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November 27, 2015

Princeton University Mathematics Department Fine Hall–Washington Road Princeton, NJ 08544-1000

To the Junior Faculty 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 a postdoctoral or junior faculty position 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 Princeton, particularly Richard Taylor, Chris Skinner, Manjul Bhargava, and others.

My application consists of the AMS cover sheet, my curriculum vitae, a list of publications, my research and teaching statements, and a brief statement explaining my interest in Princeton. In addition, it includes letters of reference from Haruzo Hida (my advisor), Jacques Tilouine, and Chandrashekhar Khare. 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,

Jaclyn Lang

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