Curriculum Vitae

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Name: Eoin Mackall
Citizenship: United States

Employment

Jul 2023 –		Lecturer University of California, San Diego
Aug 2020 – Jul 2023	Sergei Novikov Postdoctoral Fellow University of Maryland, College Park	
Jan 2020 – Aug 2020	Postdoctoral Fellow University of Victoria, Victoria	

Education

2015–2019	Ph.D. in Mathematics University of Alberta, Edmonton Advisor: Nikita Karpenko
2013–2015	B.A. in Mathematics California State University, Chico

Awards

2019	Anton Alexander Cseuz Gold Medal in Mathematics
2019	Faculty of Science Dissertation Award
2017	University of Alberta Graduate Student Teaching Award
2014	Undergraduate Award for Research and Creativity Grant

Publications/Preprints

2024　Elliptic curves and their principal homogeneous spaces: splitting Severi–Brauer varieties
coauthored with Nick Rekuski
Preprint
https://www.eoinmackall.com/s/E_Torsors_in_Severi_Brauer_Varieties.pdf

2023　On the algebraizability of formal deformations in K-cohomology
Submitted
https://www.eoinmackall.com/s/representable_short.pdf

2023　The period and index of a generic geometrically elliptic normal curve
Submitted
https://www.eoinmackall.com/s/gengeom.pdf

2022　Pro-representability of K^M-cohomology in weight 3 generalizing a result of Bloch

Annals of K-theory
https://www.eoinmackall.com/s/milnor_rev.pdf

2022   On the Chow groups of a biquaternion Severi–Brauer variety
Pacific Journal of Mathematics
https://www.eoinmackall.com/s/biquaternion.pdf

2021   Algebraic connective K-theory of a Severi-Brauer variety with prescribed reduced behavior
Documenta Mathematica
https://www.eoinmackall.com/s/revconnectivek2.pdf

2020   A universal coefficient theorem with applications to torsion in Chow groups of Severi–Brauer varieties
New York Journal of Mathematics
https://www.eoinmackall.com/s/tauR.pdf

2020   Codimension 2 cycles on Severi-Brauer varieties and decomposability
Manuscripta Mathematica
https://www.eoinmackall.com/s/revcodimension2.pdf

2020 $\mathbb{A}^1$-homotopy equivalences and a theorem of Whitehead
Homology, Homotopy and Applications
https://www.eoinmackall.com/s/revwhiteheadthm.pdf

2020   Universal additive Chern classes and a GRR-type theorem
Journal of Algebra
https://www.eoinmackall.com/s/revBthy2.pdf

2019   Functorality of the gamma filtration and computations for some twisted flag varieties
Annals of K-theory
https://www.eoinmackall.com/s/revfiltrations.pdf

2019   On the K-theory coniveau epimorphism for products of Severi-Brauer varieties
coauthored with Nikita Karpenko
Annals of K-theory
https://www.eoinmackall.com/s/revChern-subring.pdf

2019   The Coniveau Filtration on K_1 for Some Severi–Brauer Varieties.
Canadian Mathematical Bulletin
https://www.eoinmackall.com/s/revChowindexp2.pdf

2018   Six variations on a theme: almost planar graphs
coauthored with M. Lipton, T. Mattman, M. Pierce,
S. Robinson, J. Thomas, I. Weinschelbaum.
Involve
https://arxiv.org/pdf/1608.01973.pdf

Books

2022   Algebraic K-theory in Algebraic Geometry (*in progress*)
https://www.eoinmackall.com/k-book

Short Notes

2021   Rational equivalence of curves on a Severi–Brauer variety
https://www.eoinmackall.com/s/Suslin2.pdf
2020   The arithmetic genus of a complete intersection curve
https://www.eoinmackall.com/s/arigen.pdf
2019   The genera of smooth curves in a projective variety
https://www.eoinmackall.com/s/possiblegenera.pdf
2019   A degree-bound on the genus of a projective curve
https://www.eoinmackall.com/s/deggen2.pdf

Mentoring

SP22   Reading course in Commutative Algebra (with 1 undergraduate)
SU22   Informal reading group in Algebraic Geometry (with 2 undergraduates)

Talks Given/Planned

2024   TBD
AMS Sectional on Ramification in Algebraic and Arithmetic Geometry
University of Wisconsin-Milwaukee
2023   Formal representability of Chow groups using Milnor K-theory
CMS Summer Meeting
University of Ottawa
2023   Generic geometric elliptic normal curves on Severi–Brauer varieties
AMS Sectional on Brauer groups in Algebraic Geometry and Arithmetic
University of Cincinnati
2023   Naive $\mathbb{A}^1$-homotopy equivalences and theorems of Whitehead and Zariski
JMM Special Session on Homotopy theory: connections and applications
Boston
2022   Naive $\mathbb{A}^1$-homotopy equivalences and theorems of Whitehead and Zariski
Wayne State Topology Seminar
Wayne State University
2022   Chow groups of biquaternion Severi–Brauer threefolds
Wayne State Mathematics Colloquium
Wayne State University
2022   Naive $\mathbb{A}^1$-homotopy equivalences and theorems of Whitehead and Zariski
MIT topology seminar
Massachusetts Institute of Technology
2022   Pro-representability of some K-cohomology groups
The Euler International Mathematical Institute
Online (https://youtu.be/q93CEszYbCo)
2021   Chow groups of Severi–Brauer varieties and biquaternion algebras
Michigan State University Algebra Seminar

Online
2021 Finding noncyclic torsion in $\mathrm{CH}^2(X)$ when X is a Severi–Brauer variety
Algebra and Geometry of Homogeneous Spaces Online Workshop
Online
2021 Curves on Severi–Brauer varieties and nontriviality of reduced
Whitehead groups
AMS Special Session on Galois Cohomology in Arithmetic Geometry, II
Online
2019 Cycles of large codimension on generic twisted flag varieties of type A
The Forms, Flags, Graphs and Beyond Workshop
University of Ottawa
2018 On torsion in the Chow groups of some Severi-Brauer varieties
The 13th Brauer Group Conference
Pingree Park Colorado State University

Other

Referee for	Journal of Algebra
	Épijournal de Géométrie Algébrique
	Proceedings of the Amitsur Centennial Symposium
Organizer for	Student Algebra Seminar at the University of Alberta