

September 22, 2014

Alex Bailey

CONTACT	Email: alex.bailey@soton.ac.uk Web: http://www.soton.ac.uk/~ab2005
RESEARCH INTERESTS	Algebraic semigroup theory, actions of semigroups, representation theory of monoids, category theory, module theory, computational algebra.
EDUCATION	PhD in Mathematics, University of Southampton, 2013. Thesis: <i>Covers of acts over monoids</i> , Supervisor: James Renshaw. MMath, First Class Honours, University of Southampton, 2009. Dissertation: <i>Elliptic Curves and Applications in Cryptography</i> , Supervisor: Christopher Voll
AWARDS	The Mathematics Research Fellowship, University of Southampton, Oct 2012 - Sep 2013.
PUBLICATIONS AND PREPRINTS	<ol style="list-style-type: none">1. <i>Covers of acts over monoids and pure epimorphisms</i> (with J. Renshaw), Proc. Edinburgh Math. Soc. Vol. 57, (2014) pp. 589–617.2. <i>Covers of acts over monoids II</i> (with J. Renshaw), Semigroup Forum Vol. 87, (2013) pp. 257–274.3. <i>Covers for S-acts and Condition (A) for a monoid S</i> (with V. Gould, M. Hartman, J. Renshaw and L. Shaheen), Glasgow Math. Journal, to appear (preprint).4. <i>Weak factorization systems for S-acts</i> (with J. Renshaw), Semigroup Forum Vol. 89, (2014) pp. 52–67.5. <i>A short note on strongly flat covers of acts over monoids</i> (with J. Renshaw), preprint.6. <i>Subsemigroup, ideal and congruence growth of free semigroups</i> (with M. Finn-Sell and R. Snocken), preprint.
SELECTED SEMINARS	Invited speaker <i>York Semigroup Seminar</i> , 18th January 2012. <i>9th North British Semigroups and Applications Network</i> , Manchester, 30th August 2011. <i>15th North British Semigroups and Applications Network</i> , Manchester, 24th July 2013. Contributed talks <i>Workshop on Semigroups - in memory of John Howie</i> , Lisbon, 25th May 2012. <i>83rd Workshop on General Algebra</i> , Novi Sad, 17th March 2012. <i>Groups and Semigroups: Interactions and Computations</i> , Lisbon, 27th July 2011.
EVENT ORGANISATION	Joint organiser of <i>12th NBSAN</i> , Edinburgh, 23rd July 2012. Joint organiser of <i>Pure Postgraduate Seminar Series</i> , Southampton, 2010-2011
TEACHING EXPERIENCE	University of Southampton, 2009-2012 Teaching assistant and coursework marker for several undergraduate courses: Number Theory (MATH1001), Linear Algebra I (MATH1048), Linear Algebra II (MATH1049), Calculus I (MATH1050), Calculus II (MATH1051), Group Theory (MATH2003), Analysis (MATH2039), Groups and Modules (MATH3077), Further Number Theory (MATH3078), Algebraic Topology (MATH3080). Mathematics help class for Engineers. Personal tuition to mathematics undergraduates.
REFERENCES	Available on request.