

Curriculum Vitae

CHEN Miaofen

School of Mathematical Sciences
East China Normal University
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Personal information

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- Family Name: Chen
 - Given Name: Miaofen
 - Nationality: Chinese

Research interests

Research domain: Arithmetic algebraic geometry

Research interests: p -divisible groups and their moduli spaces (i.e. Rapoport-Zink spaces), affine Deligne-Lusztig varieties, p -adic period domains, Galois representations and Kisin varieties.

Employment

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- 2017.10-present: Zijiang Young Scholar, East China Normal University, China
 - 2014.08-present: Associate professor, East China Normal University, China
 - 2012.11-2014.7: Lecturer, East China Normal University
 - 2012.05-2012.08: Postdoctoral fellow, Technische Universität München, Germany
Postdoc advisor: Eva Viehmann
 - 2011.09-2012.04: Postdoctoral fellow, Universität Bonn, Germany
Postdoc advisor: Eva Viehmann

Education

- 2006-2011: Ph.D Student, University Paris XI, Orsay France
Ph.D degree
Thesis advisor: Laurent Fargues
Title of thesis: Le morphisme déterminant pour les espaces de modules de groupes p -divisibles
(the determinant morphism for the moduli spaces of p -divisible groups)
Thesis defended on the 11th May 2011
- 2005-2006: Master student, 2nd year, University Paris XI, Orsay France
Master degree
Master “Analyse, Arithmétique et Géométrie”
Advisor: Laurent Fargues
- 2004-2005: Master student, 1st year, Tsinghua University, Beijing, China
Advisor: Linsheng Yin
- 2000-2004: Undergraduate student, Tsinghua University, Beijing, China
Bachelor degree

Publications and Preprints

- (joint work with Jilong Tong) Weakly admissible locus and Newton stratification in p -adic Hodge theory, arXiv:2203.12293, preprint.
- (joint work with Sian Nie) Connectedness of Kisin varieties associated to absolutely irreducible Galois representations, *Journal für die Reine und Angewandte Mathematik*, 2022 (785): 31-54.
- Fargues-Rapoport conjecture for p -adic period domains in the non-basic case, to appear in *Journal of European Mathematical Society*, arXiv:2004.01425.
- (joint work with L. Fargues and X. Shen) On the structure of some p -adic period domains, *Cambridge Journal of Mathematics*, 2021 (9): 213–267.
- (joint work with E. Viehmann) Affine Deligne-Lusztig varieties and the action of J , *Journal of Algebraic Geometry*, 2018(27): 273–304.
- (joint work with Mark Kisin and Eva Viehmann) Connected components of affine Deligne-Lusztig varieties in mixed characteristic, *Compositio Mathematica*, 2015 (151): 1697–1762.
- Composantes connexes géométriques d’espaces de modules de groupes p -divisibles, *Ann. Sci. Éc. Norm. Supér* 2014 (4): 723–764.
- Le morphisme déterminant pour les espaces de modules de groupes p -divisibles, *Int. Math. Res. Notices*. 2013 (7): 1482–1577.
- Périodes entières de groupes p -divisibles sur une base générale, *Bull. Soc. Math. France.*, 2015 (143): 1–33.

Grants

- 2021.01-2024.12: NSFC, General Program, Grant No. 12071135, Principal Investigator.
 - 2017.01-2020.12: NSFC, General Program, Grant No. 11671136, Principal Investigator.
 - 2014.01-2016.12: NSFC, Young Scientists Fund, Grant No. 11301185, Principal Investigator.
 - 2014.01-2016.12: RFDP, New Teachers Fund, Grant No. 20130076120002, Principal Investigator.
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Teaching

- In East China Normal University:
 - 2021-2022 Autumn: Modern algebra
 - 2020-2021 Spring: Algebraic geometry I
 - 2020-2021 Autumn: Modern number theory, Algebraic geometry II
 - 2019-2020 Spring: Seminar on algebraic groups
 - 2019-2020 Autumn: Advanced algebra (honors)
 - 2018-2019 Spring:
 - Linear algebraic groups
 - Advanced algebra II
 - 2018-2019 Autumn: Linear algebra A
 - 2017-2018 Spring: Topology
 - 2017-2018 Autumn: Linear algebra A
 - 2016-2017 Autumn: Riemann surfaces
 - 2015-2016 Spring:
 - Modern algebra I
 - Modern algebra
 - Seminar on linear algebraic groups
 - 2015-2016 Autumn: Linear algebraic groups
 - 2014-2015 Spring: Introduction to number theory
 - 2014-2015 Autumn: Modern algebra I
 - 2013-2014 Spring: Modern algebra II
 - 2013-2014 Autumn: Modern algebra I
- In Fudan University:
 - 2019-2020 Spring: Algebraic number theory
- In University Paris XI:
 - 2009-2011 Autumn, IFIPS Complements (exercise class)
(Contents of the course: real analysis, complex analysis, distribution, probability et statistics)
 - 2009-2010 Spring, Linear algebra (exercise class)

- In Tsinghua University:
 - 2004-2005 Autumn, Mathematics analysis (exercise class)

Selected talks

Title: Newton stratification and weakly admissible locus in p -adic Hodge theory

- Conference on Arithmetic Geometry in honor of Luc Illusie, online, 2021
- The 8th National Conference on Number Theory, Jintan, 2021

Title: Connectedness of Kisin varieties associated to absolutely irreducible representations

- Westlake Number Theory Symposium, Hangzhou, 2020

Title: Fargues-Rapoport conjecture in the non-basic case

- ICCM 2020 Annual Meeting, Hefei, 2020
- 2019 Youth forum on algebraic geometry, Suzhou, 2019
- International conference on arithmetic geometry, in honor of Prof. Michael Rapoport's 71st birthday, Beijing, March, 2019
- Arithmetic of Shimura varieties, Oberwolfach, January, 2019

Title: Fargues-Rapoport conjecture for some p -adic period domains

- The fifth Sichuan-Chongqing workshop on number theory, Chengdu, December, 2018
- Iwasawa theory and p -adic automorphic forms, Shanghai, December, 2018
- 2018 Beihang youth forum on mathematics, Beijing, December, 2018
- The joint international meeting of Chinese Mathematical Society and American Mathematical Society, Shanghai, June, 2018

Title: A stratification of affine Deligne-Lusztig varieties

- Workshop on Shimura varieties and related topics, 2016, Taipei, May, 2016
- New progress in Number theory in China and Korea 2016, POSTECH, Pohang, January, 2016
- Conference on Algebraic Number Theory, TSIMF, Sanya, January, 2016

- 80th anniversary conference of the Chinese Mathematical Society, Capital Normal University, Beijing, November, 2015
- The Algebraic and Arithmetic Geometry Conference, USTC, Hefei, September, 2015
- Reduction of Shimura varieties, MFO, Oberwolfach, August, 2015
- Workshop on Automorphic Forms, Geometry and Representation Theory, Zhejiang University, Hangzhou, July, 2015

Title: Monodromy representation of moduli spaces of p -divisible groups in Hodge-Newton decomposable case

- Connections for Women: workshop on Geometric Representation Theory, Berkeley, August, 2014
- The 3rd Cross Strait Workshop in Algebra, East China Normal University, Shanghai, July, 2014
- K3 surface conference, Shanghai Center for Mathematical Sciences, Shanghai, April, 2014
- The fourth East Asia Number Theory Conference, Kyushu University, Fukuka, January, 2014
- The Algebraic and Arithmetic Geometry Conference to "AGAG Summer School 2013", USTC, Hefei, August, 2013
- Sino-French Conference on Arithmetic Geometry, Chern institute of Mathematics, Tianjin, June, 2013
- The third young mathematicians forum of algebra, School of Mathematical Sciences, USTC, Hefei, June, 2013

Title: Connected components of minuscule affine Deligne-Lusztig varieties

- Workshop on Arithmetic Geometry and Automorphic Form, Beijing, August 2012
- Workshop on reductions of Shimura Varieties, Oberwolfach, July 2012

Title: The determinant morphism for the moduli spaces of p -divisible groups

- Workshop on the arithmetic geometry of Shimura varieties and Rapoport-Zink spaces, Kyoto University, Kyoto, July 2011

Research visits

- Morningside center of mathematics, Chinese academy of sciences, Dec. 07 2019-Jan. 13 2020
- Institute of Mathematics Academia Sinica, May 23-June 04, 2016
- National Center for Theoretical Sciences of Taiwan, Dec. 15 2015-Jan. 02 2016
- Technischen Universität München, July 13-26, 2014
- Hong Kong University of Science and Technology Jan. 13-18, 2014
- Shanghai Center for Mathematical Sciences, Nov. 1-30, 2013

- Mathematisches Institut der Universität Bonn, May 30-June 10, 2011

Academic Activities and Service

- Co-organizer of Workshop on Local models for Galois deformation rings, Beijing, April, 2021
- Co-organizer of 2019 Winter school on Shimura varieties and related topics, ECNU, 29 Nov-3 Dec 2019
- Co-organizer of the young mathematicians forum of arithmetic geometry, ECNU, 7-9 July 2013