

Curriculum Vitae Yichao TIAN

Morningside Center of Math
Chinese Academy of Sciences
55 Zhong Guan Cun East Road
Beijing, 100190, China

Office: (86)-10-82541561
Fax: (86)-10-62558381
Email: yichaot@math.ac.cn

Homepage:

<http://www.mcm.ac.cn/faculty/tianyichao>

Current Research Interests:

Arithmetic algebraic geometry: p -adic Hodge theory, Geometry of Shimura varieties in characteristic $p > 0$, p -divisible groups, and p -adic modular forms.

Employment

- July 2011-Present, Professor, Morningside Center of Mathematics, Chinese Academy of Science, Beijing, China
- September 2008-June 2011, Veblen Research Instructor, Princeton University and Institute for Advanced Study

Education

- Ph. D. in Mathematics, University Paris-13, France, September 2005-June 2008
Thesis Title: “*Sous-groupes canoniques et monodromie p -adique des groupes de Barsotti-Tate*”
Thesis Advisor: Prof. Ahmed Abbes
- Master in Mathematics, University Paris-sud 11, France, September 2004-June 2005
- Bachelor in Fundamental Science, Tsinghua University, Beijing, China

Publication and Prepublication

1. Canonical subgroups of Barsotti-Tate groups, *Annals of Math.*, **172** No.2 (2010), 955-988.
2. p -adic monodromy of the universal deformation of a HW-cyclic Barsotti-Tate group, *Documenta Math.* **14** (2009), 397-440.
3. An upper bound on the ramification filtration of finite group schemes and applications, *Algebra and Number Theory*, Vol. **6**, No. 2 (2011), 231-242.
4. Classicality of overconvergent Hilbert eigenforms: Case of quadratic residue degree, [arXiv:1104.4583](https://arxiv.org/abs/1104.4583), to appear in *Rendiconti del Seminario Matematico della Università di Padova*.
5. Modularity lifting theorem in parallel weight one and applications to the Artin conjecture: the tamely ramified case (Joint work with Payman Kassaei and Shu Sasaki), *Forum of Math. Sigma*, Vol. **2**, 2014, e 18, p.58.

6. On Goren-Oort stratification for quaternionic Shimura varieties (Joint work with Liang Xiao), preprint in 2013, [arXiv:1308.0790](#)
7. p -adic cohomology and classicality of overconvergent Hilbert modular forms (Joint work with Liang Xiao), submitted, preprint in 2013, [arXiv:1308.0779](#).
8. Tate cycles on some quaternionic Shimura varieties (Joint with Liang Xiao), preprint in 2014, [arXiv:1410.2321](#).
9. On Tate conjecture for the special fibres of some unitary Shimura varieties (joint with David Helm and Liang Xiao), preprint in 2014, [arXiv:1410.2343](#).

Teaching Experience

- *Algebraic Number Theory* at Tsinghua University, Spring Semester, 2014, Beijing, China.
- *Basic Number Theory* at Summer School at Tsinghua University, July-August 2011, Beijing, China.
- *Abelian Varieties* at a Summer School at Tsinghua University, July-August 2010, Beijing, China.
- **Mat204** *Advanced Linear Algebra*, 2011 Spring, Princeton University
- **Mat202** *Linear Algebra*, 2010 Spring and Fall, Princeton University
- **Mat201** *Multi-variable Calculus*, 2009 Fall, Princeton University
- Teaching Assistant for *Galois Theory*, September 2006-June 2007, University Paris-13, France
- Teaching Assistant for *Linear Algebra*, September 2005-June 2006, University Paris-13, France

Visiting Experience

- September 17th-October 17th, 2014, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette, 91440, France.
- September 1st-September 30th, 2013, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette, 91440, France.
- October 1st-November 30th, 2012, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette, 91440, France.
- March 4th-March 31st, 2012, Université Paris-Nord 13, Villetaneuse, 93430, France.
- September 1st-September 30th 2011, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette, 91440, France.
- June 28th 2010-August 28th 2010, Mathematical Science Center of Tsinghua University, Beijing, 100084, China
- August 1st 2009-August 23th 2009, Morningside Center of Mathematics, Beijing, 100190, China
- June 1st 2009-July 30th 2009, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette, 91440, France

Selected Lectures

1. *On the Goren-Oort stratification of quaternionic Shimura varieties and applications*, July 18th, 45 minutes talk at 6th International Congress of Chinese Mathematicians, July 18th, 2013, Taipei, Republic of China.
2. *Cohomologie p -adique et classicité des formes cuspidales surconvergentes de Hilbert*, Deuxième journée du programme ANR Théorie de Hodge p -adique et Développement, October 5th, 2012, IHES, France
3. *Analytic continuation of overconvergent Hilbert modular forms of parallel weight one*, Workshop on the p -adic Langlands program: recent developments and applications, April 23-27, 2012, Fields Institute, Toronto, Canada.
4. *Classicality of overconvergent Hilbert modular forms in the quadratic inert case*, in the conference “Automorphic forms and Galois representations” organized by London Mathematical Society at Durham, U.K, July 18th-28th, 2011.
5. *p -Adic Analytic Continuation of Genus 2 Overconvergent Hilbert Eigenforms in the Inert Case*, at Galois representation and automorphic forms Seminar, Institute for Advanced Study, Princeton, NJ, 08540, March 17th, 2011.
6. *From ramification filtration to higher canonical subgroups*, in the international conference “Formes Modulaires, Théorie de Hodge p -adique et Applications” Roscoff (France), July 13th-17th, 2009
7. *Canonical subgroups of p -divisible groups*, in Algebraic Geometry Seminar in Mathematics Department of Princeton University, February 24th, 2009
8. *p -adic monodromy of the universal deformations of Barsotti-Tate groups*, in the conference “Of Ramification and Vanishing Cycles” Mathematics Department, Tokyo University, Japan, September 10th-14th, 2007
9. *Ramification et monodromie des groupes de Barsotti-Tate*, in the Mini-Conference “Géométrie Arithmétique, Représentations Galoisienne et Formes Modulaires” University Paris-13, France, June 6-8, 2007