Topology in Dynamics, April 3-7, University of Leicester

2017 – “The Furstenberg Topology” – Birmingham Topology and Dynamics Seminar, March

2016 – “The Enveloping Semigroup” – 19th Galway Topology Colloquium, University of Leicester, <https://sites.google.com/site/summertopology/galway-colloquium>

2016 – “A Transcendental Meditation on Schanuel’s Conjecture” – University of Leicester Postgraduate Seminar

2015 – “Putting the ‘Ultra’ in Ultrafilters” - University of Leicester Postgraduate Seminar

2014 – International Conference on Topology and its Applications, Nafpaktos, Greece, talk: ‘On the Regular and Normal Number of Topological Spaces and Cardinal Invariants’ (fully funded) – http://www.lepantotopology.gr/?section=1880&language=en_US

2013 – Graduate Seminar, Durham University, Durham, UK; talk: ‘On Schanuel’s Conjecture’

2013 – GandALF (Geometry and Algebra Forum), Durham University, Durham, UK; talk: ‘Compactness-like Covering Properties’ - <http://www.maths.dur.ac.uk/gandal/1314/>

2013 – Graduate Seminar, Durham University, Durham, UK; talk: ‘Generalisations of Compactness’

2011 – Birmingham Oxford Analytic Topology Seminar, Oxford, UK; talk: ‘Some Open Questions Concerning Lindelof-type Covering Properties’ (fully funded)

2011 – 40th Spring Conference of the Union of Bulgarian Mathematicians, Bulgaria; talk: “Demonstrating the Birth of an Idea to a High School Student” (fully funded)

2010 – 39th Spring Conference of the Union of Bulgarian Mathematicians, Albena, Bulgaria; talk: “A Problem on Infinite Series: Difficult or Easy?” (fully funded)

Attended:

2017 – “Ultrafilters, Ramsey Theory and Dynamics”, Université Claude Bernard Lyon 1, Lyon, France (fully funded), 19-26 November.

2017 – “Workshop on Topology in Dynamics”, University of Leicester, Leicester, UK, 3-7 April

2017 – “Symbolic Dynamics, Combinatorics on Words, Computability and Automata”, CIRM, Marseille, France, 30 January – 3 February

2016 – “International Conference on Topology and Its Applications and Galway Colloquium”, University of Leicester, Leicester, UK, 1-5 August

2016 – “The Stone-Cech Compactification of the Natural Numbers”, University of Cambridge, Cambridge, UK (in honour of 25 years of collaboration between Dona Strauss and Neil Hindmann) (fully funded), July 6-8 2016 - <https://www.dpmms.cam.ac.uk/events/stone-cech/>

2016 – “Dynamical Systems for Aperiodicity Conference”, Université Claude Bernard Lyon 1, Lyon, France (fully funded), 4th – 8th January 2016.

2015 - International Conference in Topology in Messina (ICTM 2015), Sicily, Italy (fully funded) - <http://mat521.unime.it/ictm2015/conferenzieri.php>

2013 – “Higher Structures in Topology and Number Theory” – organized by the Clay Mathematical Institute, Oxford, UK (fully funded) - <http://www.claymath.org/workshops/TNT/>

2012 – Galway Topology Colloquium (University of Oxford), Oxford, UK (fully funded) - <http://www.maths.ox.ac.uk/events/conferences/galway15>

Sponsorship and Grants:

2018 – Sponsorship from the Topology Seminar at Birmingham University to attend and give a talk

2018 – Sponsorship to attend and give a talk in the Algebraic Topology session at the 52nd Spring Topology Conference in Auburn, AL, USA, March 14-17

2017 – Sponsorship from the “Dynamical Systems for Aperiodicity Conference” conference organisers, Université Claude Bernard Lyon 1, Lyon, France (fully funded), 19-26 November

2016 – Sponsorship from the “Dynamical Systems for Aperiodicity Conference” organisers, Université Claude Bernard Lyon 1, Lyon, France (fully funded), 4th – 8th January 2016.

2016 – LMS Scheme 8 grant for the 19th Galway Topology Colloquium:

<https://sites.google.com/site/summertopology/galway-colloquium>

2016 – Sponsorship from the “Stone-Cech Compactification” conference organisers to attend the conference in Cambridge, UK

2015 – Sponsorship from the “International Conference in Topology” organisers to attend the conference in Messina, Italy

2015 – Sponsorship from the MAGIC network to attend the “Birmingham Young Mathematicians’ Colloquium”

2012 – Sponsorship from the Oxford Mathematical Institute to attend Galway Topology Colloquium

2011 – Sponsorship from Pembroke College to attend the Birmingham Oxford Analytic Topology Seminar

2010 – Hansell Travel Grant to attend and give a talk at the 39th Spring Conference of Union of Bulgarian Mathematicians, Albena, Bulgaria

Experience:

Teaching:

Autumn 2014, 2015, 2016 - Linear Algebra I (supervisions; 2 groups)

Spring 2015 – Cover for Topology and Topological Models (1 month; 3 lectures and 2 problem classes per week plus project supervision)

Marking:

Autumn 2014, 2015, 2016 - Homework in Linear Algebra I

Spring 2015 – marking assignments and projects for Computational Topology

January 2017 - Exam papers in Linear Algebra I

Other:

August 2015-December 2016 – comparative marking for ‘No More Marking’ project at Loughborough University Mathematics Education Centre

December 2009-January 2010 – GCSE Maths textbooks answer checking for Oxford University Press

Training Courses Attended:

- 10/2013 – ‘Teaching Induction for Postgraduates’
- 10/2013 – ‘The International Teaching Assistant’
- 01/2014 – ‘A career in Academia: Making Successful Applications’
- 03/2014 – ‘First Aid,’ one-day course organised by St John's Ambulance
- 02/2015 – ‘Workshop for Postgraduate Students New to Teaching in the Mathematical Sciences’ – Oxford Brookes University, UK
- 04/2016 – ‘Speed Reading for Academics’
- 03/2018 – ‘Teaching Workshop’, 52nd Spring Topology Conference in Auburn, AL, USA

Other Activities:

2015-present – postgraduate representative for the College of Science and Engineering at PGRPC (Postgraduate Research Policy Committee), University of Leicester

2015-present – postgraduate representative at the Athena Swan Maths Department committee, University of Leicester

2009-2012 – Maths and Philosophy Representative at MURC (Mathematics Undergraduate Representative Committee), Oxford University

Referees:

<p>Thesis Supervisor Professor Alexander D Clark Email: alex.clark@qmul.ac.uk</p> <p>Department of Mathematics Queen Mary University of London Mile End Rd London E1 4NS UK</p>	<p>Coauthor Reference Professor Maddalena Bonanzinga Email: mbonanzinga@unime.it</p> <p>Università degli studi di Messina, Dipartimento di Matematica e Informatica Messina, Italy</p>	<p>Professional Reference Professor Boaz Tsaban Email: tsaban@math.biu.ac.il</p> <p>Department of Mathematics Bar-Ilan University Ramat-Gan 5290002 Israel</p>
<p>Teaching Reference Professor Agis Athanassoulis Email: a.athanassoulis@dundee.ac.uk</p> <p>Department of Mathematics University of Dundee Dundee DD1 4HN Scotland UK</p>	<p>Professional and Teaching Reference Professor Krystyna Kuperberg Email: kuperkm@auburn.edu</p> <p>Department of Mathematics and Statistics 238 Parker Hall Auburn University Auburn, AL 36849-5310 USA</p>	<p>Professional and Teaching Reference Professor Jo Heath email: heathjw@mail.auburn.edu</p> <p>Department of Mathematics and Statistics 238 Parker Hall Auburn University Auburn, AL 36849-5310</p>

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