

ORTHO FLINT

Resume

RESEARCH INTERESTS

My relevant research is producing efficient algorithms for processing and analyzing massive (and possibly dynamic) networks as well as other complex systems.

EDUCATION

- Spring 2007 **Ph. D. in Mathematics**, University of Western Ontario, London, Canada.
THESIS: *The Master Array, a complete invariant for prime alternating links*
ADVISOR: Prof. Stuart A. Rankin
- Spring 2003 **Master of Arts (in Mathematics)**, University of Western Ontario, London, Canada.
TOPIC: *Knot theory*
ADVISOR: Prof. Stuart A. Rankin

EXPERIENCE AND EMPLOYMENT

- For 2011, I was privately funded to do research in machine learning (ML), for trading. Research in e-commerce for global peer to peer lending. Non-funded research and resolution of a major graph theoretic problem.
- Attended Industrial mathematical workshops throughout 2009/2010, and worked on problems ranging from graph comparing/similarity, graph kernels to financial problems and risk assessment.
- Postdoctoral Fellow at the University of Western Ontario, Canada, 2010.
- Instructor: Course 1228b (Finite math) for 200 plus first year social science students, Winter term 2009.
- Attended numerous Industrial mathematical workshops throughout 2008, and worked on problems ranging from semi conductor research to oncology, solving one problem in its entirety.
- Enumerated all the prime alternating knots and links at 24 crossings (around 500 billion) and enumerated all the oriented prime alternating knots and links at 24 crossings (around 2.5 trillion) in 40 hours distributed over 40 machines, Fall 2007.
- Instructor: Course 223b (Discrete Structures II) for computer science honour students, Winter term 2007.
- Enumerated all the prime alternating knots and links up to 23 crossings (around 100 billion) and enumerated all the oriented prime alternating knots and links up to 23 crossings (around 500 billion) in 19 days on a modern desktop, Fall 2006.
- Launched the new interactive website “Knotilus” for knot and link visualization and design, Fall 2006.
- Classified the knotted molecules made from synthetic DNA for Ned Seeman’s lab at New York University, Summer 2006.
- Launched the original interactive website “Knotilus” for knot and link visualization and design, Summer 2003.
- Researcher in Knot theory and Graph theory at the University of Western Ontario, Canada, Fall 2001 - present.
- Teaching Assistant at the University of Western Ontario, Canada, Fall 2001 - Fall 2006.

- Research Associate with Prof. Greg Reid at the University of Western Ontario, Canada, to devise algorithms for rooted tree constructions and enumeration, Summer 2001.
- Researcher in the Department of Applied Mathematics at the University of Western Ontario, Canada, unsupervised, Winter 2000.
- Researcher in the Department of Applied Mathematics at the University of Western Ontario, Canada, cryptography research, unsupervised, Spring and Summer 1999.
- Researcher in the Department of Applied Mathematics at the University of Western Ontario, Canada, algorithm for mapping n-cubes onto the plane, unsupervised, Summer 1998.
- Professional artist in Canada living in London Ontario, in United States living in New York, in Europe living in Budapest, Hungary.

PUBLICATIONS

Please see: <http://www.math.uwo.ca/~ortho/website.html>

SCHOLARSHIPS AND AWARDS

- **National Science and Engineering Research Council**
Canada Graduate Scholarship (Ph. D.) 2005-2007
- **National Science and Engineering Research Council**
Post Graduate Scholarship (Ph. D.) 2003-2004
- **National Science and Engineering Research Council**
Post Graduate Scholarship (Masters) 2002-2003
- **Faculty of Science Graduate Student Teaching Award**
The University of Western Ontario, 2005
- **Faculty of Science Graduate Student Teaching Award**
The University of Western Ontario, 2004

REFERENCES

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