Raum 1.325
Institut für Mathematik
Humboldt Universität

Pedro Tamaroff
Curriculum Vitæ

Postdoctoral researcher
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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: Gaëtan 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

Recent teaching

1. *Representation theory of finite groups and associative algebras*   Course webpage
   Winter Semester 2022/2023 at HU-Berlin.
2. *Algebraic operads, Koszul duality and Gröbner bases: an introduction*   Course webpage
   Winter Semester Lecture Series 2021/2022 at MPIMiS. Created and
   delivered 12 lectures (~2 hours each), plus exercise sessions. Produced   Lecture notes
   lecture notes (122 pp, 88 exercises).

Publications

[11] *Generalized cohomological field theories in the higher order formalism.*   arXiv:2112.06015
     Published in Commun. Math. Phys., with V. Dotsenko and S. Shadrin.

[10] *Derived Poincaré–Birkhoff–Witt theorems.*   arXiv:2003.06055
     To appear in Lett. Math. Phys., with A. Khoroshkin.

[9] *FG for Hochschild cohomology of Gorenstein monomial algebras.*   arXiv:1909.00487
     Published in Sel. Mathematica, with V. Dotsenko and V. Gélinas.

[8] *Resolutions of operads via Koszul (bi)algebras.*   Open access
     Published in J. Homotopy Relat. Struct.

[7] *The cohomology of coalgebras in species.*   Open access
     Published in Commun. Algebra.

[6] *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

[5] *Endofunctors and Poincaré–Birkhoff–Witt theorems.*   arXiv:1804.06485
     Published in Int. Math. Res. Not. rnz369, with V. Dotsenko.

[4] *Minimal models for monomial algebras.*   arXiv:1804.01435
     Published in Homol. Homotopy Appl. vol. 23(1) pp. 341–366.

Preprints

[3] *Tangent complexes and the Diamond Lemma.*   arXiv:2010.14792
     Submitted for publication, with V. Dotsenko.

[2] *Differential forms on smooth operadic algebras.*   arXiv:2010.08815
     Submitted for publication, with Ricardo Campos.

[1] *A spectral sequence for tangent cohomology of algebraic operads.*   arXiv:2008.00876
     Submitted for publication, with J. M. Moreno-Fernández.

Organization of academic events

March 2023	CIMPA School: *Crossroads of geometry, rep. theory and higher structures.* Part of organizing committee. School website.

Academic service

Refereed for Journal of Pure and Applied Algebra (JPAA), Algebraic Combinatorics (ALCO) and Bull. Iranian Math. Soc. (BIMS). Reviewed for Mathematical Reviews.

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 2019-20	*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.
March 2019	*Catégories supérieures, polygraphes et homotopie*, IRIF, Paris, France.
	Séminaire d'algèbre à l'Institut Henri Poincaré, Paris, France.