

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/ Citizenship: Greece
EMPLOYMENT	The University of Texas at Austin Postdoctoral Instructor University of California, San Diego S.E.W. Visiting Assistant Professor	Austin, Texas, U.S.A. 07/2021 - present La Jolla, California, U.S.A. 07/2018 - 06/2021
RESEARCH VISITS	KTH Royal Institute of Technology , Stockholm, Sweden. Seoul National University , Seoul, South Korea. Institut des Hautes Études Scientifiques (IHÉS) , Bures-sur-Yvette, France.	07/2022 05/2018, 05/2022 06/2019 - 09/2019
EDUCATION	Stanford University Ph.D. in Mathematics. Advisor: Jun Li. University of Cambridge, Trinity College <ul style="list-style-type: none">Master of Mathematics (“Cambridge Part III”), <i>Distinction</i>. Part III Essay : Cohomology of coherent sheaves on complex algebraic varieties and Hodge theory.B.A. Honours Mathematics, <i>First Class Honours</i> in each year.	Stanford, California, U.S.A. 09/2012 - 06/2018 Cambridge, U.K. 10/2011 - 06/2012 10/2008 - 06/2011
PUBLICATIONS AND PREPRINTS	<u>Algebraic Geometry</u> <ul style="list-style-type: none"><i>Stabilizer Reduction of Derived Stacks and Applications to Sheaf-Theoretic Invariants</i> (joint with J. Hekking and D. Rydh). <i>Submitted</i>. arXiv:2209.15039.<i>Virtual Riemann-Roch Theorems for Almost Perfect Obstruction Theories</i>. <i>manuscripta mathematica (to appear)</i>. arXiv:2207.14397.<i>The d-critical Structure on the Quot Scheme of Points of a Calabi-Yau 3-fold</i> (joint with A. Ricolfi). <i>Submitted</i>. arXiv:2106.16133.<i>Cosection Localization and Vanishing for Virtual Fundamental Classes of D-Manifolds</i>. <i>Advances in Mathematics, Volume 398, 2022, 108232</i>. arXiv:2007.14023.<i>Localizing Virtual Structure Sheaves for Almost Perfect Obstruction Theories</i> (joint with Y.-H. Kiem). <i>Forum of Mathematics, Sigma, Volume 8, 2020, e61</i>. arXiv:2007.06820.<i>Generalized Donaldson-Thomas Invariants of Derived Objects via Kirwan Blowups</i>. <i>Submitted</i>. arXiv:2005.13768.<i>K-Theoretic Generalized Donaldson-Thomas Invariants</i> (joint with Y.-H. Kiem). <i>International Mathematics Research Notices (IMRN), Volume 2022, Issue 3, February 2022</i>. arXiv:1912.04966.<i>Generalized Donaldson-Thomas Invariants via Kirwan Blowups</i> (joint with Y.-H. Kiem and J. Li). <i>Journal of Differential Geometry (to appear)</i>. arXiv:1712.02544. <u>Other (Artificial Intelligence, Combinatorics)</u> <ul style="list-style-type: none"><i>Categorical Semantics of Compositional Reinforcement Learning</i> (joint with G. Bakirtzis and U. Topcu). <i>Submitted</i>. arXiv:2208.13687.<i>Shutout Games on Graphs</i> (joint with A. Cioba). <i>Mathematika, volume 61 (2015), issue 03, pp. 523-530</i>. Preprint version available here.	
GRANTS AND SCHOLARSHIPS	AMS-Simons Travel Grant Onassis Foundation Graduate Scholarship A.G. Leventis Foundation Scholarship Stanford Graduate Fellowship	07/2020 - 06/2023 09/2016 - 08/2018 09/2016 - 08/2017 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

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 408C : Differential and Integral Calculus. Fall 2021

M 328K : Introduction to Number Theory. Spring 2023

M 365C : Real Analysis I. Fall 2022

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

Sunday Morning Math Group (SMMG) Fall 2022 - present
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.

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 opinion for: Geometry & Topology, Documenta Mathematica, International Mathematics Research Notices, Journal of Algebraic Geometry, Journal of Differential Geometry, Advances in Mathematics, Acta Mathematica Sinica, English Series, Bulletin of the London Mathematical Society, Proceedings of the Royal Society A.

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 Cycles, and Arithmetic. Summer School, UBC, Vancouver.	June 2013
AWARDS AND HONOURS	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++, Pascal, Python, MATLAB, R, Unix shell	