

Runhong Zong

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Date of Birth: Jan 2nd, 1989

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Research interests Algebraic Geometry, Arithmetic Geometry, Mathematical Physics, Application of Mathematics to Philosophy and Economics

Employment

Nanjing Univeristy Professor, Department of Mathematics	Nanjing, China July 2019 – present
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Johannes Gutenberg University Mainz Postdoc, Department of Mathematics Mentor: Professor Kang Zuo	Mainz, Germany May 2017 – June 2019
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University California, Los Angeles Assistant Adjunct Professor, Dept. of Mathematics	Los Angeles, USA August 2015 – May 2017
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Institute for Advanced Study Member, School of Mathematics	Princeton, USA September 2014 – August 2015
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Education

Univeristy of Pennsylvania M.A. in Economics	Pennsylvania, USA September 2015 – August 2018
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Princeton University Ph.D. in Mathematics Mentor: Professor János Kollár	Princeton, USA September 2010 – November 2014
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University of Science and Technology of China B.S. in Mathematics and Applied Mathemtaics Summa Cum Laude. Overall GPA: 4.19/4.30, Major GPA: 4.30/4.30	Hefei, China September 2006 – June 2010
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Publications

Topological Structures of Moduli Spaces of Curves and Anabelian Geometry in Positive Characteristic
Zhi Hu, Yu Yang, Runhong Zong
to appear in *Forum of Mathematics Sigma*

$U(1)$ -Gauge Theories on G_2 -Manifolds
Zhi Hu, Runhong Zong
to appear in *Annales Henri Poincaré*

Weak Approximation for Fano Complete Intersections in Positive Characteristic

Jason Starr, Zhiyu Tian, Runhong Zong

Annales de l'Institut Fourier, Vol. 72, No. 4, pp. 1503-1534 (2022)

Hyperbolic Superspaces and Super-Riemann Surfaces

Zhi Hu, Runhong Zong

Communications in Mathematical Physics, Vol. 378, pp. 891-915 (2020)

Weak Approximation for Iso-trivial Families

Zhiyu Tian, Runhong Zong

Journal für die Reine und Angewandte Mathematik, Vol. 752, pp. 1-23 (2019)

A Geometric Characterisation of Toric Varieties

James McKernan, Roberto Svaldi, Morgan Brown, Runhong Zong

Duke Mathematical Journal, Vol. 167, Issue 5, pp. 923-968 (2018)

Curve Classes on Rationally Connected Varieties

Runhong Zong

“Rational Points, Rational Curves, and Entire Holomorphic Curves on Projective Varieties”—*Contemporary Mathematics Series by American Mathematical Society*, Vol. 654 (2015)

On Rational Connectedness of Globally F-Regular Threefolds

Yoshinori Gongyo, Zhiyuan Li, Hiromu Tanaka, Karl Schwede, Zsolt Patakfalvi, Runhong Zong

Advances in Mathematics, Vol. 280, pp. 47-78 (2015)

On the Space of Conics on Complete Intersections

Runhong Zong

Communications in Mathematics and Statistics, Vol. 2, pp. 33-45 (2014)

One Cycles on Rationally Connected Varieties

Zhiyu Tian, Runhong Zong

Compositio Mathematica, Vol. 150, Issue 03, pp. 396-408 (2012)

Preprints

The Prelude of New Economy: A Materialistic System Theory with Method of Ideological Analysis in Materialistic dialectics

Runhong Zong

Universal Constants, Law of Inertia and Emergent Geometry

Zhi Hu, Mulin Yan, Runhong Zong

arXiv:2303.02556 (2023)

Moduli Spaces of Parabolic Bundles over P^1 with Five Marked Points

Zhi Hu, Pengfei Huang, Runhong Zong

arXiv:2108.08994 (2021)

Generalized Deligne-Hitchin Twistor Spaces: Construction and Properties

Zhi Hu, Pengfei Huang, Runhong Zong

arXiv:2010.06893 (2020)

On Base Changes of Local Stability in Positive Characteristics

Zhi Hu, Runhong Zong

arXiv:2001.04083 (2020)

Research
Monographs/Books

Towards Socialist Political Economy with Chinese Characteristics

Runhong Zong

To be published

Sharing and Competitive Economies: Absorption and Sublation

Runhong Zong

To be published

A Study of New Economics System: Integration and Unification of Sharing Economy and Competitive Economy

Runhong Zong

To be published

Operation of Material Systems and Ontology: A New Way of Study of Economics

Runhong Zong

To be published

Sharing and Competitive Economies: An Integrated Study Based on System Theory

Runhong Zong

To be published

Invited Talks

New Anabelian Phenomena for Curves in Positive Characteristics

Shenzhen Workshop in p -adic Arithmetic and Geometry, 1/13/2024

New Anabelian Phenomena for Curves in Positive Characteristics

45 Minutes Talk at ICCM 2023, 1/5/2024

New Anabelian Phenomena for Curves in Positive Characteristics

Tongji University Algebraic and Arithmetic Geometry Conference, 12/10/2023

On Base Change of Local Stability in Positive Characteristics

Algebraic Geometry and Arithmetic Geometry Conference, University of Science and Technology of China, 9/28/2019

Finding Rational Curves by Forgetful Maps

Chern Institute of Mathematics, Nankai University, 8/5/2018

Finding Rational Curves by Forgetful Maps

Department of Mathematics, Nanjing University, 7/15/2018

Finding Rational Curves by Forgetful Maps

School of Mathematical Science, Wuhan University, 6/5/2018

Finding Rational Curves by Forgetful Maps

School of Mathematical Science, Tongji University, 2/5/2018

Finding Rational Curves by Forgetful Maps

Postdoctoral Member Talk, Institute for Advanced Study, 10/01/2014

A New Look at the Graber-Harris-Starr Theorem

Conference—"Algebraic-Geometry-Seattle-2014", University of Washington Seattle, 08/04/2014

On Density of Rational Points in the Adèles of Function Field of Curves

Number Theory Seminar, University of Berkeley, 10/30/2013

Weak Approximation for Isotrivial Families

Algebraic Geometry Seminar, University of Utah, 10/29/2013

Some New Results in the Topic of Rationally Connected Varieties

The Algebraic and Arithmetic Geometry Conference to "AGAG Summer School 2013", University of Science and Technology of China, 8/27/2013

Weak Approximation for Isotrivial Families

Algebraic Geometry Seminar, Stanford University, 2/28/2013

One Cycles on Rationally Connected Varieties

Algebraic Geometry Seminar, California Institute of Technology, 11/19/2012

One Cycles on Rationally Connected Varieties

Algebraic Geometry Preprint Seminar, University of Utah, 10/26/2012