

Navid Nabijou

Office MB-B27
School of Mathematical Sciences
Queen Mary University of London
Mile End Road, London E1 4NS
United Kingdom

n.nabijou@qmul.ac.uk
navidnabijou.com

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
Épjournal de Géométrie Algébrique (EPIGA), to appear
arxiv:2211.15719
- Sep 2022 *Divisors and curves on logarithmic mapping spaces*
with Patrick Kennedy-Hunt, Qaasim Shafi, and Wanlong Zheng
Selecta Mathematica, to appear
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 (further 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

Public Engagement

Talks

- Jun 2024 Count Me In, University of Edinburgh
- Apr 2024 Mathematics and Statistics Awareness Month, Northeastern University London
- Jul 2023 Undergraduate Summer Research Colloquium, University of Cambridge

Classes

- Jul 2022 *Symmetry: the world through the eyes of a mathematician*. Interactive class delivered 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 *The colourful world of graphs: from bridges to borders*. Interactive course delivered as part of London Maths Outreach; four lessons at Harris Academy, St John’s Wood, spread across four weeks.
- Nov 2015 *Polyhedra and Symmetry*. Interactive class delivered at Kendrick School, Reading, via the outreach office at Imperial College London.

Other

- Jun 2013 Member of student panel for Undergraduate Open Day in the Department of Mathematics at Imperial College London

Research Talks

- Jul 2024 LMS Invited Lectures, Imperial College London
- May 2024 COW Seminar, University of Liverpool
- Apr 2024 Facets of Algebraic Geometry, QMUL
- Apr 2024 Algebraic Geometry Seminar, Academia Sinica
- 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
- 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, Lancaster/Cambridge/Imperial College
- 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)