

Titles of past theses

Below is a list of PhD theses submitted by the students of the School of Mathematics.

Thesis library (http://etheses.bham.ac.uk/cgi/search/advanced?order=-date%2Fcreators_name%2Ftitle&_action_search=Reorder&screen=Public%3A%3AEPrintSearch&exp=0%7C1%7C-date%2Fcreators_name%2Ftitle%7Carchive%7C-%7Cdepartment%3Adepartment%3AALL%3AIN%3AMathematics%7C-%7Ceprint_status%3Aeprint_status%3AALL%3AEQ%3Aarchive%7Cmetadata_visibility%3Ametadata_visibility%3AALL%3AEX%3Ashow)

2011

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Name	Degree	Title
Abo-Zaid Ghada	PhD Statistics	Individual patient data meta-analysis of prognostic factor studies
Bassi Rachan	PhD Applied Mathematics	Absolute instability in curved liquid jets
Che Dzul Kifli Syahida	PhD Pure Mathematics	Chaotic dynamical systems
Keen Philip	PhD Pure Mathematics	Independent sets in some classical groups of dimension three
Morris Thomas	PhD Pure Mathematics	Nilpotent injectors in finite groups
Schlueter Martin	PhD Management Maths	Nonlinear mixed integer based optimization technique for space applications
Wang Gehao	PhD Pure Mathematics	Genus zero systems for primitive groups of affine type

2010

Name	Degree	Title
Abuelela Waleed	PhD Pure Mathematics	Hardy-type inequalities for non-convex domains
Ghatei Davoud	MPhil(B) Pure Mathematics	The Octonions
Harrison Samuel	PhD Pure Mathematics	Control of oscillatory convolution operators via maximal functions in weighted L2 inequalities
Henke Ellen	PhD Pure Mathematics	Minimal fusion systems
Hodgskiss Joseph	PhD Management Maths	Optimisation models and algorithms for multicast message routing and power control in wireless multihop networks
McInroy Justin	PhD Pure Mathematics	A family of biaffine geometries and their resulting amalgams
Mycroft Richard	PhD Pure Mathematics	The regularity method in directed graphs and hypergraphs
Tam Kin	PhD Management Maths	Optimising and approximating eigenvectors in max-algebra
Wong Tin Lok	PhD Pure Mathematics	Initial segments and end extensions of models of arithmetic

2009

Name	Degree	Title
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Astill Sarah	PhD Mathematics	Odu characterisations of almost simple groups: 3-local and character theoretic methods
Atapattu Arachchille Chamila	MPhil(B) Pure Mathematics	Universal completions of cyclic amalgams of the same type
Coolley Oliver	PhD Pure Mathematics	Embedding problems for graphs and hypergraphs
Curtiss Geoffrey	PhD Mathematics	Non-linear,non-spherical bubble dynamics near a a two fluid interface
Farah Ali	MPhil(B) Applied Maths	Generalized and quadratic eigenvalue problems with Hermitian matrices
Ghufran Syed	MPhil(B) Applied Maths	The computation of matrix functions in particular, the matrix exponential
Gurney Christopher	PhD Applied Mathematics	The stability and control of curved liquid jet break-up
Hussain Zahir	PhD Applied Mathematics	Stability and transition of three-dimensional rotating boundary layers
Iqbal Raja	MPhil(B) Applied Maths	Computation of the nodes and weights for gaussian quadratur rule by using Jacobi's method
Kelly Luke	PhD Pure Mathematics	On cycles in directed graphs
Lu I-Chen	MPhil(B) Management Maths	Robust portfolio optimization
Naegele Philipp	PhD Management Maths	An infeasible-path-following algorithm for nonlinear multiobjective optimisation problems
Ogilvy Iver	PhD Mathematics	Fluid dynamics of underwater explosions
Semeraro Jason	MPhil(B) Pure Mathematics	ZJ - type theorems for fusion systems
Sosa Paz Carlos	PhD Mathematics	Numerical optimisation methods for power consumption in multi-hop mobiles phones networks
Sprittles James	PhD Applied Mathematics	Dynamic wetting / dewetting processes in complex liquid-solid systems
Tong Viet Hung	PhD Pure Mathematics	Rank 3 permutation characters and maximal subgroups
Tsonev Dragomir	MPhil(B) Pure Mathematics	Simple lie algebras and their classifications

2007-2008

Name	Title	Degree
Al Dhafeeri, S	Characters of multiply transistive groups	PhD Mathematics
Aminu, A	Max-algebraic linear systems and programs	PhD Mathematics
Badger, M	Braid orbits on primitive permutation groups of degree 8 and 16	MPhil(B) Pure Mathematics
Bailey, A	Almost everywhere convergence of dyadic partial sums of Fourier series for almost periodic functions	MPhil(B) Pure Mathematics
Borio Penalzoa, S	Algebra in non standard models	PhD Mathematics
Boston, E	Effects of incorporating toxic constraints to predictions of optimal chemotherapy scheduling	PhD Applied Mathematics
Cerval-Pena, ER	Automated formative computer-aided assessment with ordinary differential equations	MPhil(B) Math Education
Culverhouse, N	The hydrodynamic stability of crossflow vortices in Bodewadt boundary layer	PhD Applied Mathematics

Dokka, TVS	Reachability of a steady state	MPhil(B) Management Mathematics
Fairbairn, B	On the symmetric generation of finite groups	PhD Pure Mathematics
Fallatah, A	Coxeter groups	MPhil(B) Pure Mathematics
Fellows, JM	Some novel exactly soluble potentials related to the harmonic and isotonic oscillators	MPhil(B) Applied Mathematics
Li, S	Rank reversal properties of multicriteria decision making models	MPhil(B) Management Mathematics
Mohsin, M	Kuzmak's method for the two-dimensional navier-stokes equations	MPhil(B) Mathematics
Monro, HC	The incorporation of non-linear tumour growth models within the simulation of chemotherapy protocol scheduling	PhD Mathematics
Montenegro Villota, A	Usability of websites	MPhil(B) Management Mathematics
Wakeley, P	Optimisation and properties of gamete transport	PhD Applied Mathematics
Wang, G	Elementary number theory, group theory and graph $X^{p,q}$	MPhil(B) Pure Mathematics

2006-2007

Name	Title	Degree
Andrews, J	Long slender solid oxide fuel cells	PhD Mathematics
Chan, E	Testing constancy of regression quantiles using generalised sign test	PhD Mathematics
Collings, T	Acoustic cavitation in sonochemistry	PhD Applied Mathematics
Dhanao, H	Flexural - Gravity waves and second harmonic waves	MPhil(B) Applied Mathematics
Grammatika, M	Transport phenomena associated with complex fluid in microfluidics	MPhil(B) Mathematics
Lin, L	Centrifugal instability of wake dominated curved compressible mixed layers	PhD Mathematics
Marshall, A	Construction of prognostic models in the presence of missing covariate data	PhD Mathematics
Morris, TBS	Topics in Group Theory	MPhil(B) Mathematics
Shuib, A	The multi-level and threshold-based heuristics for the vehicle routing problem with time windows	PhD Mathematics
Uddin, J	An investigation into methods to control breakup and droplet formation in single and compound liquid jets	PhD Mathematics
Young, A	Studies in algebraic combinatorics	PhD Pure Mathematics

2005-2006

Name	Title	Degree
Allsup, J	On groups and initial segments in nonstandard models of Peano arithmetic	PhD Mathematics
Brown, S	Dynamics of oscillating bubbles	PhD Mathematics
Cao, J	Histogram estimation of hazard rate function	MPhil(B) Mathematics
Clelland, M	Towards a classification of saturated fusion systems over a Sylow p -subgroup of $SL_3(p^n)$	PhD Mathematics
Cox, BJ	New models for multilateral mode semiconductor lasers	PhD Applied Mathematics
Fenlon, J	Stochastic modelling of functional response data	PhD Mathematics

Fowler, R	Spherical nilpotent orbits in positive characteristic	PhD Pure Mathematics
Fowler, R	A 3-local characterization of the Thompson sporadic simple group	PhD Pure Mathematics
Lewis, S	On the best principal submatrix problem	PhD Management Mathematics
Parker, T	Sarkovskii's theorem and chaotic dynamical systems	MPhil(B) Pure Mathematics
Partridge, L	An experimental and theoretical investigation into the break-up of curved liquid jets in the prilling process	PhD Applied Mathematics
van Gans, M	Topics in trivalent graphs	PhD Mathematics
Whyte, S	Symmetric generation: Permutation images and irreducible monomial representations	PhD Mathematics
Yu, XZ	Variable neighbourhood search for portfolio optimization	PhD Mathematics

2003-2005

2004-2005

Name	Title	Degree
Al-Roqi, AM	Finite soluble groups generated by a conjugacy class and their fitting height	PhD Mathematics
Baffa, AB	Mathematical investigation of the planar-flow spin casting process	PhD Applied Mathematics
Barracough, RW	Some calculations related to the Monster Group	PhD Mathematics
Bate, ME	The number of homomorphisms from finite groups to classical groups	PhD Mathematics
Gomez Cano, MC	Computational Methods for simple Amalgams applied to (Sym (3), Sym (5)) Amalgams	PhD Mathematics
Haynes, L	Monotonizations of Countable Paracompactness	PhD Mathematics
Mafahi, NI	Theory of explosions and detonations for a three-step chain-branching chemistry model	PhD Mathematics
Ndam, J	Fluid Mechanics Associated with a Detached Retina	MPhil(B) Applied Mathematics
Nickerson, SJ	An atlas of characteristic zero representations	PhD Mathematics
Shaw, AJ	Coalescence of two liquid volumes	PhD Mathematics
Smith, DJ	Modelling muco-ciliary transport in the lung	PhD Applied Mathematics
Yao, J	Chaos-based digital communication systems: Evaluation and optimization	PhD Mathematics

2003-2004

Name	Title	Degree
Al-Khedhairi, A	A vertex p-centre problem: heuristics and exact algorithms	PhD Mathematics
Allen, DJ	The boundary element method and its application to ocular fluid flow	PhD Mathematics
Bradley, JD	Symmetric presentations of two sporadic groups	PhD Mathematics
Goodwin, SM	Relative springer isomorphisms and the conjugacy classes in slow p-subgroups of chevalley groups	PhD Mathematics
Hiller, L	Evaluation of the statistical validation of questionnaires for use as outcome measures in clinical trials	PhD Mathematics
Im, MS	Nonstandard approach to Hausdorff measure theory and an analysis of some sets of dimension less than 1	MPhil(B) Pure Mathematics
Kirk, SP	Pressure singularities within surface tension driven flows	PhD Mathematics

Reyes-Montiel, C	Combining Ant System heuristics and exact methods for the problem of room allocation and university course timetabling	MPhil (Research) Mathematics
Sanderson, RM	Liquid bridges between spherical particles	PhD Mathematics
Simonidis, K	Travelling wave envelopes in parametrically excited surface waves	PhD Mathematics
Smithies, RG	Neural network Heuristics for Real-World Classification: an Application to Predict Cancer Recurrence	PhD Mathematics
Subiarto	An oil-water interface model in an oil reservoir	MPhil(B) Mathematics
Young, A	Studies in Algebraic Combinatorics	PhD Pure Mathematics
Zainuddin, Z	Constructive and tabu search heuristics for capacitated continuous location-allocation problem	PhD Mathematics

2001-2003

2002-2003

Name	Title	Degree
Adamson, F	Propagating reaction fronts in zirconia tubes	PhD Mathematics
Alghamdi, A	The ordinary weight conjecture and dades projective conjecture for p-blocks with an extra special defect group	PhD Mathematics
Amponsah, SK	An investigation of a class of capacitated arc routing problems: the collection of garbage in developing countries	PhD Mathematics
Cox, EJ	The source signature due to the close interaction of marine seismic airguns	PhD Mathematics
Hendren, S	Extra special defect groups	PhD Mathematics
Maroti, A	Permutation groups and representation theoretic invariants	PhD Mathematics
Morey, PS	The $(g_3, 2\ln)$ - and (g_3, g_n) - amalgams of characteristic 2 and critical distance 3	PhD Mathematics
Spanos, P	Sequence spaces with modulus functions, mapping theorems and statistical convergence	PhD Mathematics
Suckling, PM	The impact and spreading of a drop on a surface	PhD Mathematics
Tan, M	Extended Poisson process modelling of count data	MPhil(B) Statistics
Zychaluk, K	Application of noise in nonparametric curve estimation	PhD Mathematics

2001-2002

Name	Title	Degree
Currie, RH	Distribution management: an investigation into a full-load, multi-terminal, vehicle scheduling problem with backhauling and time windows	PhD Mathematics
Bagkavos, D	Bias reduction in non parametric hazard rate estimation	PhD Mathematics
Hardy, PD	Aspects of abstract and profinite group theory	PhD Mathematics
Pearson, A	Hydrodynamics of jet impact in a collapsing bubble	PhD Mathematics
Sun, Y	On degrees of alternating and special linear groups as quotients of triangle groups	PhD Mathematics
Tucker, HL	Mathematical modelling of the effects of condensation on glass	PhD Mathematics
Wade, AC	Constructive and ant system heuristics for a class of vehicle routing problem with backhauls	PhD Mathematics
Watson, CE	Instabilities of curved, heated mixing layers in meteorological systems	PhD Mathematics

1999-2001

2000-2001

Name	Title	Degree
Bolt, SW	Some applications for symmetric generation	PhD Mathematics
Cheung, CS	A financial package for minitab and a statistical analysis of exchange rates	MPhil(B) Statistics
Cole, TR	On the stability of fluid flows with variation in tow spatial coordinates	PhD Mathematics
Gamal, MDH	Constructive and GA-based heuristics for the continuous location-allocation problem	PhD Mathematics
Holmes, PE	Computing in the Monster	PhD Mathematics
Llewellyn, JD	Presburger arithmetic and pseudo-recursive saturation	PhD Mathematics
Orme, BA	Biological mixing and chaos	PhD Mathematics
Wallwork, IM	The trajectory and stability of a spiralling liquid jet	PhD Mathematics

1999-2000

Name	Title	Degree
Castelluccio, A	CMT-automorphisms of F_n	PhD Mathematics
Cooper, RJ	Flow and reaction in solid oxide fuel cells	PhD Mathematics
John, JL	An investigation into compliance and the rotating disc	PhD Mathematics
Kinns, DJ	Multiple case influence analysis with particular reference to the linear model	PhD Mathematics
Knapper, AP	Derivations on certain banach algebras	PhD Mathematics
Murfitt, L	Discrete event dynamic systems in max-algebra: Realisation and related combinatorial problems	PhD Mathematics
Petch, RJ	Constructive and population based heuristics for the vehicle routing problem with multiple trips	PhD Mathematics

1997-1999

1998-1999

Name	Title	Degree
Bovykin, AI	On order-types of models of arithmetic	PhD Mathematics
Covello, S	Minimal parabolic subgroups in the symmetric groups	PhD Mathematics
Welch, SB	The obnoxious facility location problem	PhD Mathematics

1997-1998

Name	Title	Degree
James, JC	The location of protection devices on electrical supply tree networks: Constructive and meta heuristic approaches	PhD Mathematics
Preece, S	Mathematical methods of chemical clock reaction diffusion and cement hydration	PhD Mathematics
Sarkies, JM	On stability of compression boundary layers	PhD Mathematics
Smith, MG	Subgroups of profinite groups	PhD Mathematics
Stanley, S	Monomial representations and symmetric presentations	PhD Mathematics
Turner, SJ	Thermal instabilities in the solar corona: The effect of a magnetic heating term	PhD Mathematics
Wilson, M	Mathematical modeling of bubble-vortex interactions	PhD Mathematics
York, JP	Finite axiomatisations of certain groups of lie type	PhD Mathematics

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