

Research interests

Homological algebra, homotopical algebra, algebraic homotopy, effective methods, higher structures, operads, representation theory, combinatorics.

Employment

1. Postdoctoral researcher – Humboldt Universität, Berlin 04.2022–Present
Research group head: [Gaetan Borot](#)
2. Postdoctoral researcher – MPIMiS, Leipzig 05.2021–03.2022
Research group head: [Bernd Sturmfels](#)

Education

1. Ph.D. in Mathematics – School of Mathematics, Trinity College Dublin 2017–2021
Advisor: [Vladimir Dotsenko](#)
2. Lic. en Cs. Matemáticas – FCEyN, Universidad de Buenos Aires 2013–2017
Advisor: [Mariano Suárez-Álvarez](#)

Teaching

1. *Algebraic operads, Koszul duality and Gröbner bases: an introduction* [Course webpage](#)
[Winter Semester Lecture Series 2021/2022](#) at MPIMiS.

Publications

- [11] *Resolutions of operads via Koszul (bi)algebras.* Open access
Published in [J. Homotopy Relat. Struct.](#)
- [10] *The cohomology of coalgebras in species.* Open access
Published in [Commun. Algebra.](#)
- [9] *The Tamarkin–Tsygan calculus of an associative algebra à la Stasheff.* [arXiv:1907.08888](#)
Published in [Homol. Homotopy Appl.](#) vol. 23(2) pp. 257–282
- [8] *Endofunctors and Poincaré–Birkhoff–Witt theorems.* [arXiv:1804.06485](#)
Published in [Int. Math. Res. Not.](#) [rnz369](#), with V. Dotsenko.
- [7] *Minimal models for monomial algebras.* [arXiv:1804.01435](#)
Published in [Homol. Homotopy Appl.](#) vol. 23(1) pp. 341–366.

Preprints

- [6] *Generalized cohomological field theories in the higher order formalism.* [arXiv:2112.06015](#)
Submitted for publication, with V. Dotsenko and S. Shadrin.
- [5] *Tangent complexes and the Diamond Lemma.* [arXiv:2010.14792](#)
Submitted for publication, with V. Dotsenko.
- [4] *Differential forms on smooth operadic algebras.* [arXiv:2010.08815](#)
Submitted for publication, with Ricardo Campos.
- [3] *A spectral sequence for tangent cohomology of algebraic operads.* [arXiv:2008.00876](#)
Submitted for publication, with J. M. Moreno-Fernández.
- [2] *Derived Poincaré–Birkhoff–Witt theorems.* [arXiv:2003.06055](#)
Submitted for publication, with A. Khoroshkin.
- [1] *FG for Hochschild cohomology of Gorenstein monomial algebras.* [arXiv:1909.00487](#)
Submitted for publication, with V. Dotsenko and V. Gélinas.

Conferences and workshops

February 2021	Higher Homotopical Structures , Opening Workshop, CRM, Barcelona. Invited.
May 2020	DG Methods in Comm. Algebra and Rep. Theory , Univ. of Utah. Contributed.
March 2020	Higher homotopy algebras in topology II , Trinity College Dublin. Contributed.
February 2020	Interactions between algebra and geometry , IRMA, Univ. de Strasbourg. Invited.
May 2019	Homotopy meets homology , Trinity College Dublin. Contributed.
August 2017	Coloquio Latinoamericano de Álgebra , PUCE, Quito, Ecuador. Contributed.

Seminar talks

November 2021	Topology Seminar , Minnesota, USA. Mathematics Seminar , Luxembourg.
October 2021	LAGOON Seminar , United Kingdom.
July 2021	Non-linear algebra research group seminar , MPIMiS, Germany.
June 2021	The Calgary Peripatetic Seminar , Canada.
May 2021	Algebraic rewriting seminar , France.
April 2021	Algebra seminar , Temple University, USA. Seminar on Algebra, Algebraic Geometry and Algebraic Topology , MPIMiS. Homological Algebra Seminar , UBA, Argentina. The Antwerp Algebra Colloquium , University of Antwerp.
March 2021	Algebra, Geometry and Physics seminar , MPIM Bonn and HU Berlin. Séminaire et groupe de travail d'Algèbre , LMPA Josep Liouville, France.
February 2021	Séminaire d'algèbre à l'Institut Henri Poincaré , Paris, France.
January 2021	Algebra/Topology Seminar of the University of Copenhagen.
November 2020	Topology Seminar , EPFL, Lausanne, Switzerland.
October 2020	Deformation Theory Learning Seminar , University of Chicago, Illinois.
July 2020	Homological Algebra Seminar , UBA, Argentina.
November 2019	Colloquium of the Higher School of Economics , Moscow, Russia. Colloquium of the Steklov Mathematical Institute , Moscow, Russia. Institut de Recherche Mathématique Avancée , Université de Strasbourg, France.
September 2019	Algebra and Geometry Seminar , University of Stockholm, Sweden.
July 2019	Homological Algebra Seminar , UBA, Argentina.
March 2019	Catégories supérieures, polygraphes et homotopie , IRIF, Paris, France. Séminaire d'algèbre à l'Institut Henri Poincaré , Paris, France.
November 2018	Seminar of Mathematics , City University of London.
October 2018	Seminar of Mathematics , National Univ. of Ireland in Galway.