Runhong Zong

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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   Nanjing, China
Professor, Department of Mathematics   July 2019 – present

Johannes Gutenberg University Mainz   Mainz, Germany
Postdoc, Deparment of Mathematics   May 2017 – June 2019
Mentor: Professor Kang Zuo

University California, Los Angeles   Los Angeles, USA
Assistant Adjunct Professor, Dept. of Mathematics   August 2015 – May 2017

Institute for Advanced Study   Princeton, USA
Member, School of Mathematics   September 2014 – August 2015

Education

Univeristy of Pennsylvania   Pennsylvania, USA
M.A. in Economics   September 2015 – August 2018

Princeton University   Princeton, USA
Ph.D. in Mathematics   September 2010 – November 2014
Mentor: Professor János Kollár

University of Science and Technology of China   Hefei, China
B.S. in Mathematics and Applied Mathemtaics   September 2006 – June 2010
Summa Cum Laude. *Overall GPA: 4.19/4.30, Major GPA: 4.30/4.30*

Publications

$U(1)$**-Gauge Theories on** G_2**-Manifolds**

Zhi Hu, Runhong Zong
to appear in *Annales Henri Poincaré*

Generalized Deligne-Hitchin Twistor Spaces: Construction and Properties
Zhi Hu, Pengfei Huang, Runhong Zong
Bulletin des Sciences Mathématiques, Vol.191, 103396 (2024)

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

Zhi Hu, Yu Yang, Runhong Zong

Forum of Mathematics Sigma, Vol. 0, pp. 1-36 (2024)

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)

On Base Changes of Local Stability in Positive Characteristics
Zhi Hu, Runhong Zong
arXiv:2001.04083 (2020)

Research
Monographs/Books

Socialist Political Economy with Chinese Characteristics: An Ontology Characterizing the Operation of the Universe in Materialistic Dialectics

Runhong Zong
To be published

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
China Science and Culture Audio Visual Press Co., Ltd. (2024)

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