

Curriculum Vitae

Mark Clifford Hughes

Ph.D. Student
Department of Mathematics
Stony Brook University
Stony Brook, NY 11794-3651

Office: Math Tower 3-103
Telephone: (631) 849-2876
Email: hughes@math.sunysb.edu

Education:

- University of Waterloo – M.Math. (2008)
Pure Mathematics
- University of Calgary – B.Sc. (2006)
Applied Mathematics (First Class Honors)
Pure Mathematics (Minor)

Awards, Fellowships, and Recognition:

- N.S.E.R.C. Postgraduate Scholarship (9/2008 – 8/2010)
- N.S.E.R.C. Canada Graduate Scholarship (10/2008) – Declined
- N.S.E.R.C. Canada Graduate Scholarship (9/2006 - 8/2008)
- University of Waterloo President's Graduate Scholarship (9/2006 - 8/2008)
- Bachelor of Science with First Class Honors Distinction (6/2006)
- N.S.E.R.C. Undergraduate Student Research Award (5/2006 - 8/2006)
- N.S.E.R.C. Undergraduate Student Research Award (5/2005 - 9/2005)
- Medicine Hat College Student of the Year (9/2003 - 4/2004)
- Highest Standing in B.Sc. Program (Medicine Hat College) (4/2001)
- Governor General's Medal Recipient (7/2000)

Publications:

Geography of simply connected nonspin symplectic 4-manifolds with positive signature (with A. Akhmedov and B.D. Park). Submitted to the Journal of Symplectic Geometry. March 2009.

Branched covering constructions and the symplectic geography problem. University of Waterloo M.Math. Thesis. August 2008. <http://hdl.handle.net/10012/3857>

Triangles with common area and perimeter (with P. Zvengrowski). Preprint.

Talks and Seminar Contributions:

Branched Covering Constructions and the Symplectic Geography Problem. Masters Thesis presented to the University of Waterloo Pure Mathematics Department. July 2008.

Ricker discrete dynamical model with randomized perturbations. Paper presented at Student Research Seminar, University of Calgary. September 2005.

Models of the mechanics and dynamics of the tails in dinosaurs. Presentation given at the P.I.M.S. Industrial Problem Solving Workshop (with S. Bohun, M. Emmett, D. Henderson, E. Lushi, B. Monthubert, and R. Westbrook). May 2005.

A mathematical analysis of the threat of extinction for Sweden's wolf population from 1980 to 2001. Presentation given at P.I.M.S. Mathematical Modeling in Biology Workshop (with L. Gray). May 2005.

Conferences and Workshops Attended:

Floer Theory and Symplectic Dynamics – Centre de Recherches Mathématiques (held at Université de Montréal). May 2008.

The Stony Brook Dialogues in Mathematics and Physics (Yang & Simons Symposium) – Stony Brook University. March 2008.

Industrial Problem Solving Workshop – Pacific Institute for the Mathematical Sciences (held at the University of Calgary). May 2005.

Mathematical Modeling in Biology Workshop – Pacific Institute for the Mathematical Sciences (held at the University of Alberta). May 2005.

Teaching and Research Assistantships:

Teaching Assistant, University of Waterloo (2006 – 2008) – Calculus and linear algebra.

Research Assistant, University of Calgary (2006) – Researching topics related to affine connections in differential geometry. Supervised by Dr. P. Zvengrowski.

Research Assistant, University of Calgary (2005) – Researching discrete dynamical population models with random perturbations. Supervised by Dr. E. Braverman.