

Department of Mathematics
273 Altgeld Hall, MC-382
1409 West Green Street
Urbana, IL 61801

December 1, 2008

Search Committee
Department of Mathematics and Statistics
Mount Holyoke College
50 College Street
South Hadley, MA 01075

Dear Committee,

I am writing to convey my interest in the tenure-track assistant professorship in applied and interdisciplinary mathematics that your department has advertised on mathjobs.org. I am Ph.D. candidate in the Department of Mathematics at the University of Illinois at Urbana-Champaign working in algebraic topology and geometry under the direction of Robert Ghrist. I will complete my degree in May of 2009. As an alumna of a liberal arts college, I know and appreciate the comprehensive education that selective institutions provide to students, and I would be honored to join the Mount Holyoke community.

I am particularly interested in a faculty position in a department that values teaching. As an undergraduate I gained a great deal, both academically and personally, from professors who were deeply committed to educating the whole person, and I look forward to returning to an environment where excellent instruction is celebrated. I also appreciate your department's clear engagement in promoting undergraduate scholarship, especially through the Summer Math Institute, and I am eager to encourage potential mathematicians in this program. I am especially excited at the prospect of educating and mentoring the talented population of women that Mount Holyoke boasts as its own. I believe the success of any field depends on the breadth and diversity of its scholars and I hope very much to contribute to the sciences by inspiring of a broad and diverse group of students.

I have had many opportunities to teach while at the University of Illinois. I have taught a wide range of courses, including those for pre-service teachers and non-majors, and have successfully employed a variety of methods. I helped design undergraduate coursework, collaborating with instructors to develop a precalculus course. I also spent two semesters mentoring other teaching assistants in the department. I not only take my teaching responsibilities seriously but I enjoy them a great deal, and I think you will find that my record reflects my commitment to teaching.

My research interests include applied topology, metric geometry, and geometric group theory and my thesis project focuses on cube complexes that arise in robotics motion-planning problems. The objects I study describe situations ranging from biology to manufacturing, and admit interesting topological and group theoretic properties. A preprint of the paper I coauthored on this subject, which has also been used in a successful REU program at Illinois, is available on the website listed below. I believe my background will nicely complement the research strengths in your department as well as provide topics for fruitful student and faculty collaborations. I am pleased to hear of your active exchange with nearby math programs and would also enjoy participating in this extended community.

Included in my submission through mathjobs.org are my curriculum vitae and statements on research and teaching. Also included are letters in support of my application from Robert Ghrist, Ilya Kapovich, Stephanie Alexander, Timothy Hsu, and Jennifer McNeilly. This last letter addresses my teaching in particular. I will be presenting a poster during the AWM Workshop at the Joint Meetings in Washington, D.C. this January and would welcome the chance to speak with any members of your department who are there. Please feel free to contact me for any other information that might assist you in your decision-making. Thank you very much for your consideration.

Sincerely,



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