

Martin Speirs

Kirkebjergvaenget 5
4330 Hvalsoe, Denmark
☎ (+45) 424 50 424
✉ speirs@math.ku.dk
🌐 speirs.sites.ku.dk

Employment

- 2019-2021 **Postdoc**, *UC Berkeley*.
2019 **Postdoctoral fellow**, *Mathematical Sciences Research Institute*, Berkeley, CA, USA.
Derived algebraic geometry program, spring semester

Research papers

1. **On the K -theory of truncated polynomial algebras, revisited.**, Accepted *Advances in Mathematics*. *arXiv:1901.10602*.
2. **On the K -theory of coordinate axes in affine space.**, Submitted, *arXiv:1901.08550*.

Education

- 2015-2018 **PhD**, *University of Copenhagen*, Advisor: Prof. Lars Hesselholt.
2017 **Visiting student researcher**, *University of California, Berkeley*.
Spring of 2017 I was at Berkeley visiting Prof. Martin Olsson
2015 **MSc. in Mathematics**, *University of Copenhagen*, Advisor: Dr. Kristian Jonsson Moi.
2012-2013 **Visiting student**, *University of California, Berkeley*.
2012 **BSc. in Mathematics**, *University of Copenhagen*, Advisor: Ass. Prof. Søren Jøndrup.

Talks delivered

- 2019 **The K -theory of truncated polynomial algebras and coordinate axes**, *Regensburg*.
2019 **The K -theory of truncated polynomial algebras without any tears**, *Copenhagen*, Gong show at SYM center 10 year celebration.
2019 **The K -theory of truncated polynomial algebras and coordinate axes**, *MSRI*, *Derived Algebraic Geometry seminar*.
2019 **The K -theory of truncated polynomial algebras and coordinate axes**, *Stockholm University*, *Algebra and Geometry Seminar*.
2018 **Algebraic K -theory of coordinate axes**, *Copenhagen*, *Algebra and Topology Seminar*.

- 2017 **Topological Hochschild homology and Witt vectors**, *Stanford, Student Topology Seminar.*
- 2017 **Topological Hochschild homology**, *Berkeley, Derived Algebraic Geometry Seminar.*
- 2017 **The de Rham-Witt complex**, *Berkeley, Number Theory Seminar.*
- 2017 **Witt vectors, semirings and total positivity**, *Berkeley, Student Arithmetic Geometry Seminar.*
- 2016 **Introduction to Tate algebras**, *Copenhagen, Berkovich seminar.*
- 2016 **Topological Hochschild homology and Witt vectors**, *Nagoya, PhD seminar.*
- 2016 **Andre-Quillen homology and the cotangent complex**, *University of Copenhagen, Derived Algebraic geometry seminar .*
- 2014 **Colloquium talk on Homotopy Type Theory**, *University of Copenhagen.*

Attended conferences and workshops

- 2019 **Euro Talbot 2019**, *Algebraic K-theory, Rheinböllen, Germany.*
- 2019 **Derived algebraic geometry and its applications**, *MSRI.*
- 2019 **Arizona Winter School 2019**, *Topology and Arithmetic, Tucson, Arizona.*
- 2018 **Arbeitsgemeinschaft on Topological Cyclic Homology**, *Oberwolfach.*
- 2017 **Workshop on Motivic and Equivariant Homotopy Theory**, *University of Osnabrück .*
- 2017 **Arizona Winter School in Arithmetic Geometry**, *University of Arizona in Tucson.*
Perfectoid Spaces
- 2016 **Winter School on Bordism, L-theory, and Real Algebraic K-theory**, *University of Regensburg.*
- 2016 **Hermitian K-theory and trace methods**, *Hausdorff Institute, Bonn.*
- 2016 **Motives and Derived Algebraic Geometry**, *University of Duisberg-Essen.*
- 2016 **Arithmetic Geometry and Topological Cyclic Homology**, *University of Copenhagen.*
- 2016 **Recent developments in Integral p-adic Hodge Theories**, *University of Bonn.*
- 2015 **Algebraic structures of Hochschild complexes**, *University of Copenhagen.*

- 2014 **Vienna Summer of Logic**, *Vienna*.
- 2013 **Summer school on Representation Theory**, *The Gulbenkian Foundation, Lisbon*, Lisbon, Portugal .
- 2011 **Summer school on Experimental Mathematics**, *University of Copenhagen*.

Organizing and service

- 2019 **Study Group Leader at Arizona Winter School 2019**, *For Matthew Morrow's lectures on THH*.
<http://swc.math.arizona.edu/aws/2019/>
- 2018 **Reporter for the Arbeitsgemeinschaft on Topological Cyclic Homology**, *Report available here*.
<https://www.mfo.de/occasion/1814>
- 2017 **Stable homotopy theory and p-adic Hodge theory**, *University of Copenhagen*, Co-organizer.
<http://www.math.ku.dk/english/research/conferences/2017/stable-homotopy/>
- 2016 **Young Topologists Meeting 2016**, *University of Copenhagen*, Co-organizer.
<http://www.math.ku.dk/english/research/conferences/2016/ytm2016/>

Teaching experience

- 2010-2017 **Teaching Assistant**, *University of Copenhagen*.
- Introduction to Mathematics (2010, 2011, 2015, 2016, 2017)
 - Linear Algebra (2010 and 2011)
 - Philosophy of Science and Mathematics (2014)
 - Algebra 2, Ring Theory (2014 and 2015)
- Autumn 2013 **Academic Trainee**, *University of California, Berkeley*.
- Trainee under supervision of Professor Thomas Scanlon. I attended an introductory course in model theory, given by Professor Scanlon. During the course I wrote a comprehensive set of notes, available online at math.berkeley.edu/~scanlon.

Awards and scholarships

- 2019-2021 **International Postdoc**, *Independent Research Fund Denmark*, \$204,000.
- 2012-2013 **Visiting student**, *University of California, Berkeley*.
I was supported by the following scholarships.
- Julie Damms Study Foundation (\$1850)
 - Julie Marie Vinter Hansens Travel Grant (\$1850)
 - Augustinus Foundation (\$2800)

Theses

- PhD **On the algebraic K -theory of coordinate axes and truncated polynomial algebras**, *Defended November 2018*.
- MSc **Model categories; with a view towards rational homotopy theory**, *Defended September 2015*.

BSc **Representation Theory of Finite Groups and Group Rings, with a Proof of Burnside's $p^a q^b$ -Theorem**, *Defended 2012.*

Languages and Computer Skills

Danish Fluent
English Fluent
Spanish Proficient
French Beginner
Proficient \LaTeX , MAPLE