Daniel J. Woodhouse

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EMPLOYMENT

Sept 2019 - **University of Oxford**
Glasstone Research Fellowship in Science
Senior Demyship, Magdalen College

2016 - 2019 **Technion - Israel Institute of Technology**
Postdoctoral Fellow. Mentor: Michah Sageev

EDUCATION

2012 - 2016 **McGill University**
PhD in Mathematics, Supervisor: Daniel T. Wise

2008 - 2012 **University of Warwick**
MMath (1st), Master's thesis: *The Serre-Leray Spectral Sequence*
Thesis Supervisor: Marco Schlichting

INTERESTS

Geometric group theory, CAT(0) cube complexes, low dimensional topology.

PUBLICATIONS

One-ended hyperbolic groups that are not weakly coHopfian, with E Stark, IMRN, 04 (2020)

Revisiting Leighton's theorem with the Haar measure, Math. Proc. Cambridge Philos. Soc., January 2020

Residually finite tubular groups, with N Hoda and D Wise, Proc. Royal Soc. Edinburgh: Section A Mathematics, 1-15.

Quasi-isometric groups with no common model geometry, with E Stark, 18 pages, J. Lond. Math. Soc. 99 (2019), no. 3, 853–871.

The geometry of one-relator groups satisfying a polynomical isoperimetric inequality, with Giles Gardam, Proc. Amer. Math. Soc. 147 (2019), no. 1, Pages 125–129

Classifying virtually special tubular groups, Groups Geom. Dyn. 12 (2018), no. 2, 679–702.

A generalized axis theorem for cube complexes, Algebr. Geom. Topol. 17 (2017), no. 5, 2737–2751.

The aTmenability of some graphs of groups with cyclic edge groups, with M. Carette, and D.T. Wise, Math. Proc. Cambridge Philos. Soc. 163 (2017), no. 1, 145–159.

A cubical flat torus theorem and the bounded packing property, with D.T. Wise, Israel J. Math. 217 (2017), no. 1, 263–281.

Classifying finite dimensional cubulations of tubular groups, Michigan Math. J. 65 (2016), no. 3, 511–532.

PREPRINTS

Alternative proof of ball-restricted version, with G. Gardam, 5 pages, Appendix to *Two Generalisations of Leighton's Theorem* by Sam Shepherd (arxiv: 1908.00830)

Action rigidity for free products of hyperbolic manifold groups, with E Stark, 22 pages, (arxiv: 1910.09609)

Quasi-isometric rigidity for graphs of virtually free groups with two-ended edge groups, with S. Shepherd, 53 pages (arxiv: 2007.10034)

SELECTED TALKS

June 2020	**ICMS**, Geometry and Topology online
February 2020	**University of Lincoln**, Algebra Seminar
February 2020	**École Normale Suprieure**, Group Theory Seminar
December 2019	**Mathematisches Institut der Universität München**, Geometry and Topology Seminar
October 2019	**University of Bristol**, Algebra and Geometry Seminar
September 2019	**University of Chicago**, Geometry and Topology Seminar
September 2019	**University of Utah**, Max Dehn Seminar
September 2019	**McGill**, GGT seminar
July 2019	**Technion**, Into the forest: group actions on trees and generalizations (summer school).
June 2019	**CIRM**, Aspects of Non-Positive and Negative Curvature in Group Theory, 5-minute short talk
May 2019	**Bar Ilan University**, GAGTA
May 2019	**WWU Mnster** , Geometric group theory seminar
December 2018	**Universitat Wien**, Geometry and analysis seminar
November 2018	**University of Haifa**, Geometry and topology seminar
October 2018	**University of Illinois at Chicago**, Geometry and topology seminar
October 2018	**Columbia University**, Geometry and topology seminar
October 2018	**Boston College**, Geometry and topology seminar
October 2018	**McGill University**, GGT seminar
July 2018	**University of Warwick**, Graphs, surfaces, and cube complexes (conference)
May 2018	**Haifa**, Israel. Nonpositively curved groups on the mediterranean (conference)
November 2017	**ETH Zurich**, Geometry Seminar
September 2017	**University of Regensberg**, Manifolds and Groups (conference)
March 2017	**Oxford Mathematical Institute**, Requested Short Talk at YGGT VI
January 2017	**Isaac Newton Institute, Cambridge**, Non-Positive Curvature in Action (conference)
September 2016	**Tufts**, GGTT seminar
March 2016	**Technion**, Geometry and Topology Seminar
March 2016	**Universite de Neuchâtel**, Seminaire Groupes et Analyse
March 2016	**University of Cambridge**, Seminar
March 2016	**University of Warwick**, Geometry and Topology Seminar
February 2016	**Université catholique de Louvain**, Seminar
December 2015	**CMS Winter meeting**, Montreal, Canada.
September 2015	**McGill University**, GGT seminar
March 2015	**University of Wisconsin**, Topology Seminar
June 2014	**CMS Summer meeting**, Manitoba
February 2014	**McGill University**, GGT seminar

TEACHING EXPERIENCE

	Oxford
Trinity 2020	Consultation sessions for Topology and Groups, Geometric Group Theory, and Infinite Groups
Hilary 2020	Class tutor for Geometric Group Theory
Michaelmas 2019	Class tutor for Topology and Groups
	Technion
Summer 2018	Co-supervised summer undergrad project
Fall 2017	Graduate Course: *CAT(0) Cube Complexes*
	McGill University
Summer 2016	Teaching assistant for *Calculus 2*
Fall 2015	Teaching assistant for *Calculus 2*
Summer 2013	Teaching assistant for *Calculus 2*
Winter 2013	Teaching assistant for *Calculus 2*
	University of Warwick
Winter 2012	Tutor for first year undergraduates
Fall 2011	Tutor for first year undergraduates

AWARDS

2019	Marie Sklodowska-Curie Actions Seal of Excellence
2012 - 2015	Hydro Quebec Scholarship award
2014 - 2015	ISM Scholarship
2015 - 2016	Schulich award - $CA 5,000
2016	Alexis & Charles Pelletier Fellowship - $CA 6,600
2019	Marie Curie fellowship application scored as high quality.

SERVICE

In 2020 I volunteered as a UNIQ+ academic mentor, a program designed to help mentor students from usually underrepresented groups apply for graduate programs at Oxford and elsewhere.

I have refereed for multiple journals including G&T, AGT, Topology, Illinois J. Math., The London Math. Soc., Israel Journal of Math, IMRN, and L'Enseign Math. I also write reviews for MathSciNet.

OTHER EXPERIENCE

I spent the summer of 2010 developing code in C for the FLINT number theory library as part of a summer undergraduate research project supervised by Dr William B. Hart. (www.flintlib.org/)

OTHER WRITING

I maintain a blog which features some math, but mostly a lot of travel writing. (www.nobigons.com)

I have written a couple of short satirical pieces for McSweeney's Internet Tendency. (https://www.mcsweeneys.net/authors/daniel-j-woodhouse)

CITIZENSHIP

British

REFERENCES

Prof. Daniel T. Wise (FRS)
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Prof. Michah Sageev
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Prof. Ruth Charney
Department of Mathematics, MS 050
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Prof. Daniel Groves
Department of Mathematics, Statistics, and Computer Science
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Prof. Marc Lackenby *(teaching)*
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