Michail Savvas - Curriculum Vitae

CONTACT DETAILS	Department of Mathematics University of Texas, Austin 2515 Speedway Austin, TX 78712	Telephone: +1 (650) 441-5717 E-mail: msavvas@utexas.edu Webpage: https://web.ma.utexas.edu/users/ms86959/

EMPLOYMENT

The University of Texas at Austin — Austin, Texas, U.S.A.
Postdoctoral Instructor — *07/2021 - present*

University of California, San Diego — La Jolla, California, U.S.A.
S.E.W. Visiting Assistant Professor — *07/2018 - 06/2021*

RESEARCH VISITS

KTH Royal Institute of Technology, Stockholm, Sweden. — *07/2022*

Seoul National University, Seoul, South Korea. — *05/2018, 05/2022*

Institut des Hautes Études Scientifiques (IHÉS), Bures-sur-Yvette, France. *06/2019 - 09/2019*

EDUCATION

Stanford University — Stanford, California, U.S.A.
Ph.D. in Mathematics. Advisor: Jun Li. — *09/2012 - 06/2018*

University of Cambridge, Trinity College — Cambridge, U.K.
- Master of Mathematics ("Cambridge Part III"), *Distinction.* — *10/2011 - 06/2012*
  Part III Essay : Cohomology of coherent sheaves on complex
  algebraic varieties and Hodge theory.
- B.A. Honours Mathematics, *First Class Honours* in each year. — *10/2008 - 06/2011*

PUBLICATIONS AND PREPRINTS

Good Moduli Spaces in Derived Algebraic Geometry (with E. Ahlqvist, J. Hekking and M. Pernice). *Submitted.* arXiv:2309.16574.

Cosection Localization for D-Manifolds and (−2)-Shifted Symplectic Derived Schemes, Revisited. *Submitted.* arXiv:2309.03066.

Stabilizer Reduction for Derived Stacks and Applications to Sheaf-Theoretic Invariants (with J. Hekking and D. Rydh). *Submitted.* arXiv:2209.15039.

Virtual Riemann–Roch Theorems for Almost Perfect Obstruction Theories. **manuscripta mathematica** (2023). arXiv:2207.14397.

The d-critical Structure on the Quot Scheme of Points of a Calabi–Yau 3-fold (with A. Ricolfi). **Communications in Contemporary Mathematics** (to appear). arXiv:2106.16133.

Cosection Localization and Vanishing for Virtual Fundamental Classes of D-Manifolds. **Advances in Mathematics**, Volume 398, 2022, 108232. arXiv:2007.14023.

Localizing Virtual Structure Sheaves for Almost Perfect Obstruction Theories (with Y.-H. Kiem). **Forum of Mathematics, Sigma**, Volume 8, 2020, e61. arXiv:2007.06820.

Intrinsic Stabilizer Reduction and Generalized Donaldson–Thomas Invariants. **Journal of the Institute of Mathematics of Jussieu**, 22(4), 1987-2025. arXiv:2005.13768.

K-Theoretic Generalized Donaldson–Thomas Invariants (with Y.-H. Kiem). **International Mathematics Research Notices (IMRN)**, Volume 2022, Issue 3, February 2022. arXiv:1912.04966.

Generalized Donaldson–Thomas Invariants via Kirwan Blowups (with Y.-H. Kiem and J. Li). **Journal of Differential Geometry** (to appear). arXiv:1712.02544.

Categorical Semantics of Compositional Reinforcement Learning (with G. Bakirtzis and U. Topcu). *Submitted.* arXiv:2208.13687.

Shutout Games on Graphs (with A. Cioba). **Mathematika**, volume 61 (2015), issue 03, pp. 523-530. Preprint version available here.

Grants and Scholarships		
AMS-Simons Travel Grant		07/2020 - 06/2023
Onassis Foundation Graduate Scholarship		09/2016 - 08/2018
A.G. Leventis Foundation Scholarship		09/2016 - 08/2017
Stanford Graduate Fellowship		09/2012 - 08/2017
William R. and Sara Hart Kimball Fellow for three years.		
George and Marie Vergottis Bursary		10/2008 - 06/2011
Three year scholarship from the Vergottis Fund of the Cambridge European Trust.		
Woods Fund for summer research, Trinity College, Cambridge.		2011
Heilbronn Prize for outstanding academic performance, Trinity College, Cambridge.		2011
Senior Scholarship for outstanding academic performance, Trinity College, Cambridge.		2010, 2011
Junior Scholarship for outstanding academic performance, Trinity College, Cambridge.		2009
IKY (State Scholarships Foundation, Greece) Scholarships		2007, 2008
Scholarships for ranking third in the entrance examinations for the E.C.E. school of N.T.U.A. and ranking first at the end of the first academic year.		
Nikolaos G. Papadimitriou Foundation Scholarship		10/2007 - 06/2009

Invited Talks		
Algebra Seminar, University of Oregon.		October 2023
Algebraic Geometry and Number Theory Seminar, Rice University.		September 2023
Workshop on Moduli Spaces, Virtual Invariants and Shifted Symplectic Structures, Korea Institute for Advanced Study (KIAS).		June 2023
Algebra Seminar, Michigan State University.		February 2023
Mathematical Physics Seminar, University of Pennsylvania.		February 2023
Algebraic Geometry Seminar, University of Michigan.		February 2023
Department Colloquium, Stony Brook University.		October 2022
Algebraic Geometry Seminar, Stony Brook University.		October 2022
Geometry Seminar, University of Texas, Austin.		September 2022
Algebra, Number Theory and Combinatorics Session, Second Congress of Greek Mathematicians, National Technical University of Athens.		July 2022
Greek Mathematical Seminar, online.		June 2022
Algebraic Geometry Seminar, Seoul National University.		May 2022
Algebraic Geometry Seminar, Stanford University.		April 2022
Department Colloquium, University of Hawai'i at Mānoa.		March 2022
Geometry Seminar, Aristotle University of Thessaloniki, Greece.		November 2021
Algebraic Geometry in String Theory Seminar, Harvard Center of Mathematical Sciences and Applications (CMSA).		November 2021
Enumerative Geometry Seminar, University of California, San Diego.		October 2021
Algebraic Geometry Seminar, University of Trieste and SISSA.		May 2021
Geometry Seminar, University of Texas, Austin.		March 2021
Spring Eastern Sectional Meeting of the American Mathematical Society.		March 2021
Algebra Seminar, University of Oregon.		November 2020
Southern California Algebraic Geometry Seminar, University of Southern California.		October 2019
More Algebraic Geometry at Imperial College Seminar, Imperial College London.		June 2019
Algebraic Geometry Seminar, University of California, San Diego.		September 2018
Algebraic Geometry Seminar, Seoul National University.		May 2018
Moduli Spaces and Representation Theory Seminar, Mathematical Sciences Research Institute.		April 2018
Algebraic Geometry Seminar, University of Arizona.		March 2018
Algebraic Geometry Seminar, Columbia University.		February 2018
Shanghai Center for Mathematical Sciences, Fudan University.		August 2017

Teaching, Mentoring and Outreach		
The University of Texas at Austin		
Instructor of Record		
M 408K : Differential Calculus.		Fall 2023

M 408C : Differential and Integral Calculus.	Fall 2021
M 328K : Introduction to Number Theory.	Spring 2023
M 365C : Real Analysis I.	Fall 2022

Sunday Morning Math Group (SMMG) — Fall 2022 - present
Gave an expository talk on the Banach–Tarski Paradox in April 2023.
Volunteering to lead and assist with SMMG outreach activities for students,
teachers, and parents.

Prison Mathematics Project — 08/2022 - present
Volunteering as a "pen-pal" mentor for an incarcerated adult to provide
support and guidance for self-education in algebra.

UT Math Club — Spring 2023
Gave an expository talk titled "Moduli Spaces in Geometry".

Mathematicians of Color Alliance of Texas (MoCAT) Pizza Seminar — Spring 2021
Gave an introductory background talk on Diophantine Equations.

University of California, San Diego

Instructor of Record

MATH 10A : Calculus I.	Fall 2018, Fall 2019
MATH 10B : Calculus II.	Winter 2019, Winter 2020, Spring 2021
MATH 18 : Linear Algebra.	Spring 2021
MATH 102 : Applied Linear Algebra.	Spring 2019, Fall 2019
MATH 109 : Mathematical Reasoning.	Winter 2019, Winter 2020, Winter 2021

Research Communications Program Mini-Grant — 11/2019 - 09/2020
Grant for project aiming to develop visual metaphors and host presentations
to communicate algebraic geometry at a K-12 school in the San Diego area.

Research Brief for General Audience — September 2020
YouTube video, available `here`, to communicate my research to a wide audience.

Teaching and Learning Commons Content Training Speaker — Winter 2020
Presentation on effective learning strategies for mathematics courses
for Supplemental Instruction leaders and tutors.

Association for Women in Mathematics (AWM) Mentor — Spring 2021
Served as a mentor for a graduate student as part of UCSD's chapter of AWM
one-on-one mentoring program for graduate students and postdocs.

Stanford University

Instructor of Record

MATH 20 : Calculus.	Fall 2017, Winter 2018

Teaching Assistant (TA)

MATH 63CM : Modern Mathematics: Continuous Methods.	Spring 2017
MATH 53 : Differential Equations with Linear Algebra.	Spring 2016
MATH 53H : Honors Multivariable Mathematics, Ordinary Differential Equations.	Spring 2015
MATH 51 : Linear Algebra and Differential Calculus of Several Variables.	Winter 2014

Course Assistant (CA)

MATH 215A : Complex Analysis (graduate level).	Fall 2014
MATH 120 : Groups and Rings.	Fall 2013

Stanford Undergraduate Research Institute in Mathematics (SURIM) — Summer 2016
Graduate student mentor for 4 Stanford undergraduate students working on group
research project "Toric Varieties and their Geometry".

Teaching Assistant Mentor — Spring 2016 & 2017
Provided teaching guidance to 2 Stanford graduate students.

Stanford Math Directed Reading Program (DRP) — Spring 2017
Mentored a first-year undergraduate student learning about complex analysis.

PROFESSIONAL SERVICE

Referee reports and quick opinions for: Geometry & Topology, Documenta Mathematica, Selecta Mathematica, International Mathematics Research Notices, Journal of Algebraic Geometry, Journal of Dif-

ferential Geometry, Journal of Geometry and Physics, Advances in Mathematics, Acta Mathematica Sinica, English Series, Bulletin of the London Mathematical Society, Proceedings of the Royal Society A, Forum of Mathematics, Sigma.

Reviewer for: Zentralblatt MATH, Mathematical Reviews.

Co-organizer of the Geometry seminar at the University of Texas at Austin during the academic year 2022-2023 and the Algebraic Geometry seminar at the University of California, San Diego during the academic year 2020-2021.

Led one of the Exercise/Q & A sessions for Richard Thomas' minicourse on Vafa-Witten invariants for the 2021 IHÉS Summer School "Enumerative Geometry, Physics and Representation Theory".

CONFERENCES AND WORKSHOPS ATTENDED	**Texas Algebraic Geometry Symposium**, Texas A&M University.	October 2022
	2021 IHÉS Summer School **"Enumerative Geometry, Physics and Representation Theory"**, online.	July 2021
	FRG Workshop on Moduli Spaces and Stability, online.	December 2020
	Simons Conference on Rationality, online.	July 2020
	Western Algebraic Geometry Symposium	
	Online, virtual edition.	April 2020
	University of California, Los Angeles.	October 2017
	University of British Columbia, Vancouver.	April 2017
	University of Washington, Seattle.	October 2015
	University of California, Davis.	February 2015
	University of Colorado, Boulder.	April 2014
	University of California, San Diego.	November 2013
	Southern California Algebraic Geometry Seminar	
	University of California, San Diego.	February 2020
	University of Southern California.	October 2019
	University of California, Los Angeles.	November 2018
	Introductory Workshop: Enumerative Geometry Beyond Numbers, Mathematical Sciences Research Institute, Berkeley.	January 2018
	"Modern Moduli Theory" Graduate School, University of Oxford.	September 2017
	Workshop on Moduli Spaces of Sheaves and Shtukas, Shanghai Center for Mathematical Sciences, Fudan University.	July 2017
	Enumerative Geometry, Mirror Symmetry, and Physics, University of Illinois, Urbana-Champaign.	July 2017
	Crossing the Walls in Enumerative Geometry, Columbia University, New York.	January 2017
	Hall Algebras, Enumerative Invariants and Gauge Theory, Fields Institute, University of Toronto.	November 2016
	Derived Structures in Geometry and Representation Theory, University of Oxford.	September 2015
	AMS Summer Institute in Algebraic Geometry, University of Utah, Salt Lake City.	July 2015
	Moduli Spaces of Curves and Maps, Stanford University.	February 2015
	Fall Western Sectional AMS Meeting, San Francisco State University.	October 2014
	Derived Categories Summer School, Centre Henri Lebesgue, Nantes, France.	June 2014
	String Math Summer School, UBC, Vancouver.	June 2014
	Graduate Workshop on Geometry of Hilbert Schemes, Simons Center for Geometry and Physics, SUNY Stony Brook.	November 2013
	Recent Advances in Hodge Theory: Period Domains, Algebraic	June 2013

Cycles, and Arithmetic. Summer School, UBC, Vancouver.

Awards and Honors	**Silver medal** in the International Mathematics Competition (**IMC**) for University students, Blagoevgrad, Bulgaria.	July 2008
	Bronze medal in the South Eastern European Mathematical Olympiad for University Students (**SEEMOUS**), Athens, Greece.	March 2008
	Bronze medal in the International Mathematical Olympiad (**IMO**), Hanoi, Vietnam.	July 2007
	Bronze medal in the Balkan Mathematical Olympiad (**BMO**), Rhodes, Greece.	May 2007
	Gold medal in the Hellenic Mathematical Olympiad (**HMO**), Athens, Greece.	February 2007

Languages   **English:** fluent, **German:** fluent, **Greek:** native language, **Spanish:** basic.

Computer Skills   LaTeX, C, C++, Python, MATLAB, R, Unix shell