

Curriculum Vitae

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Date of Birth: 14.08.1989

Education

07/2006 Abitur, Ratsgymnasium Osnabrück
10/2006 - 12/2010 Studies of Mathematics and Computer Science
Universität Osnabrück
12/2010 Diploma in Mathematics, Universität Osnabrück
Advisors: Oliver Röndigs, Manfred Stelzer.
On topological realisation at odd primes
01/2011 - 07/2014 Graduate studies in Mathematics, WWU Münster
research group 'Topology'
07/2014 Doctorate in Mathematics, WWU Münster
Advisor: Michael Joachim.
Twisted Spin Cobordism

Employment

10/2007 - 09/2010 Student assistant, Universität Osnabrück
01/2011 - 08/2014 Research assistant, WWU Münster
09/2014 - 08/2015 Research visitor, University of Notre Dame
10/2015 - 03/2017 Postdoctoral research fellow, Universität Bonn
04/2017 - 10/2023 Assistant professor (non tenure-track, akademischer Rat
auf Zeit), Universität Bonn
09/2017 - 03/2018 Substitute associate professor (Vertretung von W. Steimle,
W2), Universität Augsburg, on leave from Bonn

Awards

- 02/2008 - 12/2010 Scholarship, Studienstiftung des Deutschen Volkes
08/2014 Oberwolfach Leibniz Travel Grant
09/2014 - 08/2015 Scholarship, Deutscher akademischer Austauschdienst

Research Interests

Algebraic & Geometric Topology, Homotopical Algebra

Publications and Preprints

- 2011 S. Büscher, F. Hebestreit, O. Röndigs, M. Stelzer.
The Arone-Goodwillie spectral sequence for iterated loop spaces and topological realization at odd primes
Algebraic & Geometric Topology **13**, no. 1, pp. 127 - 169 (2013)
- 2013 F. Hebestreit, M. Joachim.
Twisted Spin cobordism and positive scalar curvature
Journal of Topology **13**, no. 1, pp. 1 - 58 (2020)
- 2016 F. Hebestreit, N. Perlmutter.
Stable moduli spaces of odd dimensional manifolds
Advances in Mathematics **353**, no. 7, pp. 526 - 590 (2019)
- 2017 F. Hebestreit, M. Land, W. Lück, O. Randal-Williams.
A vanishing theorem for tautological classes of aspherical manifolds
arXiv:1705.06232 (submitted)
- 2019 F. Hebestreit, S. Sagave, C. Schlichtkrull.
Multiplicative parametrized homotopy theory via symmetric spectra in retractive spaces.
arXiv:1904.01824 (submitted)
- F. Hebestreit, S. Sagave.
Homotopical and operator algebraic twisted K-theory.
arXiv:1904.01872 (submitted)

In preparation

- expected \leq 2019 F. Hebestreit, M. Land, G. Laures.
A highly structured refinement of Ranicki's signature square

F. Hebestreit, M. Land, G. Laures.

The two E_∞ -structures on \mathcal{G}/Top

B. Calmès, E. Dotto, Y. Harpaz, F. Hebestreit, M. Land, K. Moi, D. Nardin, T. Nikolaus, W. Steimle.

Real algebraic K-theory of stable ∞ -categories

F. Hebestreit, W. Steimle.

Stable moduli spaces of hermitian forms

expected ≤ 2020

F. Hebestreit, S. Stolz

Q_0 -acyclic \mathcal{A}_1 -modules and their Ext-groups

F. Hebestreit, N. Perlmutter.

Stable stability for diffeomorphism groups of odd-dimensional manifolds

Organised Meetings

- 10/2013 organised Summer School ‘Field theories, conformal nets and Kac-Moody groups’, with Alan Carey, Michael Joachim & Daniel Kasprowski
Speakers: André Henriques, Nitu Kitchloo & Stephan Stolz
- 06/2014 organised Summer School ‘Surgery and its applications in geometry’, with Daniel Kasprowski
Speakers: Diarmuid Crowley, Frank Quinn, Oscar Randal-Williams & Thomas Schick
- 12/2017 organised Conference ‘Second Bavarian Geometry and Topology meeting’, with Markus Land
- 09/2019 organised Workshop ‘Automorphisms of manifolds’, with Wolfgang Lück
Speakers: Alexander Berglund, Alexander Kupers, Oscar Randal-Williams, Tadayuki Watanabe, Michael Weiss, Thomas Willwacher

Research Visits of at least two weeks

- 04/2013 with Stefan Stolz at the University of Notre Dame
- 02/2014 - 03/2014 with Stefan Stolz at the University of Notre Dame
- 12/2015 with Michael Joachim at WWU Münster
- 04/2016 with Nathan Perlmutter at Stanford University
- 08/2018 - 10/2018 Research program ‘Homotopy harnessing higher structures’ at the Newton Institute, University of Cambridge

- 03/2019 with Ulrike Tillmann at the University of Oxford
- 08/2020 - 10/2020 with Søren Galatius at the University of Copenhagen (planned)

Invited Talks

- 10/2013 *Twisted spin cobordism*, Conference ‘Twists, generalised cohomology and applications’, WWU Münster
- 08/2014 *Twisted spin Cobordism*, Conference ‘Analysis, Geometry and Topology of positive scalar curvature’, Mathematisches Forschungsinstitut Oberwolfach
- 09/2016 *Stable moduli spaces of odd dimensional manifolds*, Conference ‘OAC-manifolds meeting’, University of Cambridge
- 11/2016 *Stable moduli spaces of odd dimensional manifolds*, Conference ‘26th NRW topology meeting’, Universität Osnabrück
- 06/2017 *A vanishing theorem for tautological characteristic classes of aspherical manifolds*, ‘Topology and Analysis in Interaction’, Scuola Normale Superiore di Pisa
- 08/2017 *Characteristic classes of manifold bundles*, Mathematical Colloquium, Universität Augsburg
- 08/2017 *A vanishing theorem for tautological characteristic classes of aspherical manifolds*, ‘Topology in Ecuador’, Universidad San Francisco de Quito
- 12/2018 *The homotopy types of algebraic cobordism categories*, Conference ‘Manifolds’, University of Cambridge
- 04/2019 *The homotopy types of algebraic cobordism categories*, Lecture series, University of Oxford

Seminar talks Augsburg, Bochum(3), Bonn, Cambridge, Cardiff, Chicago, Copenhagen, Johns Hopkins, Minnesota, Münster(4), Notre Dame(2), Oregon, Osnabrück(2), Oxford, Regensburg(3), Stanford, Stockholm, Wuppertal

Teaching

Bonn: Lecture courses: Algebraic Topology II (with T. Nikolaus), Mathematics for Geoscientists, Introduction to

	higher categories Seminars: Real Divisionalgebras, Characteristic classes Exercise courses: Linear Algebra I, II (J. Franke), Introduction to Algebra (J. Franke), Topology II (D. Kasproski)
Augsburg:	Lecture course: Algebraic Topology Seminars: Representations of finite groups, The space of positive scalar curvature metrics
Münster:	Seminars: Platonic and Archimedean Solids (with U. Hartl), Hodge Theory (with M. Joachim) Exercise courses: Algebraic Topology I, II, III (C. Ausoni), Complex Analysis II, III (M. Joachim)
Osnabrück:	Student assistant: Algebra (2, H. Brenner, R. Vogt), Mathematics II (T. Römer), Real and Applied Analysis (2, P. Meyer Nieberg), Analysis (R. Vogt), Complex Analysis (R. Vogt), Precourse (2, H. Brenner, T. Römer), Number theory (R. Vogt), Discrete Mathematics (T. Römer), Geometry (W. Bruns)

Supervision

Bachelor theses:	Annette Lutz, <i>The theorem of Dold and Kan</i> (Bonn, 2019)
Master theses:	Thorben Kastenholz, <i>Homological Stability for embedded surfaces</i> (Bonn, 2017) Franziska Salzberger, <i>Harer's stability theorem</i> (Augsburg, 2018) Sil Linskens, <i>Dualising bifibrations</i> (Bonn, expected 2020) Dimitris Oikonomou, <i>Parametrised homotopy theory</i> (Bonn, expected 2020)

References

Søren Galatius
University of Copenhagen, galatius@math.ku.dk

Wolfgang Lück
University of Bonn, wolfgang.lueck@him.uni-bonn.de

Thomas Nikolaus
University of Münster, nikolaus@uni-muenster.de