

Curriculum Vitae (Sug Woo Shin)

Dept of Mathematics, University of Chicago
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Education

- Ph.D., Mathematics, Harvard University, Sep 2002-Jun 2007
supervisor: Richard Taylor
- B. Sc., Mathematics, Seoul National University, Mar 1997-Feb 2000
(Military service, May 2000-Jul 2002)

Position

- Assistant Professor, MIT, Sep 2011-
- Member, Institute for Advanced Study, Sep 2010-Jun 2011
- Dickson Instructor, University of Chicago, Sep 2008-Jun 2010 (on leave: Sep-Dec 2008)
- Member, Institute for Advanced Study, Sep 2007-Dec 2008

Publication

- Plancherel density theorem for automorphic representations, submitted
- Construction of Galois representations (lecture notes for 2009 Clay summer school), in preparation
- On the cohomology of Rapoport-Zink spaces of EL-type, submitted.
- Galois representations arising from some compact Shimura varieties, to appear in Annals of Math.
- Stable trace formula for Igusa varieties, to appear in J. Inst. Math. Jussieu.
- Counting points on Igusa varieties, Duke Math 146 (2009), 509-568.

Research Interests

- number theory, Shimura varieties, Langlands functoriality, trace formula

Fellowships/Awards

- Clay Math Institute Liftoff Fellowship, 2007
- Harvard Merit Fellowship, 2006-2007
- Juan Carlos I scholarship (funding for travel to the ICM 2006)
- Samsung Scholarship for graduate studies, 2003-2006
- Joseph Leonard Walsh Fund, 2002-2003
- Undergraduate Scholarship from Korea Foundation of Advanced Studies, 1998-2000
- International Mathematical Olympiad (2 golds, 1 bronze), 1994-1996

Invited Talks

- “Cohomology of Shimura varieties and the Langlands philosophy” (Colloquium), U Minnesota, Mar 2010
- “Plancherel density theorem for automorphic representations”, U of Michigan, Northwestern, Nov 2009, Caltech, MIT, Dec 2010.
- “Theta functions from the geometric viewpoint (4 lectures)”, POSTECH, Korea, Nov 2009
- “Automorphic representations of prescribed type”, Paris Jussieu, Paris Orsay, Paris Nord, Cambridge(UK), Oct 2009.
- “Finding automorphic representations of prescribed type”, National Taiwan University, Taipei, Jul 2009
- “Construction of Galois representations” (short lectures), Clay summer school, Honolulu, Jun-Jul 2009
- “Cohomology of Rapoport-Zink spaces of EL-type”, Univ. of Chicago, Apr 2009
- “Construction of Galois representations”, Workshop on Shimura Varieties, Automorphic Representations and Related Topics, Kyoto, Nov 2008
- “Stabilization I”, “Points on special fibers of PEL Shimura varieties and introduction to vanishing cycles”, “Construction of Galois representations”, Banff, Aug 2008
- “Galois representations arising from some compact Shimura varieties”, Harvard Univ., Mar 2008; Princeton Univ., Mar 2008; Caltech, May 2008; Northwestern Univ., May 2008; Univ. of Maryland, Sep 2008

- “Non-abelian class field theory”, Seoul National Univ., Jul 2007
- “Endoscopy and Shimura varieties”, Kyoto Mini-Workshop, May 2007; KIAS, Sep 2007 (conference)
- “Representations in the cohomology of Rapoport-Zink spaces”, MIT, Mar 2007
- “Local-global compatibility at ramified primes”, Univ. of Connecticut, Nov 2006
- “Counting points on Igusa varieties”, Harvard Univ., Nov 2006; Univ. of Chicago, Nov 2006; Univ. Paris 7, May 2007; Luminy, Jun 2007 (conference); Princeton Univ., Oct 2007
- “Shimura varieties and the Langlands correspondence”, Korea Institute of Advanced Study, Aug 2005

Workshops and Conferences attended as a speaker

- Southern California Number Theory Day, UCSD, Mar 6, 2010
- Workshop on Arithmetic Geometry in Kanazawa, Japan, Nov 24-28, 2009
- Midwest Number Theory Day, Univ of Wisconsin, Madison, Nov 6, 2009
- Workshop on Automorphic Representations, Geometry, and Arithmetic, Taipei, Jul 21-24, 2009
- Clay Summer School on Galois Representations, Hawaii, Jun 15-Jul 10, 2009
- Workshop on Shimura Varieties, Automorphic Representations and Related Topics, Kyoto, Japan, Nov 25-28, 2008
- The stable trace formula, automorphic forms, and Galois representations (summer school/workshop), Banff, Canada, Aug 10-22, 2008
- Current developments and directions in the Langlands program, Northwestern Univ., May 10-14, 2008
- Asian conference in Arithmetic Geometry, KIAS, South Korea, Sep 15-19, 2007
- France-Japan conference on Automorphic Endoscopy, Luminy, France, Jun 11-15, 2007
- Mini-workshop on Automorphic Representations and Shimura Varieties, Kyoto, Japan, May 30-31, 2007

Teaching Experience

- Instructor, Math 25400-25600, Winter-Spring 2010
- Instructor, Math 25500 (undergrad algebra), Winter 2009
- Teaching Fellow, Math 21A (multivariable calculus), teaching own section, Fall 2004 and Fall 2006
- Teaching Fellow, Undergraduate Tutorial (joint with T. Yoshida), topic: Complex Multiplication, lecture and supervision of the final project, Spring 2005
- Course Assistant, Math 260A (Graduate algebraic geometry course), grading and weekly problem sessions, Fall 2003
- Teaching Assistant, Korean Math Olympiad summer/winter school for high school students, grading and daily problem sessions, Jan 1998 and Aug 1998

Personal information

Citizenship: Republic of Korea

References

Professor Richard Taylor

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Professor Oliver Knill (teaching)

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