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November 5, 2015

Instructorship Search Committee  
California Institute of Technology  
Mathematics Department  
1200 E. California Blvd.  
MC 253-37  
Pasadena, CA 91125

To the Instructorship Search Committee:

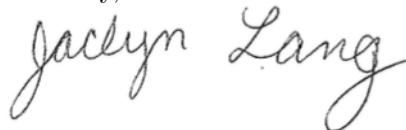
I am a Ph.D. student in algebraic number theory at UCLA studying with Haruzo Hida. I will be graduating in June 2016 and would like to apply for the Taussky-Todd Instructorship, the Bateman Research Instructorship, and the Senior Research Fellowship beginning in the Fall of 2016, as posted on the MathJobs website.

In my thesis, I study images of Galois representation associated to Hida families of modular forms. I prove that, in the non-CM case, the images of such Galois representations are appropriately large, an analogue of a classical theorem by Ribet and Momose. One of the key steps is a lifting theorem, which I prove using a combination of deformation theory and automorphic techniques. For more detailed information, please see my research statement. I would be excited to work with the number theorists at Caltech, particularly Matthias Flach, Dinakar Ramakrishnan, and Elana Mantovan.

While at UCLA, I have been a successful teacher, both in the classroom and while working with individual students. I was honored to receive a Distinguished Teaching Award in 2014 from the UCLA Mathematics Department, based on evaluations from students and faculty members.

My application consists of the AMS cover sheet, my curriculum vitae, a list of publications, and my research and teaching statements. In addition, it includes letters of reference from my advisor, Haruzo Hida, and from Jacques Tilouine, Chandrashekhar Khare, and Olga Radko. Dr. Radko's letter addresses my teaching experience. Please let me know if any of these items is not accessible or if I can provide any further information. Thank you for your consideration.

Sincerely,

A handwritten signature in cursive script that reads "Jaclyn Lang". The signature is written in dark ink and is positioned below the word "Sincerely,".

Jaclyn Lang