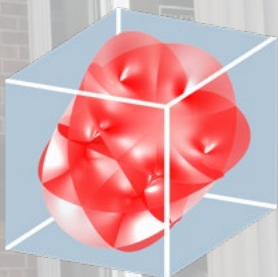


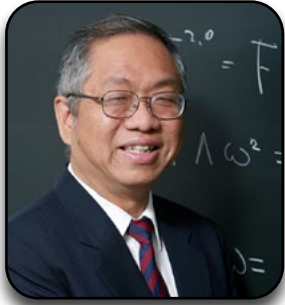
Directory

Academic Year 2021 - 2022



**HARVARD UNIVERSITY
CENTER OF MATHEMATICAL
SCIENCES AND APPLICATIONS**

Scientific Board



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Research interests: Differential geometry, partial differential equations, topology, and mathematical physics.



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Research interests: Theory of computation, information and society, science and technology policy.



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Research interests: Algebraic topology.



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Office: Jefferson 467
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Research interests: String theory.



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Research interests: Algebras and tropical geometry.



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Daniel Junghans

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Ph.D.: Leibniz Universitaet Hannover

Faculty sponsor: Cumrun Vafa

Research interests: Mathematical physics, quantum graphs, and spectral geometry; string theory

Daniel Kapec

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Email: dkapec@cmsa.fas.harvard.edu

Ph.D.: Harvard University

Faculty sponsor: Shing-Tung Yau and Andrew Strominger

Research interests: Quantum field theory, general relativity, and quantum gravity

Tsung-Ju Lee

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Ph.D.: National Taiwan University

Faculty sponsor: Shing-Tung Yau

Research interests: Algebraic geometry

Kan Lin

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Ph.D.: University of Tokyo

Faculty sponsor: Shing-Tung Yau

Research interests: Financial Math, Fintech

Postdoctoral Fellows

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Ph.D.: Sun Yat-sen University

Faculty sponsor: Shing-Tung Yau

Research Interests: Geometric analysis

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Faculty sponsor: Shing-Tung Yau

Research Interests: Mathematical general relativity

Matteo Parisi

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Ph.D.: University of Oxford

Faculty sponsor: Lauren K. Williams

Research interests: Quantum Field Theory, Scattering Amplitudes, Amplituhedron, Tropical Geometry, Cluster Algebras

Du Pei

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Email: dpei@cmsa.fas.harvard.edu

Ph.D.: Caltech

Faculty sponsor: Shing-Tung Yau

Research interests: Invariants of 3- and 4-manifolds, Higgs bundles, mirror symmetry, categorification, conformal field theory and TQFT, dynamics of, supersymmetric gauge theories, various other topics in mathematical physics

Postdoctoral Fellows

Itamar Shamir

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Email: ishamir@cmsa.fas.harvard.edu

Ph.D.: Weizmann Institute of Science

Faculty sponsor: Shing-Tung Yau

Research interests: Supersymmetry and high energy; Boundary conformal field theory, BH entropy through localization

Yun Shi

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Email: yshi@cmsa.fas.harvard.edu

Ph.D.: University of Illinois at Urbana Champaign

Faculty sponsor: Shing-Tung Yau

Research interests: Algebraic Geometry, Donaldson-Thomas theory, Pandharipande-Thomas theory, stability conditions

Michael Simkin

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Ph.D.: Hebrew University of Jerusalem Israel

Faculty sponsor: Shing-Tung Yau

Research interests: Combinatorics; Probabilistic Combinatorics

Ryan Thorngren

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Ph.D.: UC Berkeley

Faculty sponsor: Shing-Tung Yau

Research interests: Quantum condensed matter system and high energy theory; mathematical physics, topological phases of matter

Postdoctoral Fellows

Freid Tong

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Faculty sponsor: Shing-Tung Yau

Research interests: Complex differential geometry and nonlinear partial differential equations

Farzan Vafa

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Ph.D.: University of California, Santa Barbara

Faculty sponsor: Shing-Tung Yau

Research interests: Physical Modeling of Morphogenesis

Juven Wang

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Ph.D.: MIT

Faculty sponsor: Shing-Tung Yau

Research interests: Ultra Unification, Theoretical Physics, Condensed Matter Physics, High Energy Physics, Mathematical Physics, Quantum Field Theory

Max Wiesner

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Ph.D.: Instituto de Fisica Teoria UAM-CSIC

Faculty sponsor: Cumrun Vafa

Research Interests: String theory

Postdoctoral Fellows

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Ph.D.: University of Virginia

Faculty sponsor: Cumrun Vafa

Research interests: Quantum information theory and quantum gravity

Thérèse (Yingying) Wu

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Ph.D.: UT Austin

Faculty sponsor: Shing-Tung Yau

Research interests: Graph cohomology, Comparison Theorems of Phylogenetic Spaces and Algebraic Fans; Differential Geometry and Mathematical Biology

Changji Xu

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Email: cxu@cmsa.fas.harvard.edu

Ph.D.: University of Chicago

Faculty sponsor: Horng-Tzer Yau

Research interests: Probability theory

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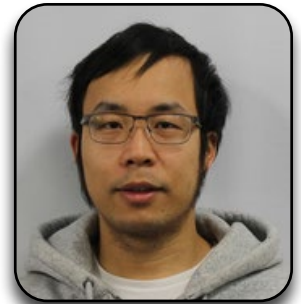
Affiliation: Indiana University-Bloomington
Research interests: Probability, mathematical biology and phylogenetics



An Huang

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Research interests: D-modules, period integrals, mirror symmetry, Hodge theory, arithmetic geometry, and their interconnections



Bong Lian

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Research interests: Math physics, algebra, geometry



Chien-Hao Liu

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Affiliation: Harvard University



Research Visitors

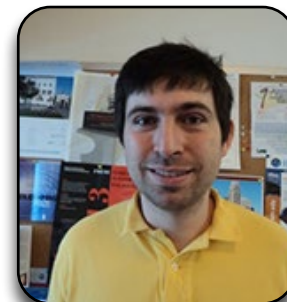
Valentino Tosatti

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Affiliation: Northwestern University

Research interests: Differential geometry, geometric analysis, complex algebraic geometry, and partial differential equations



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Affiliation: Einstein Institute of Mathematics, The Hebrew University of Jerusalem

Research interests: Algebraic and arithmetic geometry, Algebraic groups, Geometric aspects of Langlands's program



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Research interests: Economics, applied mathematics, digital technologies



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Jie Xiao

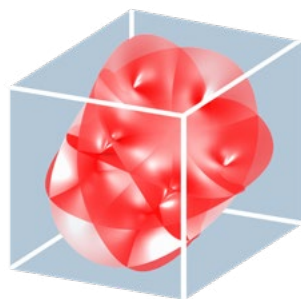
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