Scott Schmieding

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Department of Mathematics

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RESEARCH INTERESTS

Information

Symbolic dynamics, algebraic K-theory, topological dynamics, ergodic theory,

aperiodic tilings

EDUCATION University of Maryland

Ph.D. in Mathematics, May 2016

• Dissertation Topic: Strong shift equivalence, algebraic K-theory, isolating zero-dimensional dynamics on manifolds

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• Advisor: Mike Boyle

Montana State University

M.S. in Mathematics, May 2010 B.S. in Mathematics, May 2008

EMPLOYMENT 2019 - present University of Denver, Visiting Assistant Professor

2016 - 2019 Northwestern University, RTG Postdoctoral Fellow

Winter 2017 University of Copenhagen, Visiting position

PUBLICATIONS Mike Boyle, Scott Schmieding, Dynamics of isolated invariant sets, in preparation.

Yair Hartman, Bryna Kra, Scott Schmieding, The stabilized automorphism group of a subshift, preprint, arXiv:2001.09530

Scott Schmieding, Rodrigo Treviño, Random substitution tilings and deviation phenomena, preprint, arXiv:1902.08996.

Scott Schmieding, Kitty Yang, *The mapping class group of a minimal subshift*, to appear, Colloquium Mathematicum, arXiv:1810.08847.

Scott Schmieding, Automorphisms of the shift: Lyapunov exponents, entropy, and the dimension representation, to appear, Ergodic Theory and Dynamical Systems, https://arxiv.org/abs/1803.04060.

Scott Schmieding, Rodrigo Treviño, Traces of random operators associated with self-affine Delone sets and Shubin's formula, Annales Henri Poincaré, 19 (2018), no. 9, 2575–2597.

Scott Schmieding, Rodrigo Treviño, Self affine Delone sets and deviation phenomena, Communications in Mathematical Physics, 357(3), (2018) 1071–1112.

Mike Boyle, Scott Schmieding, Strong shift equivalence and algebraic K-theory, to appear, Journal für die reine und angewandte Mathematik (Crelle's Journal),

arXiv:1501.04695.

Mike Boyle, Scott Schmieding, Finite group extensions of shifts of finite type: K-theory, Parry and Livšic, Ergodic Theory and Dynamical Systems 37 (2017), no. 4, 1026–1059.

Mike Boyle, Scott Schmieding, Strong shift equivalence and the generalized Spectral Conjecture for nonnegative matrices, Linear Algebra and its Applications, Volume 498, (2016) 231–243.

Marcy Barge, Johannes Kellendonk, Scott Schmieding, Maximal equicontinuous factors and cohomology for tiling spaces, Fund. Math. 218 (2012), 243–267.

Conference Talks

Symbolic dynamics and the stable algebra of matrices, Minicourse (joint with Mike Boyle) for G2D2 2019 (August 2019).

The stabilized automorphism group of a subshift, Symbolic Dynamical Systems, CMO-BIRS (May 2019).

The stabilized automorphism group of a shift of finite type, 2019 Maryland Workshop on Dynamical Systems (April 2019).

The mapping class group of a minimal subshift, AMS Special Session on Symbolic Dynamics (January 2019).

Automorphisms of the shift: Lyapunov exponents and the dimension representation, Midwest Dynamical Systems Conference (November 2017).

Isolating zero-dimensional dynamics on manifolds, Special Session on Zero Dimensional Dynamics (October 2016).

Gähler and Anderson-Putnam Complexes, Mathematisches Forschungsinstitut Oberwolfach (October 2015).

Dynamics of isolated invariants sets, Rocky Mountain Dynamical Systems Conference, Provo, Utah (June 2015).

Strong shift equivalence and algebraic K-theory, Special Session on Number Theory in Ergodic Theory and Dynamical Systems, Georgetown University (March 2015).

Strong shift equivalence of matrices over a ring, Semi-annual Workshop in Dynamical Systems and Related Topics, Penn State (October 2013).

Isolating dynamics on manifolds, Carolina Dynamics, University of North Carolina (April 2013).

Maximal equicontinuous factors and cohomology for tiling spaces, Special Session on Tilings, Substitutions, and Bratteli-Vershik Transformation, George Washington University (March 2012).

CONFERENCE CO-ORGANIZATION

January 2018 - AMS JMM - Special Session on Dynamical Systems: Smooth, Symbolic, and Probability.

January 2020 - AMS JMM - Special Session on Symbolic Dynamics. June 2020 - AIMS Conference, Special Session on Symbolic Dynamics.