

# Curriculum Vitae

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### Current Research Interests

Number Theory and Arithmetic Geometry:

- Mordell-Weil and Selmer ranks of abelian varieties;
- Euler system and Iwasawa theory;
- $S$ -units and  $L$ -function, Stark conjecture, Gross conjecture;
- $p$ -adic representations.

### Education

Ph.D. in Mathematics, June 2000, University of Minnesota.

Thesis advisor: Prof. Greg William Anderson.

Thesis title: “The group cohomology of universal ordinary distribution and its application”

M.S. in Mathematics, July 1995, Univ. of Sci. and Tech. of China(USTC), P. R. China.

B.S. in Mathematics, July 1993, USTC, P. R. China.

### Working Experience

- Visiting Scholar, Erasmus Mundus-ALGANT program, Padova-Leiden-Bordeaux, April–June, 2006.
- Visitor, Institut des Hautes Études Scientifiques(IHES), Bures-sur-Yvette, France, January –March, 2006.
- Associate professor, Tsinghua University, December 2003-present;
- Lecturer, Tsinghua University, July 2003–December 2003;
- Postdoctoral Fellow, University of Toronto, Advisor: Prof. V. Kumar Murty.
- Visitor, Institut des Hautes Études Scientifiques(IHES), Bures-sur-Yvette, France, January –June, 2001.

### Publications

- “Riemann-Hurwitz formula in Basic  $\mathbf{Z}_S$ -extensions”(with Fei Xu), Acta Arith. LXXXI.1 (1997), 1–10.
- “The group cohomology of universal ordinary distribution”, Journal für die reine und angewandte Mathematik 537 (2001), 1–32.
- “The universal norm distribution and Sinnott’s index formula”, Proceedings of American Mathematical Society 130(2002), 2203-2213.
- “A note on the cyclotomic Euler systems and the double complex method”(with Greg W. Anderson), Canadian Journal of Mathematics 55, No.4(2003), 673–692.
- “On the universal norm distribution”, J. Ramanujan Math. Soc. 17, No. 4(2002), 287–311.
- “The universal Kolyvagin recursion implies the Kolyvagin recursion”, to appear, Acta. Math. Sinica. English Series.
- “The Gross conjecture over rational function fields”, to appear, Sci. of China, Ser. A.
- “The rank of Selmer group in unramified extensions” (with Kumar Murty), to appear.
- “Lectures on  $p$ -adic Galois representations”, a book in preparation, with Jean-Marc Fontaine.

### Presentations

- Lecture series for the Algebraic Number Theory Seminar - “Sinnott’s index formula”, University of Minnesota (Winter 1999).
- Lecture series for the Euler system and Cohomology Seminar - “The group cohomology of universal ordinary distribution”, University of Minnesota (Fall 1999).

- Graduate student conference in number theory - “The group cohomology of the universal ordinary distribution”, University of Illinois Urbana-Champaign (March 2000).
- Millennium Conference in number theory - “The group cohomology of the universal ordinary distribution”, UIUC, May 2000.
- “The applications of double complex methods in cyclotomic field theory”, University of Science and Technology of China, Hefei, China, June 2000.
- “The group cohomology of universal ordinary distributions and its connections to the Euler systems”, Morningside Center, Chinese Academy of Science, July 2001.
- “The universal norm distribution and its applications”, number theory seminar, Pennsylvania State University, November 2001.
- “The universal norm distribution and Kolyvagin recursion”, number theory seminar, McMaster University, February 2002.
- “On the universal norm distribution”, invited talk at Canadian Mathematical Society Summer meeting at Laval University, Arithmetic Geometry section, June 2002.
- Lecture series on “Mazur’s control theorem”, Ganita seminar, University of Toronto.
- “Bound of Selmer groups in unramified field towers”, number theory seminar, University of Toronto, February 2003.
- “On the growth of the ranks of Selmer groups in unramified field tower”, Conference on Arithmetic Algebraic Geometry of China, Nandaihe, August 2003.
- “The applications of the universal norm distributions”, Morningside Center, Beijing, November 2003.
- “Introduction to Iwasawa theory”, Nanjing University, July 2005.
- Lecture series in University of Padova, April 2006.

#### Conferences Organized

- International conference and summer school on arithmetic geometry and automorphic forms, by the Departments of Mathematics of University of Paris-Sud and Tsinghua University, Centre Sino-Français de Mathématiques of Paris-Sud and Tsinghua, and Nankai Institute of Mathematics, Beijing and Tianjin, August 2005.

#### Conferences attended

- Workshop on the proof of Shimura-Taniyama conjecture, MSRI, Berkeley, December 1999.
- Graduate student conference in number theory, UIUC, March 2000.
- Arizona Winter School on arithmetic algebraic geometry, Arizona, March 2000.
- Millennium conference in number theory, UIUC, May 2000.
- Mathematical challenges in 21st century by Amer. Math. Society, UCLA, August 2000.
- Workshop on motives and Iwasawa theory, Univ. Paris-Nord, Paris, March 2001.
- Conference in honor of Michel Raynaud, Paris-Sud, Orsay, June 2001.
- Summer meeting of Canad. Math. Society, Laval, June 2002.
- Thematic year on automorphic forms in the Fields Institute, Toronto, Jan-June 2003.
- Workshop on Shimura variety and related topics, Toronto, March 2003.
- Workshop on automorphic L-functions, Toronto, May 2003.
- Seminar in Arithmetic Geometry, Morningside center, Beijing, August 2003-December 2003.

#### References

- Greg W. Anderson, School of Mathematics, University of Minnesota,  
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- Keqin Feng, Department of Mathematics, Tsinghua University,  
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- Jean-Marc Fontaine, Département de Mathématique, Université Paris-Sud,  
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