Navid Nabijou

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Citizenship: British and Canadian
Birth year: 1991

Research Interests

Algebraic geometry; moduli spaces and enumerative invariants; logarithmic and orbifold structures; combinatorial and tropical geometry.

Employment

Sep 2022–present	Lecturer (Assistant Professor), Queen Mary University of London
Sep 2020–Sep 2022	Herchel Smith Postdoctoral Research Fellow, University of Cambridge
Sep 2020–Sep 2022	Research Associate, St John's College, Cambridge
Oct 2018–Aug 2020	Research Associate, University of Glasgow Mentor: Professor Michael Wemyss

Education

Oct 2014–Sep 2018	PhD in Mathematics, Imperial College London Supervisor: Professor Tom Coates
Oct 2010–Jun 2014	MSci (incorporating BSc) in Mathematics, Imperial College London First class honours; ranked first in year

Publications/Preprints

All arXiv preprints submitted for publication.

Feb 2024	*Logarithmic negative tangency and root stacks* with Luca Battistella and Dhruv Ranganathan arxiv:2402.08014
Oct 2023	*Gromov–Witten theory of bicyclic pairs* with Michel van Garrel and Yannik Schuler arxiv:2310.06058
Jun 2023	*Toric configuration spaces: the bipermutahedron and beyond* arxiv:2306.03215
Nov 2022	*Universality for tropical and logarithmic maps* with Gabriel Corrigan and Dan Simms arxiv:2211.15719
Sep 2022	*Divisors and curves on logarithmic mapping spaces* with Patrick Kennedy-Hunt, Qaasim Shafi, and Wanlong Zheng arxiv:2209.00630
Jul 2022	*Tropical expansions and toric variety bundles* with Francesca Carocci arxiv:2207.12541

Mar 2022   *Gromov–Witten theory via roots and logarithms*
with Luca Battistella and Dhruv Ranganathan
Geometry & Topology, to appear
arxiv:2203.17224

Sep 2021   *GV and GW invariants via the enhanced movable cone*
with Michael Wemyss
Moduli, to appear
arxiv:2109:13289

Sep 2021   *Rubber tori in the boundary of expanded stable maps*
with Francesca Carocci
Journal of the London Mathematical Society, vol. 109, no. 3 (2024)
arxiv:2109.07512

Mar 2021   *The local-orbifold correspondence for simple normal crossings pairs*
with Luca Battistella, Hsian-Hua Tseng, and Fenglong You
Journal of the Institute of Mathematics of Jussieu, vol. 22, no. 5 (2023)
arxiv:2103.09299

Jul 2020   *Tangent curves to degenerating hypersurfaces*
with Lawrence Jack Barrott
Journal für die reine und angewandte Mathematik (Crelle's Journal), vol. 2022, no. 793 (2022)
arxiv:2007.05016

Aug 2019   *Gromov–Witten theory with maximal contacts*
with Dhruv Ranganathan
Forum of Mathematics, Sigma, vol. 10, e5 (2022)
arxiv:1908.04706

Jul 2019   *Curve counting in genus one: elliptic singularities and relative geometry*
with Luca Battistella and Dhruv Ranganathan
Algebraic Geometry, vol. 8, no. 6 (2021)
arxiv:1907.00024

Apr 2018   *The fundamental solution matrix and relative stable maps*
European Journal of Mathematics, vol. 5, no. 3 (2019)
arxiv:1804.00678

Oct 2017   *Relative quasimaps and mirror formulae*
with Luca Battistella
International Mathematics Research Notices (IMRN), vol. 2021, no. 10 (2021)
arxiv:1710.11158

Dec 2013   *Mutations of fake weighted projective spaces*
with Tom Coates, Samuel Gonshaw, and Alexander Kasprzyk
Electronic Journal of Combinatorics, vol. 21, no. 4 (2014)
arxiv:1312.0921

Invited Lecture Series

Sep 2019   Mini-course: *Moduli Spaces of Curves and Hurwitz Theory*
Summer School Around Moduli Spaces, University of Saarland

Conference Grants

Apr 2024   *Facets of Algebraic Geometry* at QMUL
LMS Celebrating New Appointments (£500)

Sep 2023   *A Tropical Panorama* at Trinity College Dublin
Hamilton Mathematics Institute (€6000), Foundation Compositio (€2500)
with Marvin Anas Hahn

Sep 2022   *COMB in CAMB* at the University of Cambridge
LMS (£5500), Foundation Compositio (€5000), Heilbronn (£3000)
with Luca Battistella

Apr 2022   Research in Groups, ICMS, Edinburgh
with Luca Battistella and Dhruv Ranganathan

Apr 2019   Research in Pairs, MFO, Oberwolfach
with Luca Battistella

PhD Students

Cat Rust (2023-2027)

Service

Recommendation letters at various levels: undergraduate (2), PhD (3), postdoctoral (4)

Referee reports and quick opinions for leading journals (details on request)

Reviews for MathSciNet

Administration

Sep 2023–present   Deputy EDI Lead, QMUL School of Mathematical Sciences

Feb 2022–present   Advisory Board (Early-Career), UK Academy for the Mathematical Sciences

Jan 2022–present   Co-lead, EDI Ethnic Minorities Group, QMUL School of Mathematical Sciences

Dec 2020, 2021   Undergraduate admissions at St John's College, Cambridge
Interviewing ~50 applicants, participating in decision meetings and producing interview reports

Conference and Seminar Organisation

Apr 2024   Organiser, Facets of Algebraic Geometry Conference at QMUL

Sep 2022–present   Co-organiser, QMUL Internal Mathematics Colloquium

Sep 2023   Co-organiser, A Tropical Panorama Workshop in Dublin

Jan 2023–April 2023   Co-organiser, QMUL Algebra and Number Theory Seminar

Sep 2022   Co-organiser, COMB in CAMB Summer School in Cambridge

Jan 2021–Mar 2022   Organiser, Guided Meditations in Logarithmic Gromov–Witten Theory

Jan–Jul 2021   Organiser, Cambridge Algebraic Geometry Group Meeting

Oct 2015–Jun 2016   Organiser, Imperial College Junior Geometry Seminar

Nov 2012–Mar 2013   Co-founder and co-organiser, Imperial College Undergraduate Mathematics Colloquium

Teaching

Lecture Courses

Autumn 2023   Convergence and Continuity, Queen Mary University of London
Course head and lecturer, undergraduate course, 55 hours total

Spring 2023, 2024	Further Topics in Algebra, Queen Mary University of London Course head and lecturer, master's course: 34 hours total
Jan–Mar 2022	Toric Geometry (Part III), University of Cambridge Course head and lecturer, master's course: 29 hours total
Nov–Dec 2019	Groups, Rings and Modules, SMSTC Course head and lecturer, second half of graduate course (video-conferenced to 8 Scottish universities): 10 hours total
Jan–Mar 2019	Galois Theory (4H), University of Glasgow Course head and lecturer, final-year undergraduate course: 29 hours total

Mentoring, Supervisions, Tutorials

Sep 2022–present	Advisor for undergraduate students, Queen Mary University of London
Feb–Jun 2022	Setter and assessor for Part III essay (title: *Moduli of Curves*) University of Cambridge
Oct 2020–May 2022	Tutor ("supervisor") for numerous undergraduate courses St John's College, Cambridge
Jul-Aug 2021, 2022	Supervisor for undergraduate summer research projects University of Cambridge
Oct 2018–Sep 2019	Supervisor for master's dissertation (title: *Hurwitz theory*) University of Glasgow
Oct 2014–Sep 2018	Tutor for numerous undergraduate courses Imperial College London
Oct 2013–Mar 2014	Mentor for first-year undergraduates Imperial College London

Outreach

Jul 2022	Outreach sessions (*Symmetry: the world through the eyes of a mathematician*), as part of the "Intro to Maths at Uni" programme, encouraging students from under-represented ethnic backgrounds to apply to study mathematics at selective universities.
Nov 2021	Outreach course (*The colourful world of graphs: from bridges to borders*), as part of London Maths Outreach: four interactive sessions in London schools
Nov 2015	Outreach lesson (*Polyhedra and Symmetry*) at Kendrick School, Reading
Jun 2013	Member of student panel for Undergraduate Open Day in the Department of Mathematics at Imperial College London

Talks

Jul 2024	LMS Invited Lectures, Imperial College London
Apr 2024	Facets of Algebraic Geometry, QMUL
Apr 2024	GLEN Workshop in Tropical Geometry, University of St Andrews
Mar 2024	Enumerative Geometry and Arithmetic, Lorenz Center, Leiden
Feb 2024	Geometry & Topology Seminar, Imperial College London
Jan 2024	Internal School Colloquium, QMUL

Aug 2023	Curves: Algebraic, Tropical and Logarithmic, BIRS
Jul 2023	Undergraduate Summer Research Colloquium, University of Cambridge
Apr 2023	Groups, Arithmetic and Algebraic Geometry Seminar, EPFL
Mar 2023	Geometry Seminar, Trinity College Dublin
Feb 2023	Tropical Geometry and Combinatorics Seminar, QMUL
Feb 2023	RéGA Seminar, Institut Henri Poincaré, Paris
Feb 2023	Tropical Geometry in Frankfurt (TGiF), University of Frankfurt
Jan 2023	Structures in Enumerative Geometry, University of Sheffield
Nov 2022	Algebraic and Arithmetic Geometry Seminar, University of Utrecht
Nov 2022	Algebra and Number Theory Seminar, QMUL
Jun 2022	Sheffield Geometry and Physics Seminar, University of Sheffield
May 2022	Intercontinental Moduli and Algebraic Geometry Zoominar
Apr 2022	Algebraic Geometry Seminar, University of Glasgow
Jan 2022	Algebraic Geometry Seminar, University of Cambridge
Dec 2021	Online Workshop on Mirror Symmetry, Kyoto University
Nov 2021	Geometric Representation Seminar, YMSC, Tsinghua University
Nov 2021	Freemath Seminar
Oct 2021	Non-Archimedean and Tropical Geometry, Goethe University Frankfurt
May 2021	Weekly Geometry Seminar, KIAS
Feb 2021	Subdivisions Seminar, University of Bonn
Oct 2020	Fanosearch Group Meeting, Imperial College London
Sep 2020	Online Algebraic Geometry Seminar, University of Nottingham
Feb 2020	Physical Mathematics Seminar, University of Heidelberg
Feb 2020	Algebraic Geometry Seminar, University of Liverpool
Dec 2019	Edinburgh Geometry Seminar (EDGE), University of Edinburgh
Nov 2019	Algebraic Geometry Seminar, University of Warwick
Oct 2019	Number Theory and Algebraic Geometry Seminar, Boston College
Jul 2019	Workshop on Mirror Symmetry and Cluster Algebras (5CinG), University of Cambridge
Jul 2019	Geometry and Mathematical Physics Seminar, University of Birmingham
Jun 2019	Workshop: Logarithmic Enumerative Geometry and Mirror Symmetry, MFO, Oberwolfach
Apr 2019	British Mathematics Colloquium, University of Lancaster

Mar 2019	COW Seminar, University of Birmingham
Feb 2019	Geometry and Topology Seminar, University of Glasgow
Dec 2018	NCTS Seminar on Algebraic Geometry, National Taiwan University
Oct 2018	KCL/UCL Junior Geometry Seminar, University College London
Aug 2018	Workshop on Degenerate Contributions to Enumerative Invariants, Imperial College London
May 2018	Algebraic Geometry Seminar, Oxford University
May 2018	MAGIC Seminar, Imperial College London
May 2018	Front Range Algebraic Geometry Seminar, Colorado State University
Apr 2018	Séminaire de Géométrie Algébrique, Université d'Angers
Mar 2018	Structures in Enumerative Geometry (Poster Session), MSRI Berkeley
Feb 2018	London Geometry and Topology Seminar, Imperial College London
Feb 2018	Warwick Algebraic Geometry Seminar, University of Warwick
Nov 2017	Edinburgh Geometry Seminar (EDGE), University of Edinburgh
Nov 2017	Mirror Symmetry Days, University of Kent
Feb 2016	Symplectic Cut Seminar, King's College London
Oct 2015	Symplectic Cut Seminar, King's College London
Jan 2015	Junior Geometry Seminar, Imperial College London
Nov 2013	Undergraduate Mathematics Colloquium, Imperial College London

Prizes

Oct 2014	Governors' MSci Prize in Mathematics (£250) Awarded by Imperial College London to the highest-ranked MSci student in the final examinations
Oct 2014	Lance Ware Mensa Award (£300) Awarded by Imperial College London for academic excellence to a student of mathematics, biochemistry or medicine
Oct 2013	Gloucester Research Prize (£100) Awarded by Imperial College London for exceptional third-year exam results
Oct 2012	Gloucester Research Prize (£100) Awarded by Imperial College London for exceptional second-year exam results
Nov 2008	Senior UK Mathematics Challenge Gold Award and advancement to Round 1 of BMO

Expository Articles

Apr 2015	*Virtual Fundamental Classes in Gromov–Witten Theory* Supervisor: Dr Cristina Manolache

Jun 2014   *Homotopy Groups of the Spheres*
                Supervisor: Professor Richard Thomas

Other Research Experience

Jun–Sep 2013   Research Assistant, Fanosearch Group, Imperial College London
                   Supervisors: Professor Tom Coates and Dr Alexander Kasprzyk

Membership of Professional Associations

London Mathematical Society (LMS)