Zhiwei Zheng | Curriculum Vitae

Yau Mathematical Sciences Center, Tsinghua University, Beijing, China, 100084
Personal Homepage: https://zhengzhiweimath.github.io/homepage/
✉ zhengzw11@163.com

Experience

09/2019–: Postdoc, Max Planck Institute at Bonn, Germany. Mentor: Daniel Huybrechts

08/2014–07/2019: Ph.D Candidate in Pure Mathematics, Tsinghua University, China. Advisor: Professor Eduard Looijenga

01/2018-07/2018: Visiting Scholar, Math Department, Stony Brook University, USA. Mentor: Professor Radu Laza

08/2010–07/2014: Bachelor of Science, Tsinghua University, China

02/2013-07/2013: Exchange Student at École Normale Supérieure, France

Honors and Awards

01/2018–07/2018: Tsinghua Scholarship for Overseas Graduate Studies

2017: Excellent Postgraduate Award, Yau Mathematical Sciences Center

08/2014–07/2019: Tsinghua Future Scholar Scholarship

07/2014: Bachelor with distinction

10/2013: National Scholarship

10/2012: Academic Outstanding Award

08/2010–07/2014: Member of Xuetang Program of Tsinghua University

07/2009: Gold Medal of 50th International Mathematical Olympic, Germany

01/2009: Gold Medal at National Math Olympic, China

Research Interests

Algebraic Geometry, Algebraic Topology, Complex Geometry, Lattice theory and Finite Group theory. In particular, the constructions (via geometric invariant theory, Hodge theory or methods from minimal model program) of Moduli spaces and their compactifications, automorphisms of $K3$ surfaces/cubics/hyper-Kähler manifolds, automorphic forms and Moonshine phenomena, algebraic cycles, and rationality problems.

Publications

[4]: with R. Laza, Automorphisms and Periods of Cubic Fourfolds, arXiv: 1905.11547, 2019

[3]: with C. Yu, Moduli of Singular Sextic Curves via Periods of K3 surfaces, arXiv:1809.06589, 2018

[2]: with C. Yu, On Moduli Spaces of Symmetric Cubic Fourfolds and Locally Symmetric Varieties, arXiv:1806.04873, 2018

[1]: Orbifold Aspects of Certain Occult Period Maps, arXiv:1711.02415, 2017

Invited Talks

03/07/2019: *Classification of Symplectic Automorphism Groups of Smooth Cubic Fourfolds*, Ph.D. Session, The Second National Algebraic Geometry Conference

13/06/2019: *Classification of Symplectic Automorphism Groups of Smooth Cubic Fourfolds*, Contributed Talk, International Congress for Chinese Mathematicians

07/01/2019: *Automorphism groups of cubic fourfolds*, Algebraic Geometry, Beijing International Center for Mathematical Research

28/11/2018: *Geometry of cubic fourfolds and hyper-Kähler manifolds*, Geometry and Physics Seminar, Tsinghua University

26/10/2018: *Compactifications of moduli spaces*, Program of Moduli Spaces and Varieties, Shanghai Center for Mathematical Sciences

22/10/2018: *Introduction to GIT*, Program of Moduli Spaces and Varieties, Shanghai Center for Mathematical Sciences

20/06/2018: *Geometry of Symmetric Cubic Fourfolds*, Algebra Seminar, Indiana University at Bloomington

09/04/2018: *Moduli of Symmetric Cubic Fourfolds*, Geometry Seminar, Texas A&M University

30/03/2018: *Moduli Spaces of Cubic Fourfolds with Automorphisms*, Geometry Seminar, Harvard University

22/03/2018: *Moduli Spaces of Cubic Fourfolds with Specified Prime-order Automorphism, and their compactification*, Universtiy of Chicago

25/12/2017: *Orbifold Aspect of Certain Occult Period Maps*, Colloquium & Seminars, Chinese Academic Institute

Seminars (Co)Organized

Fall 2018: *Student Seminar On Higgs Bundles and Hitchin Systems*, Tsinghua University

Fall 2017: *Ubiquity of Root Systems*, Tsinghua University

Spring 2017: *Student Seminar on Hodge Theory*, Tsinghua University

Spring 2016: *Moduli of Curves*, Tsinghua University

Fall 2015: *Complex Algebraic Surfaces*, Tsinghua University

Fall 2014: *Topics on Translation Surfaces*, Tsinghua University

Teaching Experience

October 2018: Lecturer, K3 surface and cubic fourfold, Short Course (in English), Tsinghua University

Fall 2015: Teaching Assistant, Algebraic Geometry 1 given by Prof. Eduard Looijenga, Tsinghua University

Spring 2015: Teaching Assistant, Basics of Advanced Algebra given by Prof. Bangming Deng, Tsinghua University

Fall 2014: Teaching Assistant, Algebraic Geometry 1 given by Prof. Eduard Looijenga, Tsinghua University

Summer 2014: Teaching Assistant, Number theory given by Prof. Michael Zieve, Tsinghua Summer Mathcamp for High School Students