

JESSE PETERSON

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Vanderbilt University Mathematics Department
1326 Stevenson Center, Nashville, TN 37240
jesse.d.peterson@vanderbilt.edu

Education

PhD in Mathematics at UCLA, June 2006.

Advisor: Prof. Sorin Popa.

Dissertation title: 1-cohomology and rigidity in II_1 factors.

Bachelor of Science from Westmont College (USA), May 2001.

Academic Employment

Assistant Professor - Vanderbilt University

2008 to current.

NSF Postdoctoral Fellow - UC Berkeley

2006 to 2008.

Scientific mentor: Vaughan Jones.

Instructor - UCLA.

Spring 2004.

Teaching Assistant - UCLA.

Fall 2002 to Summer 2004.

Honors and Awards

NSF Grant DMS-1201565, Vanderbilt University, 2012-2015.

Alfred P. Sloan Research Fellowship, Vanderbilt University, 2009-2013.

NSF Grant DMS-0901510, Vanderbilt University, 2009-2012.

NSF Math. Sci. Postdoctoral Research Fellowship, UC Berkeley, 2006-2008.

Clay Mathematics Institute Liftoff Fellowship, UC Berkeley, Summer 2006.

UCLA Dissertation Year Fellowship, UCLA, 2005-2006.

NSF-VIGRE Fellowship, UCLA, 2001-2002, 2004-2005.

Students

- Thomas Sinclair, Ph.D. in 2011, Vanderbilt University (joint advisor Dietmar Bisch).

Publications and preprints

- D. Creutz, J. Peterson: *Rigidity for characters on lattices and commensurators*, arXiv.org: 1311.4513, preprint 2013.
- H. Li, J. Peterson, K. Schmidt: *Ergodicity of principle algebraic group actions*, arXiv.org: 1312.3098, preprint 2013, accepted to Contemporary Mathematics.
- J. Peterson, A. Thom: *Character rigidity for special linear groups*, arXiv.org: 1303.4007, preprint 2013, accepted to J. Reine Angew. Math. (Crelle's Journal).
- D. Creutz, J. Peterson: *Stabilizers of ergodic actions of lattices and commensurators*, arXiv.org: 1303.3949, preprint 2012.
- J. Peterson: *Examples of Group actions which are virtually W^* -superrigid*, arXiv.org: 1002.1745, preprint 2010.

- I. Chifan, J. Peterson: *Some unique group-measure space decomposition results*, Duke Mathematical Journal **162** (11), 1923-1966 (2013).
- J. Peterson, T. Sinclair: *On cocycle superrigidity for Gaussian actions*, Ergodic Theory and Dynamical Systems **32** (1), 249-272 (2012).
- J. Peterson, A. Thom: *Group cocycles and the ring of affiliated operators*, Invent. Math. **185** (3), 561-592 (2011).
- J. Peterson: *L^2 -rigidity in von Neumann algebras*, Invent. math. **175**, 417-433 (2009)
- A. Ioana, J. Peterson, S. Popa: *Amalgamated Free Products of w -Rigid Factors and Calculation of their Symmetry Groups*, Acta Math. **200**, No. 1, 85-153 (2008).
- J. Peterson: *A 1-cohomology characterization of property (T) in von Neumann algebras*, Pacific Journal of Math. **243**, No. 1, 181-199 (2009)
- J. Peterson, S. Popa: *On the notion of relative property (T) for inclusions of von Neumann algebras*, J. Funct. Anal. **219**, no. 2, 469-483 (2005).

Conferences and Seminars Organized

- Co-organizer: The Twelfth Annual NCGOA Spring Institute at Vanderbilt University, May 2-8, 2014.
- Co-organizer: Arbeitsgemeinschaft: Superrigidity, at Mathematisches Forschungsinstitut Oberwolfach, March 30-April 5, 2014.
- Organizer of The Shanks Workshop on von Neumann Algebras and Ergodic Theory at Vanderbilt University, April 27-28, 2013.
- Co-organizer: NCGOA Spring Institute (on von Neumann algebras), at Vanderbilt University, May 10 - 19, 2010.
- Co-organizer: Concentration Week on Operator Spaces and Approximation Properties of Discrete Groups, Texas A&M University, August 3-5, 2009.
- Co-organizer: Subfactor seminar, Vanderbilt University, 2008-current.

Recent Invited Talks

- January 13-17, 2014 - 2014 NZMRI Summer School: Operator Algebras (lecture series), at Te Anau, New Zealand.
- August 25-31, 2013 - C^* -Algebren, at Mathematisches Forschungsinstitut Oberwolfach, Germany.
- August 18-24, 2013 - Group theory, measure, and asymptotic invariants, at Mathematisches Forschungsinstitut Oberwolfach, Germany.
- July 22-26, 2013 - Workshop on Analytic, Stochastic, and Operator Algebraic Aspects of Noncommutative Distributions and Free Probability, at The Fields Institute, Canada.
- July 15-19, 2013 - Subfactors in Maui 2013, at University of Hawai'i, Maui College.
- July 8-12, 2013 - Von Neumann Algebras and Measurable Group Theory, at Katholieke Universiteit Leuven, Belgium.
- June 17-28, 2013 - Rigidity and group actions (lecture series), at Institut de Mathématiques de Jussieu, France.
- June 10-14, 2013 - Workshop on Operator Spaces, Harmonic Analysis and Quantum Probability, at Instituto de Ciencias Matemáticas, Spain.
- May 20 - June 9, 2013 - Harmonic Analysis and Quantum Information theory (lecture series), at Instituto de Ciencias Matemáticas, Spain.
- September 23, 2012 - 15th Workshop: Non-commutative Harmonic Analysis, at Stefan Banach International Mathematical Center, Poland.
- September 15-16, 2012 - Wabash Extramural Modern Analysis Miniconference, at Indiana University-Purdue University Indianapolis.
- July 16-20, 2012 - Subfactors in Maui, at University of Hawai'i Maui College.
- June 17-22, 2012 - Descriptive Set Theory and Functional Analysis, at Banff International Research Station, Canada.