

CURRICULUM VITAE

CAMILO SARMIENTO

MAY 11, 2018

PERSONAL INFORMATION

Date of birth: Sep. 11, 1986
Place of birth: Bogotá, Colombia
Cityzenship: Colombian
Married, two children (ages 4, 0)

CONTACT

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POSITIONS

- Dec. 2016 – Postdoctoral researcher, Universität Leipzig, Germany
Mentor: Karim Adiprasito
- 2016 Visiting scientist, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany
- 2013 – 2015 Postdoctoral researcher, Otto-von-Guericke-Universität Magdeburg, Germany
Mentor: Thomas Kahle

EDUCATION

- 2010 – 2013 PhD in Mathematics, Universität Leipzig. Carried out as member of the International Max Planck Research School of the Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany. Advisor: Jürgen Jost
- 2009 PreDoc preparation period for doctoral studies at the International Max Planck Research School of the Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany
- 2008 Enrolled in M.Sc. in Physics, Universidad de los Andes, Bogotá, Colombia
- 2004 – 2007 B.Sc. in Physics, Universidad de los Andes, Bogotá, Colombia.
Advisor: Andrés Fernando Reyes Lega

GRANTS AND AWARDS

- 2017 *Travel grant (795 EUR)*, awarded by the German Academic Exchange Service (DAAD) to give a talk at the 29th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2017) in London, United Kingdom
- 2015 *Travel grant (1670 EUR)*, awarded by the German Academic Exchange Service (DAAD) to give a talk at the 27th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2015) in Daejeon, South Korea
- 2010 *PhD scholarship* to carry out doctoral studies, awarded by the Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany
- 2009 *PreDoc scholarship*, awarded by the Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany
- 2003 *Mejor estudiante en las pruebas de estado*, Colegio San Viator, Bogotá, Colombia

RESEARCH INTERESTS

Combinatorics and its relations to geometry, algebra and topology; applications of algebraic geometry and commutative algebra

LIST OF PUBLICATIONS

PREPRINTS

- (with C. Ceballos and A. Padrol) *The ν -Tamari lattice as the rotation lattice of ν -trees*, arXiv preprint (<https://arxiv.org/abs/1805.03566>)

REFEREED JOURNAL ARTICLES

- (with C. Ceballos and A. Padrol) *Geometry of ν -Tamari lattices in types A and B*, Transactions of the American Mathematical Society (in press)
- (with T. Kahle and T. Windisch) *Parity binomial edge ideals*, Journal of Algebraic Combinatorics, 44(1) (2016) 99-117 (<http://dx.doi.org/10.1007/s10801-015-0657-3>)
- (with C. Ceballos and A. Padrol) *Dyck path triangulations and extendability*, Journal of Combinatorial Theory, Series A 131 (2015) 187-208 (<http://dx.doi.org/10.1016/j.jcta.2014.10.009>)
- (with S. Potka) *Betti numbers of cut ideals of trees*, Journal of Algebraic Statistics, 4(1) (2013) 108-117 (<http://dx.doi.org/10.18409/jas.v4i1.21>)

IN REFEREED CONFERENCE PROCEEDINGS

- (with C. Ceballos and A. Padrol) *ν -Tamari lattices via subword complexes*, Electronic Notes in Discrete Mathematics 61 (2017) 215–221
Proceedings of the European Conference on Combinatorics, Graph Theory and Applications (EUROCOMB'17) (<https://doi.org/10.1016/j.endm.2017.06.041>)
- (with C. Ceballos and A. Padrol) *Geometry of ν -Tamari lattices in types A and B*, Séminaire Lotharingien de Combinatoire, 78B.68 (2017), 12 pp.
Proceedings of the 29th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2017) (<http://www.mat.univie.ac.at/~slc/wpapers/FPSAC2017/68%20Ceballos%20Padrol%20Sarmiento.pdf>)
- (with C. Ceballos and A. Padrol) *Tropical Catalan subdivisions*, Electronic Notes in Discrete Mathematics 54 (2016) 187–192
Proceedings of Discrete Mathematics Days - JMDA16 (<http://dx.doi.org/10.1016/j.endm.2016.09.033>)
- (with C. Ceballos and A. Padrol) *Dyck path triangulations and extendability (extended abstract)*, in Proceedings of the 27th International Conference on Formal Power Series and Algebraic Combinatorics, Daejeon, (2015) 73–84
Proceedings of the 27th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC 2015) (<https://fpsac2015.sciencesconf.org/70974/document>)

THESES

- *Concerning triangulations of products of simplices*, doctoral thesis, Universität Leipzig (available at <http://nbn-resolving.de/urn:nbn:de:bsz:15-qucosa-146377>)
- *Quantum electrodynamics in external fields*, undergraduate thesis, Universidad de los Andes (unpublished)

TEACHING EXPERIENCE

- 2017 *Teaching assistant*, Numerical Analysis, Optimization, Universität Leipzig, Germany
- 2015 *Teaching assistant*, Commutative Algebra, Otto-von-Guericke-Universität Magdeburg, Germany
- 2008 *Teaching assistant*, Physics 1 for biologists (classical mechanics), Physics 2 (thermodynamics and electromagnetism), Universidad de los Andes, Bogotá, Colombia
Instructor, Experimental Physics 1, Experimental Physics 2, Universidad de los Andes, Bogotá, Colombia
- 2007 *Teaching assistant*, Physics 3 (electromagnetism), Universidad de los Andes, Bogotá, Colombia
Instructor, Experimental Physics 2, Universidad de los Andes, Bogotá, Colombia
- 2006 *Teaching assistant*, Physics 1 (classical mechanics), Universidad de los Andes, Bogotá, Colombia

SELECTED TALKS

- 2017 *29th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC)*, Queen Mary University of London, United Kingdom (contributed talk)
- 2016 *Institute for Algebra and Geometry Oberseminar*, Otto-von-Guericke-Universität Magdeburg, Germany (invited talk)
- 2015 *27th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC)*, KAIST, Daejeon, South Korea (contributed talk)
- 2015 *Special session on convex and integral geometry of the Congress of the Spanish Royal Mathematical Society*, Universidad de Granada, Spain (invited talk)
- 2014 *Discrete Mathematics/Geometry Seminar*, Technische Universität Berlin, Germany (invited talk)
- 2014 *Prague Stochastics 2014, UTIA*, Prague, Czech Republic (contributed talk)
- 2014 *Cuarto Encuentro Colombiano de Combinatoria (ECCO 2014)*, Universidad de los Andes, Bogotá, Colombia (contributed talk)
- 2014 *Discrete Geometry Seminar*, Freie Universität Berlin, Germany (invited talk)
- 2014 *Mathematics Colloquium*, Universidad de los Andes, Bogotá, Colombia (invited talk)
- 2014 *Algebraic Coalescent Seminar*, Goethe-Universität Frankfurt, Germany (invited talk)
- 2013 *Discrete and Convex Geometry Seminar*, Otto-von-Guericke-Universität Magdeburg, Germany (invited talk)

POSTERS

- 2016 *Einstein Workshop on Lattice Polytopes*, Freie Universität Berlin, Germany
- 2015 *Third ERC Workshop Discrete Models in Geometry and Topology*, Freie Universität Berlin, Germany
- 2015 *Workshop Homology: Theoretical and Computational Aspects*, Università degli Studi di Genova, Italy
- 2013 *Second ERC Workshop Delaunay Geometry: Polytopes, Triangulations and Spheres*, Freie Universität Berlin, Germany
- 2012 *Workshop on Combinatorics*, Universidade de Lisboa, Portugal

PROFESSIONAL ACTIVITIES

- 2016 – Organizing committee, *Sixth Encuentro Colombiano de Combinatoria (ECCO 2018)* – CIMPA Research School: *Combinatorics meets Algebra, Geometry and Optimization*, to take place at the Universidad del Norte, Barranquilla, Colombia (<http://ecco2018.combinatoria.co>)
- 2014 – 2016 Organizing committee, *Fifth Encuentro Colombiano de Combinatoria (ECCO 2016)* – CIMPA Research School: *Algebraic, Enumerative and Geometric Combinatorics*, Universidad Nacional sede Medellín, Colombia (<http://ecco2016.combinatoria.co>)
- 2013 (with Yangjing Long) Organizer of a reading seminar on topological obstructions to graph colorings, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany

Reviewer for: *European Journal of Combinatorics, Discrete and Computational Geometry*

PROGRAMMING SKILLS

Programming languages: C, C++, Python, Fortran77

Mathematical software: SageMath, Macaulay2, polymake

LANGUAGE SKILLS

Spanish: native language

English: fluent (TOEFL iBT 110/120 – dated January 18, 2008)

German: fluent (TestDaF Reading, Listening, Speaking: TDN 5/5; Writing: TDN 4/5)

French: basic knowledge