# Jiajun Ma (马家骏)

Resumes

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#### Current Position

Jan 2017-present Special Researcher (Assistant Professor),

School of Mathematical Science, Shanghai Jiao Tong University, China

#### Research Fields

Theta Correspondence, Representation Theory of reductive groups, Invariant Theory

#### Education

Feb, 2013 Ph.D in Mathematics, National University of Singapore, Singapore.

Disseration: Two topics on local theta correspondence

Advisors: Professor Chen-Bo Zhu

Jun, 2007 **B.S. in Mathematics**, *Soochow University*, Suzhou, Jiangsu, China.

#### Career

Jan 2017-present Special Researcher (Assistant Professor),

School of Mathematical Science, Shanghai Jiao Tong University, China

Mar 2016-Dec 2016 Research Fellow, Department of Mathematics, National University of Singapore, Singapore

Sept 2014-Feb 2016 Postdoctoral Fellow, The Institute of Mathematical Sciences,

The Chinese University of Hong Kong, Hong Kong

Oct 2013-Aug 2014 Postdoctoral Fellow, Department of Mathematics, Ben-Gurion University of the Negav, Israel

Apr 2013-Aug 2013 Research Fellow, Department of Mathematics, National University of Singapore, Singapore

### Teaching

2018 Spring MA333: Algebraic Topology, SJTU

2018 Spring MA093: College Mathematics, SJTU

2017 Fall MA417: Algebraic Number Theory, SJTU

2017 Spring MA135: Advanced Algebra and Analytic Geometry II, SJTU

2016 Fall MA6291: Topics In Mathematics I, NUS

Character theory of representations of reductive groups over local fields

2015 Summer MA1030E: Linear Algebra I, CUHK

Course website: http://www.math.cuhk.edu.hk/course/1415/math1030e

2014 Fall Geometric Representation theory, 5-lectures, BGU

## **Publications and Preprints**

- [1] On two questions concerning representations distinguished by the Galois involution (with Maxim Gurevich and Arnab Mitra), ArXiv e-prints:1609.03155, to appear in Forum Mathematicum, Volume 30, Issue 1, pp 141–157, 2018
- [2] Local theta correspondence between supercuspidal representations, (with Hung Yean Loke), ArXiv e-prints:1512.01797, Annales scientifiques de l'ENS, Vol 51, Issue 4, pp 927-991, 2018
- [3] Local theta correspondences between epipelagic supercuspidal representations, (with Hung Yean Loke and Gordan Savin), ArXiv e-prints:1501.07069, Mathematische Zeitschrift, Vol 283, Issue 1, pp 169–196, 2016
- [4] Invariants and *K*-spectrums of local theta lifts, (with Hung Yean Loke), Compositio Mathematica, Vol 151, Issue 01, pp 179-206, 2015
- [5] Derived functor modules, dual pairs and  $U(\mathfrak{g})^K$ -actions, ArXiv e-prints:1310.6378, Journal of Algebra, Vol 450, pp 629-645, 2016
- [6] Transfers of *K*-types on local theta lifts of characters and unitary lowest weight modules, (with Hung Yean Loke and U-Liang Tang), Israel Journal of Mathematics, Vol 201, Issue 1, pp 1-24, 2014

#### Talks

- Aug 10, 2016 Theta correspondence and Moment maps, The 7th International Congress of Chinese Mathematicians, Beijing
- Mar 11, 2016 K-type, moment map and local theta correspondence, IMS, NUS, Singapore
  - 2015 Local theta correspondence between supercuspidal representations, Dec 25 at Kyoto University, July 26 at Zhejiang University, May 08 at HKUST, April 22 at NUS
- Oct 09, 2014 Theta correspondences and representations of classical groups, School of Mathematical Science, Suzhou University, China
- Sep 05, 2014 Local theta correspondence between supercuspidal representations,
  The Institute of Mathematical Sciences, The Chinese University of Hong Kong, Hongkong
- Jul 23, 2014 Theta correspondence between supercuspidal representations,
  Workshop on Representation Theory, National University of Singapore, Singapore
- May 28, 2014 Explicit local theta correspondences between (epipelagic) supercuspidal representations, Algebraic Geometry and Number Theory Seminar, Ben Gurion University, Israel
- Feb 26, 2014 Associated varieties and associated cycles of local theta lifts,
  Faculty of Mathematics and Computer Science, The Weizmann Institute of Science, Israel
- Dec 05,2012 Theta lifts of one-dimensional representations, Symposium on Representation Theory 2012, Kagoshima, Japan
- Mar 15,2012 Derived functor modules, dual pairs and  $U(\mathfrak{g})^K$ -actions, Branching Laws, Institute for Mathematical Sciences, National University of Singapore, Singapore
- Jan 28,2011 Dual pairs and  $U(\mathfrak{g})^K$ -actions, Workshop on Geometry and Representation Theory, Institute for Mathematical Sciences, National University of Singapore, Singapore

#### Personal Information

Date of Birth Jan 14, 1985 Place of Birth Suzhou, Jiangsu (China)
Citizenship China, Singapore Permanent Resident
Language Chinese (native), English (fluent),
French (basic)

Place of Birth Suzhou, Jiangsu (China)
Gender Male

Marital status Married