



ILLINOIS  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

**Department of Mathematics**

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

January 13, 2009

Search Committee  
Department of Mathematics  
University of Toronto  
40 St. George Street  
Toronto, Ontario M5S 2E4  
Canada

Dear Committee,

I am writing to convey my interest in the Postdoctoral Fellowship that your department has advertised on [mathjobs.org](http://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.

My research interests include applied topology, combinatorial and  $CAT(0)$  geometry, and geometric group theory and my thesis project focuses on cube complexes that arise in robotic motion-planning problems. A preprint of the paper I coauthored on this subject is available on the website listed below. I would welcome the opportunity to learn from and collaborate with with the many excellent researchers in geometry and topology at Toronto but, in particular, believe I would enjoy and benefit from working with Professor Vitali Kapovitch.

Included in my submission through [mathjobs.org](http://mathjobs.org) are my curriculum vitae, a list of publications, and statements on research and teaching. Also submitted 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. Please feel free to contact me for any other information that might assist you in your decision-making. Thank you very much for considering my application.

Sincerely,

A handwritten signature in black ink that reads "Valerie J. Peterson".

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