Zhijie Dong

Contact Information

Harbin Institute of Technology. E-mail: dongmouren@gmail.com

Personal Data

Citizenship: China
Date of Birth: Oct 24, 1989

Education and Employment

Harbin Institute of Technology, Harbin, China — *December 2018 - Present*
Postdoc

University of Massachusetts Amherst, MA, USA — *September 2012 - September 2018*
Ph.D., Mathematics, Sep 1st 2018
Advisor: Ivan Mirkovic

Tsinghua University, Beijing, China — *September 2007 - 2011*
B.Eng, Mechanical engineering

Research Interest

Geometric representation theory

Publications and Preprints

A relation between Mirkovic-Vilonen cycles and modules over preprojective algebra of Dynkin quiver of type ADE, https://arxiv.org/abs/1802.01792; Preprint.

Presentations

" A relation between Mirkovic-Vilonen cycles and modules over preprojective algebra of Dynkin quiver of type ADE" — *Oct 23, 2017; March, 2018*
Umass Amherst Representation theory seminar; Yau mathematical science center

"The Buchsbaum-Eisenbud structure theorem for Gorenstein ideals of codimension 3" Spring, 2014
Umass Amherst reading seminar in algebraic geometry

Honors and Awards

Distinguished Thesis Award at UMass Amherst.

Activities attended

MSRI Program on Geometric representation theory. *Fall 2014*
PCMI Summer School in Geometry of moduli spaces and representation theory. *Summer 2015*
Arizona Winter School 2016: Analytic Methods in Arithmetic Geometry. *Spring 2016*
MSRI — Hot Topics: Cluster algebras and wall-crossing. *April 2016*
ICTP Conference on Moduli Spaces, Mirror Symmetry and Enumerative Geometry. *Summer 2016*
Chicago: Interactions between Representation Theory and Algebraic Geometry. *August 2017*
Cologne: Spring School: Tropical Geometry meets Representation Theory. *March 2018*
Toronto: Derived Geometry and Higher Categorical Structures in Geometry and Physics. *June 2018*
Notre Dame: THEMATIC PROGRAM ON GEOMETRIC REPRESENTATION THEORY AND SYMPLECTIC VARIETIES. *June 2018*
Cetraro, Italy: CIME School on Geometric Representation Theory and Gauge Theory. *July 2018*
IST Austria: Summer School on Geometric Representation Theory *July 2018*

Teaching Experience

Teaching assistant for Math 131& 132 (Calculus I & II), University of Massachusetts

Grader, University of Massachusetts

The current plan to study geometric Satake for Kac-Moody algebra. I would like to see the two sided compactified Zastava coincides with local space construction. The later generalized to any quiver. Second, I would like a local space construction for framed case and study Rees algebra compactified Coulomb branch for framed case. Also I wish to study MV cycle for affine type and relation to affine MV polytope.