

# Curriculum Vita

## *Alan Wiggins*

### Employment

- Assistant Professor • University of Michigan-Dearborn, 2009-present
- Assistant Professor • Vanderbilt University, 2007-2009
- Assistant Professor • Texas A&M University, Summer 2007

### Education

- PhD • Mathematics, 2007, Texas A&M University, College Station, TX  
Advisor: Roger Smith
- BA • Mathematics/Philosophy, 1999, Indiana University, Bloomington, IN

### Research Interests

- I study von Neumann algebras, which can be thought of as the proper setting for “noncommutative” measure theory. In particular, I study factors, those algebras with trivial multiplicative center. These include the  $n \times n$  matrices as well as the bounded linear operators on an infinite dimensional Hilbert space, but also additional objects known as type  $\text{II}_1$  factors. Type  $\text{II}_1$  factors are infinite dimensional but possess a tracial state like the normalized trace on the  $n \times n$  matrices. I analyze normalizing algebras of von Neumann subalgebras of factors, with emphasis on the situations where the normalizing algebras are trivial (equal to the subalgebra) and when the center of the algebra in question is either as large or as small as possible. I have also done work on the spatial isomorphism conjecture of Kadison and Kastler and have recently begun forays into Composition Operators on the Hardy Space.

## Papers

- **Strong Singularity of Singular Masas in  $\text{II}_1$  Factors**, with Allan Sinclair, Roger Smith, and Stuart White.  
*Illinois Journal of Mathematics*, 51(4):1077-1084, 2007
- **Semi-Regular Masas of Transfinite Length**, with Stuart White  
*International Journal of Mathematics*. 18(9):995-1007, 2007
- **Normalizers of Irreducible Subfactors**, with Roger Smith and Stuart White  
*Journal of Mathematical Analysis and Applications*, 352(2):684-695, 2009
- **Groupoid Normalizers of Tensor Products**, with Junsheng Fang, Roger Smith, and Stuart White  
*Journal of Functional Analysis*, 258(1):20-49, 2010
- **Strong Singularity for Subfactors**, with Pinhas Grossman  
*Bulletin of the London Mathematical Society*, 42(4):607-620, 2010
- **A Remark on the Similarity and Perturbation Problems**, with Jan Cameron, Erik Christensen, Roger Smith, Allan Sinclair, and Stuart White  
*C. R. Math. Acad. Sci. Soc. R. Can.*, to appear.
- **Type  $\text{II}_1$  Factors Satisfying the Spatial Isomorphism Conjecture**, with Jan Cameron, Erik Christensen, Roger Smith, Allan Sinclair, and Stuart White  
*Proc. Natl. Acad. Sci. USA*, Vol. 109, no. 50, 2012, pp. 20338-20343.

## Research and Professional Development

### *Invited Talks*

- **Products of Composition Operators with their Adjoints**, Analysis Seminar, November 2012, Wayne State University, Detroit, MI

### *Conferences*

- **Close  $\text{II}_1$  Factors**, Operator Spaces, Quantum Probability, and Applications, June 2012, Wuhan University, Wuhan, China

## Service

### *Departmental*

- Colloquium Organizer, 2011-present
- Website Committee (Chair), 2010-present
- Scholarship Committee (Chair), 2011-present
- Al Turfe Lecture Series Committee, 2012-present
- Technology in the Calculus Sequence Committee, 2012

### *College*

- CASL Tech Committee, 2010-present
- Online Learning Advisory Committee, 2012-present

## Personal Information

Citizenship    • US

Languages      • English, conversational Serbo-Croatian, French (reading)

## Contact Information

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                  4901 Evergreen Road  
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