

Andrew H. Hoefel

CURRICULUM VITÆ

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EDUCATION

- Ph.D. Dalhousie University, Mathematics, August 2011 (pending approval).
Supervised by Dr. Sara Faridi.
Thesis entitled *Hilbert Functions of Monomial Algebras*.
- M.Sc. Dalhousie University, Mathematics, May 2007.
Supervised by Dr. Sara Faridi.
Thesis entitled *A Survey of Monomial Resolutions*.
- B.Math. University of Waterloo, Honours Pure Mathematics, June 2005.
Co-operative Program, Computer Science Minor.
With Distinction, Dean's Honours List.

AWARDS

- Postgraduate Scholarship**, NSERC, 2009 – 2011.
- Izaak Walton Killam Memorial Scholarship**, Dalhousie University, 2007 – 2011.
- President's Award**, Dalhousie University, 2007 – 2009.
- Professor Michael Edelstein Memorial Graduate Prize**, Dalhousie University, 2007.
- Graduate Student Scholarship**, Dalhousie University, 2005 – 2007.
- Undergraduate Student Research Award**, NSERC, Summer 2004.
- Senate Scholarship**, University of Waterloo, 2001 – 2005.

PAPERS

- A.H. Hoefel**, J. Mermin, *Squarefree Gotzmann Ideals*. arXiv:1010.3194.
- A.H. Hoefel**, *Gotzmann Edge Ideals*, to appear in Communications in Algebra. arXiv:0908.1946.
- C.A. Francisco, **A.H. Hoefel**, A. Van Tuyl, *EdgeIdeals: a package for (hyper)graphs*. The Journal of Software for Algebra and Geometry **1** (2009) 1-4.

TEACHING

Mathematics Instructor

Dalhousie University. Math 2030, Linear Algebra. 2008.

Tutorial Instructor

Dalhousie University. Math 1000 & Math 1010, Calculus I & II. 2006 – 2008.

Mathematics Tutor

Mathematics Resource Center, Dalhousie University. 2005 – 2010.

Computer Science Tutor

Instructional Support Group, University of Waterloo. Full-time duties included office hours, assignment and marking scheme construction, TA management, and teaching tutorials.

- Winter 2001 ◦ CS130, Introduction to Object Oriented Programming
- Fall 2001 ◦ CS114/130, Principles of Computer Science (Tutor/Practicum Instructor)
- Spring 2002 ◦ CS134, Principles of Computer Science
- Winter 2003 ◦ CS240, Data Structures and Data Management
- Fall 2003 ◦ CS134, Principles of Computer Science

Private Tutor

University of Waterloo's Office of Persons with Disabilities. 2002.

Volunteer Tutor

Halifax Community Learning Network. 2010.

Calculus Review Instructor

Dalhousie Mathematics and Statistics Graduate Society. 2006 – 2009.

TALKS

Gotzmann Squarefree Monomial Ideals,

AMS Special Session on Commutative Algebra and Algebraic Geometry, Syracuse University, Fall 2010, 20 min.

Gotzmann Graphs and Clutters,

East Coast Combinatorics Conference, Saint Mary's University, Spring 2010, 20 min.

Gotzmann Edge Ideals,

AMS Special Session on Graded Resolutions, Florida Atlantic University, Fall 2009, 20 min.

Gotzmann Edge Ideals,

Computational and Combinatorial Commutative Algebra Seminar, Cornell University, Fall 2009, 1 hr.

Betti Numbers of Chordal Edge Ideals,

APICS/AARMS Conference on Algebra and Combinatorics, University of New Brunswick, Fall 2007, 30 min.

Chordal Edge Ideals,

COCOA International School on Computer Algebra, Research Institute for Symbolic Computation, Summer 2007, poster.

Monomial Relations and Supported Resolutions,

Dalhousie Graduate Student Seminar, Fall 2006, 1 hr.

Betti Numbers of Edge Ideals,

Dalhousie Graduate Student Seminar, Spring 2006, 1 hr.

Extremal Graph Theory, Groups and Integer Equations,

University of Waterloo Combinatorics URA Seminar, Spring 2004, 30 min.

On Set Theory Axioms,

Mathematics Society of Waterloo SASMS, Winter 2002, 30 min.

CONFERENCES ATTENDED

AMS Sectional Meeting and Special Session on Commutative Algebra and Algebraic Geometry,

Syracuse University, October 2 – 3, 2010.

East Coast Combinatorics Conference,

Saint Mary's University, April 29 – 30, 2010.

Combinatorial Algebra meets Algebraic Combinatorics,

Queen's University, January 22 – 24, 2010.

AMS Sectional Meeting and Special Session on Graded Resolutions,

Florida Atlantic University, October 30 – November 1, 2009.

Combinatorial Algebra meets Algebraic Combinatorics,

Memorial University, January 16 – 18, 2009.

Route 81: Algebraic Geometry and Commutative Algebra,

Queen's University, October 18, 2008.

Macaulay 2 Workshop,

Snowbird Resort in Utah, June 28 – July 3, 2008.

Commutative Algebra: Connections with Algebraic Topology and Representation Theory,

University of Nebraska-Lincoln, May 18 – 22, 2008.

Combinatorial Algebra meets Algebraic Combinatorics,

Dalhousie University, January 18 – 20, 2008.

APICS & AARMS conference on Algebra and Combinatorics,

University of New Brunswick, October 12 – 14, 2007.

COCOA International School on Computer Algebra,

Research Institute for Symbolic Computation, June 18 – 22, 2007.

Valuation Theory and Integral Closures in Commutative Algebra,

University of Ottawa, July 3 – 22, 2006.

Workshop on Computational and Combinatorial Commutative Algebra,

The Fields Institute, July 24 – August 4, 2006.

Workshop on Combinatorial Inverse Systems,

The Field Institute, January 13 – 15, 2006.

DEPARTMENTAL SERVICE AND OUTREACH

Nova Scotia Math League,

Problem construction, Programming, Event Volunteer (2008 – 2009).

Lett Bursary Committee Member,

Department of Mathematics and Statistics (2007, 2010).

Dalhousie Mathematics and Statistics Graduate Society,

Computer Resource Representative (2006), President (2007), Vice-President (2008).