Curriculum Vitae Johannes Siemons

Personal Details

Name	Johannes Siemons
Address	16 Newmarket Road, Norwich NR2 2LA, Norfolk
University	School of Mathematics, University of East Anglia
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Present Position	Reader in Mathematics, UEA

Education

1976 – 79:	Imperial College London, European Exchange Scholarship awarded by Imperial College London and the German Government
1970 – 76:	Universität Heidelberg: Undergraduate studies in Physics and Mathematics
1961 – 70:	Markgrafen Gymnasium Durlach (Grammar School in Karlruhe) Greek Examination 1969, Abitur 1970

Academic Qualifications

1979:	PhD in Mathematics, University of London
1979:	Diploma of Imperial College London
1976:	Diplom in Mathematik und Physik (Sehr Gut), Universität Heidelberg

Research and Publications

Research Areas:	Combinatorics and Algebra: simplicial structures, permutation groups, designs and graph theory; Reconstruction and errors in graphs; Algebraic and topological Methods in combinatorics
Research Papers:	65 published papers, with several current papers pending or submitted

Professional Career, since 1983

1997 -	Reader in Mathematics, UEA
1993 - 97:	Senior Lecturer in Mathematics, UEA
1985 - 93:	Lecturer in Mathematics, UEA
1984 - 85:	Research Fellow, Institut für Wirtschaftsforschung und Wirtschaftspolitik, Universität Karlsruhe
1983 - 84:	Visiting Professor in Mathematics (CNR) at Università di Milano

February 2011

Visiting Positions since 2007

2010: Visiting Professor, Alfred Rényi Institute Budapest, Hungarian Academy of Science, two-month period funded by European Community

2007: Visiting Professor, Università Del Sacro Cuore at Brescia, and Università La Bicocca at Milan, funded through Consiglio Nazionale della Ricerca (CNR), May 2007

Research Students, since 2001

To date I have had 14 successful PhD students. They have been funded by Research Council grants, including the Italian CNR, the EPSRC of the United Kindgom and the Royal Thai Government. Recent PhD students since 2001 include

2008 - B. Summers, PhD funded by EPSRC, 'Regular Actions of Permutation Groups'

2006 - 10: S. Alder, PhD funded by EPSRC, 'An Introduction to q-Simplicial Complexes'

2006 - 10: T. Phongpattanacharoen, PhD funded by Royal Thai Government, ' Cayley Graphs and Reconstruction Problems'

2005 - 08: T. McKay, PhD funded by EPSRC, 'On a Conjecture of Foulkes'

2003 - 07: D. Smith, PhD funded by EPSRC, 'Simplicial Homology and Group Representations'

2001 - 05: H. Treacher, PhD UEA 2006, funded by a grant from the Leverhulme Foundation, 'On the Reconstruction Index of Permutation Groups of Frobenius Type'

Grants, since 1997

My research has attracted funding from national (Royal Society, EPSRC, LMS) and international agencies, including the Italian CNR and the Deutsche Forschungsgemeinschaft. I am engaged as Principal Investigator in competitive bids and collaborations. Successful grant applications have included

2004 - 05: 'On the Structure of Kernels and Applications to Reconstruction', LMS/Leverhulme grant as PI, for V Mnukhin to visit UEA for 5 months

2001 - 04: 'On the Reconstruction Index of Permutation Groups' Leverhulme Foundation as PI, grants for one 3-year PDRA and one PhD studentship

1997 - 98: 'Modular Homology', NATO/Royal Society Fellowship as PI, for V Mnukhin to visit UEA for 15 months

Recent Unfunded Proposals as PI include: 'Combinatorics and Representations of q-Complexes' (2009) 130 k£; 'Reconstruction in Graphs and Partially Ordered Sets', (2005) Royal Society Joint International Project, 12 k£; 'Regular Components of Permutation Representations', (2004) EPSRC Standard Research Proposal, 144 k£.

International Invitations and Lectures, since 2004

2010 - 15: Program and Project Assessor in Mathematics (Algebra), Scienze Matematiche, Università di Padova.

2009 - 10: Visiting Researcher at Alfred Rényi Institute Budapest, Hungarian Academy of Science for three periods in 2009-2010, funded by European Community. Work on Efficient Reconstruction.

Some Intersection Problems in Cayley Graphs, Invited Lecture at Renyi Institute, Budapest May 2010.

2010: Editorial Board, Journal of Combinatorial Designs, Wiley Publishers New York, for the period 2010-15

'Permutation Representations of Finite Simple Groups: Orbits of Cyclic Subgroups', Topics in Algebra: in Honour of Alex Zalesskii, Milan May 2009, invited main speaker

2008 – : European External Examiner, *Scuola di Dottorato di Ricerca in Scienze Matematiche,* at Università di Padova, various periods in 2008-10

'Some GL(n,q) Representations from Grassmannians', invited lecture at Jiao Tong University, Shanghai, Mai 2008

'Root and Groups', Invited Graduate Lecture Course at Jiao Tong University, Shanghai

'Foulkes and Schur-Weyl Duality', invited seminar at Oxford University

'Conjectures on Plethysm', invited lecture at Università di Padova, April 2008

'Teachers' Concepts of Proof', two invited papers, Faculty of Education, University of Cambridge

2007: *'On a Conjecture of Foulkes',* invited lecture at the University of Birmingham

2006: *'Progress in Reconstruction'*, invited lecture at Schloss Dagstuhl, Germany

2005: *'Rigid Homology'*, invited lecture at the Komaba Seminar, Tokyo University, Japan
'Topological Methods in Combinatorics', invited lecture, Zhejian University, Hangzhou

2004: *'Combinatorics',* Chair of Special Session at BMC 2004, Belfast

Administrative Experience

Internal administrative tasks have included appointments at School and University level, for instance Vice-Chair of the European Exchange Committee, Teaching Coordinator (School of Mathematics) and Chair of Examiners. Other significant projects were

2000 - 2002: Local and Organizing Committee of PME 26, International Group for Psychology of Mathematics Education at Norwich, with 600 participants

1991 - 1997: Coordinator and PI of the TEMPUS Project 'Discrete Mathematics and Applications' and various follow-up projects, the awards totalling well over 500.000 Euro. The project involved the universities of Eötvös Lorand Budapest, Queen Mary London, UEA Norwich, La Sapienza Rome, the Universities of Sofia, Veliko Turnovo (Bulgaria) and the Technical University of Braunschweig. It supported more than 20 young researchers and 20 graduate exchanges between the participating departments. The Inspectors of Commission of the European Community awarded the project an 'excellent' rating.

Publications, since 2002

[**46**] On the reconstruction index of permutation groups: Semiregular groups, (with P Maynard), *Aequationes Mathematicae* **64** (2002), 218–231.

[**47**] On modular homology of simplicial complexes: Saturation, (with VB Mnukhin), *Journal of Combinatorial Theory A* **98** (2002), 377–394.

[**48**] Regular orbits of cyclic subgroups in permutation representations of certain simple groups, (with A Zalesskii), *Journal of Algebra* **256** (2002), 611-625.

[**49**] On the Livingstone-Wagner Theorem (with VB Mnukhin), *Electronic Journal of Combinatorics*, **11.1** (2004) R29.

[**50**] Efficient reconstruction of partitions, (with P Maynard), *Discrete Mathematics*, **293** (2005) 205–211.

[**51**] Saturated simplicial complexes, (with V Mnukhin), *Journal of Combinatorial Theory A*, **109** (2005) 149–179.

[**52**] Reconstruction of partitions (with O Pretzel), Richard Stanley Festschrift, *Electronic Journal of Combinatorics*, **11(2)** (2005) N5.

[**53**] On the reconstruction index of permutation groups: general bounds, (with P Maynard), *Aequationes Mathematicae*, **70** (2005) 1-15.

[**54**] Solvable minimally transitive permutation groups, (with F dalla Volta), *Designs, Codes and Cryptography*, **44** (2007) 143–150,

[**55**] Corrigendum: Saturated simplicial complexes, (with V Mnukhin), *Journal of Combinatorial Theory*, **A14** (2007) 572–574.

[**56**] Reconstruction of permutations distorted by single transposition errors, (with E Konstantinova and V Levenshtein), Proceedings ISIT 2007, arXiv CO/ 0702191

[**57**] On error graphs and the reconstruction of elements in groups, (with V Levenshtein), *Journal of Combinatorial Theory,* Series A **116** (2009) 795–815.

[**58**] Permutation groups defined by unordered relations I, (with F dalla Volta), Ischia Group Theory 2008, World Scientific, (2009) 56–67.

[**59**] How do undergraduate students generate examples of mathematical concepts? (with P. Iannone, M. Inglis, J. Mejia-Ramos and K. Weber), in *33th Annual Conference of the International Group for Psychology in Mathematics Education,* **3** (2009) 217–224.

[**60**] On Orbit Equivalence and Permutation Groups Defined by Unordered Relations, 16p, (with F. Dalla Volta), Bulletin of the London Mathematical Society.

[**61**] Stretch Pattern Matching, 12 p, (with A. Apostolico, P. Erdös, I. Miklos), Journal of Discrete Algorithms.