

# Curriculum Vitae

Irakli Patchkoria

## Personal Data:

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First Name: Irakli  
Last Name: Patchkoria  
Place of Birth: Tbilisi, Georgia  
Date of Birth: 20.08.1987  
Nationality: Georgian  
Affiliation: Department of Mathematics,  
University of Bonn, Endenicher Allee 60, 53115 Bonn,  
Germany  
E-mail: irpatchk@math.uni-bonn.de

## Employment:

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09/2016 – present: Postdoctoral researcher at the Department of Mathematics of the University of Bonn, Germany (Funded by the German Research Foundation Schwerpunktprogramm 1786 “Homotopy Theory and Algebraic Geometry”)  
09/2013 – 08/2016: Postdoctoral researcher at the Department of Mathematical Sciences of the University of Copenhagen, Denmark (within the Centre for Symmetry and Deformation)

## Education:

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10/2010 – 07/2013: PhD studies at the Department of Mathematics of the University of Bonn  
Doctoral fellow of the German Research Foundation Graduiertenkolleg 1150 “Homotopy and Cohomology”  
July 2013: Graduation: Dr. rer. nat.  
Thesis Title: *Rigidity in equivariant stable homotopy theory*  
10/2008 – 09/2010: Studies in Mathematics at the University of Bonn  
Qualifying fellow of the German Research Foundation Graduiertenkolleg 1150 “Homotopy and Cohomology”  
09/2004 – 08/2008: Studies in Mathematics at the I. Javakhishvili Tbilisi state University (Georgia)  
July 2008: Graduation: Bachelor of Mathematics  
Bachelor thesis: *Cubical resolutions and derived functors*

## Publications:

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- *Stable finiteness properties of infinite discrete groups*, (with N. Bárcenas and D. Degrijse), *Journal of Topology* **10** (2017), 1169-1196.
- *On exotic equivalences and a theorem of Franke*, *Bulletin of the London Mathematical Society*, **49** (2017), 1085-1099.
- *The derived category of complex periodic K-theory localized at an odd prime*, *Advances in Mathematics* **309** (2017), 392-435
- *Topological Hochschild homology and the cyclic bar construction in symmetric spectra*, (with S. Sagave), *Proceedings of the American Mathematical Society* **144** (2016), 4099-4106
- *Rigidity in equivariant stable homotopy theory*, *Algebraic & Geometric Topology* **16** (2016), 2159-2227
- *On the algebraic classification of module spectra*, *Algebraic & Geometric Topology* **12** (2012), 2329-2388
- *Cubical approach to derived functors*, *Homology, Homotopy and Applications*, **14** (2012), No. 1, pp.133-158

## Preprints:

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- *Comparing cyclotomic structures on different models for topological Hochschild homology*, (with E. Dotto, C. Malkiewich, S. Sagave and C. Woo), arXiv: 1707.07862
- *Rigidity and exotic models for  $v_1$ -local  $G$ -equivariant stable homotopy theory*, (with C. Roitzheim), arXiv: 1705.03855
- *Real topological Hochschild homology* (with E. Dotto, K. Moi, and S. Reeh), arXiv:1711.10226

## Conferences and workshops organized

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- June / July 2014: Young Topologists Meeting 2014,  
University of Copenhagen, Denmark
- November 2016: Hermitian K-theory and Trace Methods,  
Hausdorff Research Institute for Mathematics, Bonn, Germany

## Grants and funding:

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- 2017-2019: Shota Rustaveli Georgian National Science Foundation grant Ref. 217-614 (Key personnel)
- 2013-2015: Shota Rustaveli Georgian National Science Foundation grant DI/27/5-103/12 (Key personnel)

## Supervision:

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- Copenhagen: 2 Master theses, 2 Master project
- Bonn: 4 Bachelor theses (2 ongoing), 2 Master theses (ongoing)

## Teaching:

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- Copenhagen: Exercises in Formal groups and cohomology theories (Topics in Topology II) (Block 3, 2016)
- Stable homotopy theory (Topics in Topology) (Block 2, 2015-16)
- Exercises Categories & Topology (Block 1, 2015)
- K-theory (Block 4, 2015)
- Exercises Categories & Topology (Block 1, 2014)
- K-theory (Block 4, 2014)
- Exercises Categories & Topology (Block 1, 2013)
- Bonn: GRK 1150 graduate student seminar: Unstable homotopy theory (Summer term 2012, Bonn)
- Reading course on spectral sequences (Summer term 2011)
- Exercises Algebraic Topology I (Winter term 2010/2011)
- Exercises Topology II (Summer term 2010)
- Exercises Topology I (Winter term 2009/2010, Bonn)

## Selected talks and lecture series:

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- October 2017: *Lecture series on equivariant homotopy theory*  
Workshop on motivic and equivariant homotopy theory, University of Osnabrück, Germany
- 27.08.2015: *Geometric meaning of the virtual cohomological dimension of a group*  
Nordic Topology Meeting, KTH/University of Stockholm, Sweden
- 09.03.2015: *Proper equivariant stable homotopy and virtual cohomological dimension*  
Homotopy theory conference, Mathematisches Forschungsinstitut Oberwolfach, Germany
- 21.11.2014: *What is the geometric meaning of the virtual cohomological dimension of a group?*  
22th NRW Topology Meeting, University of Bonn, Germany
- 19.04.2013: *Rigidity in equivariant stable homotopy theory*  
19th NRW Topology Meeting, University of Osnabrück, Germany
- June 2011: *Mini course on Model categories*  
Algebra, Topology and Fjords, Summer School, Nordfjordeid, Norway

**Language Skills:**

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Georgian (native language), English (fluent), German (fluent), Russian (fluent), Danish (good).