

Adam Salminen

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University of Evansville
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Education

- **The Ohio State University** Columbus, OH
PhD Mathematics August, 2005
 - Advisor: Dr. Markus Linckelmann
 - Dissertation: *On the sources of simple modules in nilpotent blocks*
- **The Ohio State University** Columbus, OH
MS Mathematics August, 2003
- **Michigan State University** East Lansing, MI
BS Mathematics May 1999

Research Interests

- commutative algebra; specifically homomorphically finite rings and modules, residual properties in rings and modules
- representation theory of finite groups; specifically the modular representation theory of finite groups, nilpotent blocks, source algebras of blocks

Current Position

- **Associate Professor** University of Evansville
Courses taught listed below August 2006 - present
 - Assistant Professor 2006-2012

Previous Positions

- **Lecturer** The Ohio State University
Courses taught listed below September 2005 - August 2006
- **Graduate Teaching Assistant** The Ohio State University
Courses taught listed below September 1999 - August 2005

Grants, Honors & Fellowships

- College of Arts and Science Dean's Teaching Award, University of Evansville, April 2018
- NSF, S-STEM grant (\$999,932) (pending)
- Ball Venture Fund Grant for starting the Computational Problem Solving Lab, (\$25,000) (pending)
- Sadelle and Sydney Berger Award for Service, University of Evansville, August 2017
- Co-PI, NSF Funded S-STEM Grant No. 1258767, (\$610,000), 2013-2019
- Funding to attend group representation theory workshop at Mathematical Sciences Research Institute, 2008
- Inducted Kappa Mu Epsilon honor society, April 2007
- SGA VIGRE fellowship (The Ohio State University), Spring 2005, Autumn 2004
- Grant to attend group representation theory workshop from the Bernoulli Center at the École Polytechnique Fédérale de Lausanne, April 2005

Publications

- Refereed Publications
 - *Residually small commutative rings* (with Greg Oman), Journal of Commutative Algebra, 25 pages (to appear).
 - *Residual smallness in commutative algebra* (with Greg Oman), Communications in Algebra, **46** (2018), 2109-2122.
 - *Polynomial and power series rings with finite quotients* (with Greg Oman), Houston Journal of Mathematics, **43**(2017), no. 1, 31-38.
 - *Game show shenanigans: Monty Hall meets mathematical logic* (with Greg Morrow and Greg Oman), Elem. Math. **71**(2016), no. 4, 145-155.
 - *Modules which are isomorphic to their factor modules* (with Greg Oman), Communications in Algebra **41**(2013), no. 4, 1300-1315.
 - *On modules whose proper homomorphic images are of smaller cardinality* (with Greg Oman), Canadian Mathematical Bulletin **55** (2012), no. 2, 378-389.
 - *Endo-permutation modules arising from the action of a p -group on a defect zero block*, Journal of Group Theory **12** (2009), no. 2, 201-207.
 - *On the sources of simple modules in nilpotent blocks*, Journal of Algebra **319** (2008), no. 11, 4559-4574.
- In Progress
 - *Small and residually small modules*, (preprint, 10 pages)
- Problems posed
 - Problem #1096 (with Greg Oman) College Math Journal **48** (2017), no. 2, p. 138.
 - Problem #12010 (with Greg Oman) American Mathematical Monthly **124** (2017), no. 10, p. 971

– Problem #2043 (with Greg Oman) *Mathematics Magazine* **91** (2018), no. 2, p. 151.

- Dissertation

- *On the sources of simple modules in nilpotent blocks*, Ph.D. Dissertation, The Ohio State University, August 2005.

Presentations

- *Homomorphic and residual smallness in commutative algebra*, University of Wisconsin Whitewater, March 10, 2017.
- *Polynomial and power series rings with finite quotients*, Joint Mathematics Meeting of the AMS-MAA, Atlanta, GA, January 7, 2017.
- *Applications of vectors in geometry and algebra*, Multivariate Mathematics Workshop, Evansville, IN, July 14, 2016.
- *Residual properties in commutative algebra*, SUNY Buffalo State College, April 22, 2016.
- *Cardinality and commutative ring theory: How do small factors influence structure?*, Metron, Reston, VA, February 18, 2016.
- *Residually small rings and modules*, Joint Mathematics Meeting of the AMS-MAA, Seattle, WA, January 8, 2016.
- *Residual smallness in commutative algebra*, Fall Meeting of the Indiana section of the MAA, Purdue University North Central, October 17, 2015.
- *The Mathematics of Numb3rs*, University of Evansville Mathematics Department movie night, January 21, 2011.
- *On modules whose proper homomorphic images are of smaller cardinality*, Joint Mathematics Meeting of the AMS-MAA, New Orleans, LA, January 9, 2011.
- *Permutation groups and the Rubik's cube*, Signature School math club, October 6, 2010.
- *Modules which are isomorphic to their factor modules*, Ohio State-Denison Ring Theory Conference, The Ohio State University, May 22, 2010.
- *Generalizing some problems of Kaplansky*, Spring Meeting of the Indiana section of the MAA, Franklin College, April 9, 2010.
- *Defect zero blocks acted on by p -groups for $p \geq 5$* , Ohio State-Denison Group Theory Conference, The Ohio State University, May 17, 2008.
- *Permutation Groups and Lloyd's Puzzle*, Kappa Mu Epsilon Initiation Banquet, University of Evansville, April 15, 2008.
- *Endo-permutation modules arising from the action of a p -group on a defect zero block*, Ohio State Group Theory Seminar, The Ohio State University, May 18, 2007.
- *Endo-permutation modules arising from the action of a p -group on a defect zero block*, Zassenhaus Group Theory Conference, Saint Louis University, March 17, 2007.

- *On the sources of simple modules in certain blocks*, Joint Mathematics Meeting of the AMS-MAA, New Orleans, LA, January 7, 2007.
- *Triangulated functors and Verdier localization*, Ohio State working group on triangulated categories, The Ohio State University, May 5 and 12, 2006.
- *On the sources of simple modules in nilpotent blocks*, Ohio State-Denison Group Theory Conference, The Ohio State University, May 21, 2006.
- *A look at the Feit-Thompson odd order theorem*, Buckeye Grad Student Seminar, The Ohio State University, Spring 2004.

Workshops, Seminars and Conferences

- Data Science: Computation and Visualization, Grinnell, IA, June 11-13, 2018.
- Indiana-MAA, Spring Meeting, Valparaiso University, Valparaiso, IN, March 23-24, 2018 (brought students).
- Joint Mathematics Meetings of the AMS-MAA, San Diego, CA, January 10-13, 2018.
- Transforming STEM Higher Education: Discovery, Innovation, and the Value of Evidence, San Francisco, CA, November 2-4, 2017.
- Great Lakes Analytics in Sports Conference, University of Wisconsin, Stevens Point, WI, July 13, 2017.
- Joint Mathematics Meetings of the AMS-MAA, Atlanta, GA, January 4-7, 2017.
- Multivariate Mathematics Workshop, University of Evansville, Evansville, IN, July 14th, 2016 (co-organizer with Dave Dwyer and Rebekah Robinson).
- Indiana-MAA, Spring Meeting, Franklin College, Franklin, IN, March 18-19, 2016 (brought students).
- Joint Mathematics Meetings of the AMS-MAA, Seattle, WA, January 6-9, 2016.
- Indiana-MAA, Fall meeting, Purdue University North Central, Westville, IN, October 17, 2015.
- Joint Mathematics Meetings of the AMS-MAA, San Antonio, TX, January 10-13, 2015.
- Transforming STEM Education: Inquiry, Innovation, Inclusion and Evidence, San Diego, CA, October 31-November 2, 2013.
- Indiana-MAA, Fall meeting, University of Southern Indiana, Evansville, IN, October 26, 2013.
- Rose-Hulman Undergraduate Mathematics Conference, Rose-Hulman University, Terre Haute, IN, April 19-20, 2013 (brought students).
- Joint Mathematics Meetings of the AMS-MAA, San Diego, CA, January 9-12, 2013.
- Indiana-MAA Spring meeting, Indiana Wesleyan University, Marion, IN, April 8-9, 2011 (brought students).
- Joint Mathematics Meetings of the AMS-MAA, New Orleans, LA, January 6-9, 2011.
- Millikin Undergraduate Mathematics Research Conference, Millikin University, Deatur, IL, November 6, 2010 (brought students).

- Ohio State-Denison Group and Ring Theory Conference, The Ohio State University, Columbus, OH, May 21-23, 2010.
- Indiana-MAA Spring meeting, Franklin College, Franklin, IN, April 9, 2010 (brought students).
- 12th Annual Legacy of R.L. Moore Conference, Austin, TX, July 16-18, 2009.
- Indiana-MAA Spring meeting, IUPUI, Indianapolis, IN, March 20-21, 2009 (brought students).
- Indiana-MAA Fall meeting, Rose-Hulman Institute of Technology, Terre Haute, IN, October 25, 2008 (brought students).
- Indiana-MAA Spring meeting, St. Mary's College, Notre Dame, IN, March 28-29, 2008 (brought students).
- Ohio State-Denison Group Theory Conference, The Ohio State University, Columbus, OH, May 16-18, 2008.
- Introductory Workshop on the Representation Theory of Finite Groups, Mathematical Sciences Research Institute, Berkeley, CA, February 4-8, 2008.
- Illiana Undergraduate Mathematics Research Conference, Wabash College, Crawfordsville, IN, October, 2007 (brought students).
- Indiana-MAA Spring meeting, University of Indianapolis, Indianapolis, IN, March 23-24, 2007 (brought students).
- Zassenhaus Group Theory Conference, Saint Louis University, St. Louis, MO, March 16-18, 2007.
- Joint Mathematics Meetings of the AMS-MAA, New Orleans, LA, January 5-8, 2007.
- Young Mathematicians Conference, The Ohio State University, Columbus, OH, August 4-6, 2006.
- Conference on Groups, VOAs and Related Structures, in Honor of Koichiro Harada, The Ohio State University, Columbus, OH, June 12-14, 2006.
- Ohio State-Denison Group Theory Conference, The Ohio State University, Columbus, OH, May 19-21, 2006.
- Working Group on Triangulated Categories, The Ohio State University, Columbus, OH, Spring 2006.
- Joint Mathematics Meetings of the AMS-MAA, San Antonio, TX, January 12-15, 2006.
- Group Theory Seminar, studying a paper on approach to p -local finite groups by Aschbacher and Chermak, The Ohio State University, Columbus, OH, Autumn 2005.
- Young Mathematicians Conference, The Ohio State University, Columbus, OH August 12-14, 2005.
- Workshop, endo-permutation modules, Bernoulli Center, École Polytechnique Fédérale de Lausanne, Lausanne Switzerland, April 11-13 2005.
- Workshop, topology and representation theory, Bernoulli Center, École Polytechnique Fédérale de Lausanne, Lausanne Switzerland, April 4-8 2005.
- Group Theory Seminar, The Ohio State University, Columbus, OH, Fall 2004-Spring 2005.
- VIGRE Professional Development Seminar, The Ohio State University, Columbus, OH, Spring 2004.
- VIGRE Algorithms for Groups and Their Applications Working Group, The Ohio State University, Columbus, OH, Fall 2002.

Service and Memberships

- Co-Director University of Evansville, NSF funded Science and Math Scholarship (SAMS) program, fall 2013-present.
- Mathematics department communication committee, Chair 2017-present.
- Mathematics department assessment committee, spring 2011-present, Chair 2013-present.
- University of Evansville Academic Services Committee, fall 2015-present, Chair 2016-present.
- University of Evansville Curriculum Committee, fall 2010-2013, fall 2014, fall 2016-present.
- University of Evansville Eykamp Center for Teaching excellence faculty mentor, fall 2015-present.
- Referee for “Missouri Journal of Mathematical Sciences”, 2016
- University of Evansville Mathematics Faculty Search Committee, 2015-2016
- University of Evansville Faculty Athletics Committee, fall 2011, fall 2012-fall 2015, Chair 2013-2014.
- University of Evansville Dean of Arts and Science search committee, 2012-2013.
- University of Evansville Mathematics Faculty Search Committee, Chair 2012-2013.
- Committee for new BS in mathematics, Chair spring 2011-2012.
- Supervised internship for math education major at Bosse High School, spring 2011, fall 2011.
- Judge for undergraduate poster session, Joint Mathematics Meetings of the AMS-MAA, New Orleans, January 8, 2011.
- Judged papers for MESCON, University of Evansville, March 2010 and March 2011.
- Co-organizer (with Dr. Erin Davis and Dr. Chris Tweddle) for AMC preparation seminar, fall 2009-fall 2013.
- Refereed papers for two volumes of “Contemporary Mathematics” Published by the AMS, spring 2007 and spring 2009.
- Recruitment/Scholarship Day Committee, fall 2008-present.
- Math Recognition Banquet Committee, fall 2008-present, Chair Fall 2010-2014.
- Co-Organized (with Dr. Mohammad Azarian) University of Evansville students to compete in the Indiana College Mathematics competition, spring 2007-present.
- Grader for Indiana College Mathematics Competition, spring 2007 and 2008.
- Predoctoral Committee, spring 2007-present.
- Math Club faculty advisor, spring 2007-present.
- Corresponding Secretary for Kappa Mu Epsilon, spring 2007-present.
- UE organizer for the Virginia Tech Regional Mathematics Competition and the Putnam Exam, fall 2006-present.
- Elementary Mathematics Education committee, fall 2006.

- Member AMS fall 1999-present.
- Graduate Student Representative, Graduate Studies Committee, The Ohio State University, fall 2004-spring 2005.
- Algebra Qualifying Exam Workshop Mentor, helped first year graduate students study finite fields and group theory, winter 2004, summer 2003.

Courses Taught

- Advanced Calculus, University of Evansville.
- Abstract Algebra, University of Evansville.
- Elementary Number Theory, University of Evansville.
- Excelling in Math and Science, University of Evansville.
- Independent Study in second semester of Abstract Algebra, University of Evansville.
- Discrete Mathematics, University of Evansville/The Ohio State University.
- Independent Study on Permutation Puzzles and Permutation Groups, University of Evansville.
- Calculus I, II, III, University of Evansville/The Ohio State University.
- Differential Equations, University of Evansville.
- Linear Algebra, University of Evansville.
- College Algebra, University of Evansville.
- Survey of Calculus, University of Evansville.
- Math and Science and the Environment, University of Evansville. (co-taught)
- Excelling in Math and Science, University of Evansville.
- Independent Study on Topology, University of Evansville.
- Teaching College Mathematics for Graduate Students, The Ohio State University (served as Master Teacher).
- Discrete Mathematics, The Ohio State University
- Calculus I and II with Mathematica, The Ohio State University (teaching assistant/lecturer).
- Algebra and Trigonometry and Their Applications, The Ohio State University (teaching assistant/lecturer).
- Mathematical Analysis for Business II, III, The Ohio State University.
- Accelerated Calculus I, II, The Ohio State University (teaching assistant).
- Calculus with review I, II, III, The Ohio State University (teaching assistant).

References

- Dave Dwyer, Professor and Chair (teaching reference), Department of Mathematics
University of Evansville, (812-488-2632, dd4@evansville.edu)
- Markus Linckelmann, Professor, Department of Mathematics
City University London, (44 (0)20 7040 8459, markus.linckelmann.1@city.ac.uk)
- Greg Oman, Associate Professor, Mathematics Department
University of Colorado, Colorado Springs, (719-255-3515, goman@uccs.edu)
- Joyce Stamm, Associate Professor, Biology Department
University of Evansville, (812-488-2029, js383@evansville.edu)
- Erin Davis, Associate Professor (teaching reference), Department of Mathematics
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