

Runhong Zong

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Date of Birth: Jan 2nd, 1989

Tel: 86-15889799917

e-mail1: rzong@nju.edu.cn

e-mail2: runhong1989@outlook.com

Homepage1: runhong1989.github.io

Homepage2: sites.google.com/view/runhongzong

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

$U(1)$ -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)

Topological Structures of Moduli Spaces of Curves and Anabelian Geometry in Positive Characteristic

Zhi Hu, Yu Yang, Runhong Zong

arXiv:2301.04864 (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