Kam-Fai Tam
Curriculum Vitae

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Education

(2007-2012) **Ph.D. in Math.** University of Toronto. Thesis Advisor: James Arthur.

(2005-2007) **M.Phil. in Math.** The Hong Kong University of Science and Technology.

(2002-2005) **B.Sc. in Math.** (First Class Honors) The Hong Kong University of Science and Technology.

Positions

(Jun 2016) Visitor, Institut des Hautes Études Scientifiques

(2013-2016) Postdoctoral Fellow, Department of Mathematics and Statistics, McMaster University.
Supervisor: Chung Pang Mok, Manfred Kolster.

(2012-2013) Postdoctoral Fellow, Institut de Mathématiques de Jussieu.
Supervisor: Michael Harris.

Articles and Publications

1. Endoscopic classification of very cuspidal representations of quasi-split unitary groups (submitted, arXiv: 1510.03963).
2. Some endoscopic properties of the essentially tame Jacquet-Langlands correspondence (To appear in *Documenta Mathematica*, 2016).
3. Admissible embedding of L-tori and the essentially tame local Langlands correspondence (*Int Math Res Notices* (2016) Vol. 2016 1695-1775 doi:10.1093/imrn/rnv183).
4. Transfer relations in essentially tame local Langlands correspondence (University of Toronto thesis).

Professional Experience

1. (Winter 2014) Peer review: Contemporary Mathematics (AMS), volume in honor of Jim Cogdell's 60th birthday.
2. (2014-2015) Organizer: Arithmetic Geometry Seminar, McMaster University.
3. (Jun 2014) Organizer: Mini-workshop on automorphic forms and geometric Langlands program, Fields Institute.

Grants, Scholarships, and Awards

1. (2012-2013) European Research Council Grant, IMJ Paris.

2. (2007-2012) Tuition Fee Waiver Scholarship, University of Toronto.
3. (May 2006) Epsilon Fund Award, The Hong Kong University of Science and Technology.
4. (Nov 2005) Academic Achievement Award, The Hong Kong University of Science and Technology.
5. (2005) Li Po Chun Charitable Trust Fund Scholarships, Hong Kong.
6. (2004) Hang Seng Bank Scholarship, Hong Kong.

Invited Talks

1. Topic: Endoscopic classification of very cuspidal representations of quasi-split unitary groups.

   (Apr 2016) Séminaire GRFA, Institut de mathématiques de Jussieu.
   (Mar 2016) Algebraisation and Geometrisation in the Langlands Program: University of Bristol.
   (Nov 2015) Number Theory/Representation Theory Seminar, University of Toronto.
   (Oct 2015) AMS Sectional Meeting, Loyola University, Chicago.
   (Oct 2015) Arithmetic Geometry Seminar, McMaster University.
   (Dec 2014) CMS Winter Meeting, McMaster University, Hamilton.

2. Topic: Construction of supercuspidal representations.

   (Oct 2015) Arithmetic Geometry Seminar, McMaster University.
   (Jun 2014) Mini-workshop on automorphic forms and geometric Langlands program, Fields Institute.

3. Topic: Transfer relations in the essentially tame local Langlands correspondence.

   (Sept 2013) Arithmetic Geometry Seminar, McMaster University.
   (Aug 2013) IMS Number Theory Seminar, The Chinese University of Hong Kong.
   (Mar 2013) University of East Anglia.
   (Dec 2012) Groupes Réductifs, Institut de Mathématiques de Luminy.
   (Nov 2012) Séminaire AG, Laboratoire de Mathématiques de Versailles.
   (Oct 2012) Séminaire GRFA, Institut de mathématiques de Jussieu.
   (Apr 2012) Algebra & Number Theory Seminar, Rutgers University at Newark.
   (Apr 2012) Group, Lie and Number Theory Seminar, University of Michigan.

4. Topic: Admissible embeddings of L-tori and the essentially tame local Langlands/Jacquet-Langlands correspondence.

   (Dec 2013) CMS Winter Meeting, Ottawa.
   (Mar 2012) AMS 2012 Spring Western Section Meeting, University of Hawaii at Manoa, Honolulu.
   (Oct 2011) Number Theory/Representation Theory Seminar, University of Toronto.

5. (Jan-Mar 2012) Trace Formula Working Seminar, Fields Institute.
   Topic: Langlands-Kottwitz-Shelstad transfer factor (based on Kottwitz-Shelstad's book).

6. (Aug 2010) Duntroon workshop on Hitchin fibration and the fundamental Lemma.
   Topic: Langlands duality and endoscopic groups from a geometric perspective.

7. Learning Seminars.

   (Oct 2011-June 2012) Trace Formula Working Seminar, University of Toronto.
   (June-July 2009) Seminars on Relative Trace Formulae, University of Toronto.
   (2007-2008) on Bump's book 'Automorphic Forms and Representations', University of Toronto.
   (2005-2006) on Hartshrone's book 'Algebraic Geometry', HKUST.

Attended Conferences, Seminars, and Visitings

(Mar 2016) Algebraisation and Geometrisation in the Langlands Program: University of Bristol.

(Nov 2015) Paul J Sally, Jr. Midwest Representation Theory Conference, University of Missouri.

(Jun 2015) Roger Howe Conference, Yale University.

(May 2015) Workshop on Representation Theory and Analysis on Lie Groups over Local Fields, Ottawa.

(Apr 2015) The Chinese University of Hong Kong (visiting).

(Jun 2014) The Future of Trace Formulas, Banff.

(Dec 2013) The Chinese University of Hong Kong (visiting).

(June 2012) FRG Workshop and Conference on Characters, Liftings, and Types, American University.

(May 2012) Towards a Local Proof of the Local Langlands Correspondence, Chicago.

(Apr 2012) Automorphic forms and related geometry, Yale University.

(Spring 2012) Thematic Program on Galois Representations, Fields Institute.

(Dec 2009) CMS Winter Meeting, Lie Groups and Automorphic Forms, Windsor.

(June 2006) AMS Conference, Representation Theory of Real Reductive Lie Groups, Snowbird, Utah.

(May 2006) SL(2,R) mini-course, University of Utah.

Teaching Experience

Lecturer

1. McMaster University.

   (Winter 2016) MATH1ZC3, Engineering Mathematics II-B (co-lecturing, 3 hours per week).
   (Fall 2015) MATH1B03, Linear algebra 1 (3 hours per week).
   (Winter 2015) MATH702, Commutative Algebra and Algebraic Geometry (3 hours per week).
   (Fall 2014) MATH4E03/6E03, Galois Theory (3 hours per week).
   (Summer 2014) MATH2R03, Linear Algebra II (6 hours per week).
   (Winter 2014) MATH1ZC3, Engineering Mathematics II-B (co-lecturing, 3 hours per week).

Teaching Assistant

1. University of Toronto.

(a) MAT135, Calculus I (2007-2008, 2010-2011, 2011-2012).

(b) MAT223/224, Linear Algebra I, II (2008 Fall, 2009-2010, 2010-2011, 2011 Fall).

(c) MAT235/237, Multi-variable Calculus (2009 Summer, 2010 Summer, 2011-2012, Summer 2012).

(d) MAT315, Number Theory (2008 Winter).

2. The Hong Kong University of Science and Technology.

   (a) MATH311/312, Abstract Algebra (2005-2006, 2006-2007).

Reference

- James Arthur, University of Toronto (arthur@math.utoronto.ca).
- Fiona Murnaghan, University of Toronto (fiona@math.utoronto.ca).
- Guy Henniart, Université Paris-Sud (Guy.Henniart@math.u-psud.fr).
- Chung Pang Mok, Purdue University (mokc@purdue.edu).
- Deirdre Haskell (teaching), McMaster University (haskell@math.mcmaster.ca).
- Joe Repka (teaching), University of Toronto (repka@math.toronto.edu).

Personal

Residential Status: **Permanent resident of Canada**. Citizen of Hong Kong.
Languages: Fluent in English. Native in Chinese. Basic reading of French articles in mathematics.