

# Curriculum Vitae

## Matthew B. Young

---

- Address** Mathematics Department  
Stony Brook University  
Stony Brook, NY, USA  
11794-3651
- Phone: (519)-884-6960  
myoung@math.sunysb.edu  
www.math.sunysb.edu/~myoung
- Personal** Date of Birth: May 6, 1985  
Place of Birth: Kitchener, Ontario  
Citizenship: Canadian  
Languages: English, French
- Research Interests** Gauge theory and quantum field theory with applications to geometry and topology. Algebraic techniques in gauge theory.
- Education** **Ph.D. Mathematics, State University of New York at Stony Brook, Stony Brook, New York**  
*Aug. 2007-Present*  
Advisor: Dr. Michael Moshé  
NSERC fellow.
- B.Sc. Mathematical Physics with Distinction, Queen's University, Kingston, Ontario**  
*Sept. 2003-May 2007*  
Honours Thesis: "An Investigation of a Potential Spin Liquid State in a Frustrated Triangular Lattice"  
Advisor: Dr. Robert J. Gooding
- Publications** R.B. Mann and M.B. Young. "Perturbative Quantum Gravity Coupled to Particles in (1 + 1)-Dimensions," *Class. Quant. Grav.* **24**, 951 (2007).
- In Preparation** R.B. Mann, M.B. Young and I. Fuentes-Schuller. "A Perturbative Approach to Inelastic Collisions in a Bose-Einstein Condensate."
- Honours and Awards** NSERC Postgraduate Scholarship-Doctorate(2009-2012)  
NSERC Alexander Graham Bell Canada Graduate Scholarship  
(Declined, 2009-2012)  
NSERC Postgraduate Scholarship-Masters (2008)  
Renaissance Technologies Fellowship in Mathematics, Stony Brook (2007)  
Helmkay Scholarship in Mathematics, Queen's University (2006)  
Rattray Scholarship in Science, Queen's University (2006)  
NSERC Undergraduate Student Research Award, University of Waterloo (2006,2007)

## Matthew B. Young

---

NSERC Undergraduate Student Research Award, Canadian Institute for Theoretical Astrophysics (Declined, 2006)  
Dean's Scholar, Queen's University (2004-2006)  
Dean's Award, Queen's University (2004,2005)  
Dean's Scholarship in Applied Science, Queen's University (2003)

### Seminars and Presentations

"Equivariant Cohomology and Localization." Graduate Student Seminar, Stony Brook, Sept. 2009.  
"Supersymmetric Gauge Theories (Two lectures)." RTG Seminar in Geometry and Physics, Stony Brook, Nov. 2008.  
"Mathematical Foundations of Quantum Mechanics." MAT 648 Topics in Quantum Mechanics, Stony Brook, Sept. 2008.  
"Supersymmetric  $\sigma$ -Models (Three lectures)." RTG Seminar in Geometry and Physics, Stony Brook, Sept. 2008.  
"A Perturbative Approach to Inelastic Collisions in a Bose-Einstein Condensate." GWPI Poster Session, University of Waterloo, July 2007.  
"An Introduction to TQFT." Waterloo Symposium in Undergraduate Mathematics, University of Waterloo, June 2007.  
"An Introduction to Quantization." Seminar on Differential Geometric Methods in Mathematical Physics, Queen's University, Feb. 2007.  
"Bernstein's Theorem in Algebraic Geometry." MATH 413 Computational Commutative Algebra, Queen's University, Dec. 2006.  
"Geometric Mechanics and Partial Differential Equations." Canadian Undergraduate Mathematics Conference, McGill University, July 2006.

### Conferences Attended

AGNES Workshop: Algebraic Geometry Northeastern Series, Stony Brook, Oct. 2009.  
RTG Graduate Summer School in Geometry of Quantum Fields and Strings, University of Pennsylvania, June 2009.  
Workshop and Conference on Topological Field Theories, Northwestern University, May 2009.  
Connections in Geometry and Physics, Perimeter Institute for Theoretical Physics, May 2009.  
Workshop on Topology and Physics, Drexel University, Sept. 2008.  
Motives, Quantum Field Theory, and Pseudodifferential Operators, Boston University, June 2008.  
Stony Brook Dialogues in Mathematics and Physics, Stony Brook, March 2008.  
Guelph-Waterloo Physics Institute Poster Session, University of Waterloo, July 2007.  
Waterloo Symposium in Undergraduate Mathematics, University of Waterloo, June 2007.  
Canadian Undergraduate Mathematics Conference, McGill University, July 2006.

## Matthew B. Young

---

### Teaching Experience

Teaching Assistant, Department of Mathematics, State University of New York  
at Stony Brook, Stony Brook, N.Y.

*Jan. 2008-May 2008* MAT 126 Calculus B

*Sept. 2007-Dec. 2007* MAT 171 Accelerated Calculus

Teaching Assistant, Department of Mathematics and Statistics, Queen's Uni-  
versity, Kingston, Ontario

*Sept. 2005-Dec. 2005* and *Sept. 2006-Dec. 2006*

MATH 237 Ordinary Differential Equations and Computer Methods

### Professional Activities

Graduate Student Representative, Stony Brook University, (2009-2010)

Member, American Mathematical Society, (2007-Present)