CURRICULUM VITAE

Rodica Andreea DINU

Contact info: Simion Stoilow Institute of Mathematics of the Romanian Academy,
  Calea Grivitei 21, 010702, Bucharest, Romania,
  Room 616, E-mail: rdinu@imar.ro

Research interests: Combinatorial Commutative Algebra, Algebraic Geometry, Matroid Theory

Professional experience:
05.2021–current: Member of the grant New results for combinatorially defined algebras, Director of the grant: Dr. Dumitru Stamate.
11.2020–08.2022: Postdoc of Prof. Dr. Mateusz Michałek (Real Geometry and Algebra), Department of Mathematics and Statistics, University of Konstanz, Germany.
11.2020–current: Research assistant, Simion Stoilow Institute of Mathematics of the Romanian Academy, Bucharest, Romania.

Awards:
2021: Humboldt fellowship 01.09.2022–31.08.2024, host: Prof. Dr. Mateusz Michałek, University of Konstanz.
2021: DAAD Prime fellowship, declined.

Education:
2017–2020: Ph.D. in Mathematics, University of Bucharest.
  Dissertation: *Contributions to the study of toric ideals*, supervised by Prof. Dr. Viviana Ene.
2015–2017: M.Sc. in "Algebra, Geometry and Cryptography", University of Bucharest, ranked 1st in my class.
  Dissertation: *White's conjecture for lattice path polymatroids*, supervised by Dr. Dumitru Stamate.
2013–2016: B.Sc. in Computer Science, University of Bucharest.
  Dissertation: *Tutte polynomial for special classes of matroids* (in Romanian), supervised by Dr. Dumitru Stamate.
2012–2015: B.Sc. in Mathematics, University of Bucharest.

Dissertation: *Generalizations of the Picard-Banach-Caccioppoli's Principle* (in Romanian), supervised by Prof. Dr. Radu Miculescu.
2008–2012: "Eremia Grigorescu" High School, Mărăşeşti, Romania.

Papers and preprints:
1. **Rodica Dinu**, Francesco Navarra, *Non-simple polyominoes of König type*, arXiv:2210.12665, preprint 2022.
2. **Rodica Dinu**, Mateusz Michałek, Martin Vodička, *Geometry of the Gaussian graphical model of the cycle*, arXiv:2111.02937, preprint 2021.
3. **Rodica Dinu**, Mateusz Michałek, Tim Seynnaeve, *Applications of intersection theory: from maximum likelihood to chromatic polynomials*, arXiv:2111.02057, preprint 2021.
4. **Rodica Dinu**, Jürgen Herzog, Ayesha Asloob Qureshi, *Restricted classes of Veronese type ideals and algebras*, International Journal of Algebra and Computation, **31** (1), 173–191, 2021.
5. **Rodica Dinu**, Christopher Eur, Tim Seynnaeve, *K-theoretic Tutte polynomials of morphisms of matroids*, Journal of Combinatorial Theory Series A, **181**, 105414, 2021.
6. **Rodica Dinu**, Martin Vodička, *Gorenstein property for phylogenetic trivalent trees*, Journal of Algebra, **575**, 233–255, 2021.
7. **Rodica Dinu**, Tim Seynnaeve, *The Hessian discriminant*, Le Matematiche, Special issue on Twenty-seven questions about the cubic surface, Editors Marta Panizzut, Kristian Ranestad, Emre Sertöz, **75** (2), 595–610, 2020.
8. **Rodica Dinu**, *Gorenstein t-spread Veronese algebras*, Osaka Journal of Mathematics, **57** (4), 935–947, 2020.
9. Amanda Cameron, **Rodica Dinu**, Mateusz Michałek, Tim Seynnaeve, *Flag matroids: algebra and geometry*, Interactions with Lattice Polytopes, Springer, Editors: Alexander Kasprzyk, Benjamin Nill, Magdeburg, Germany, 73–114, September 2017 (2022).
10. **Rodica Dinu**, Viviana Ene, Takayuki Hibi, *On the regularity of join-meet ideals of modular lattices*, Journal of Commutative Algebra, **13** (4), 479–488, 2021.

Research stages:
-Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany, (host: Prof. Mateusz Michałek),
-University Duisburg-Essen, Essen, Germany, (host: Prof. Jürgen Herzog),
- Autonoma University, Madrid, Spain, (host: Prof. Ana Bravo).

Talks:
-Fifth Meeting of Young Women in Mathematics "Cohomological methods in Geometry", Freiburg University, poster presentation, April 2022.
-SIAM Conference on Applied Algebraic Geometry (AG21), Minisimposium on Algebraic Approaches to Maximum Likelihood Estimation (online event), Texas A& M, USA, August 2021.
-One day workshop on commutative algebra and related fields (online event), Constanţa, September 2020.
-Nonlinear algebra seminar, Max Planck Institute for Mathematics in the Sciences, Leipzig, June 2019, September 2018, May 2018.
-Commutative Algebra seminar, University of Bucharest, January 2023, March 2020, November 2018, April 2018.
-Commutative algebra-algebraic and arithmetic geometry, UAM-ICMAT seminar, Madrid, November 27, November 6 2019.
-ASGARD, University of Oslo, May 2019.
-National School on Algebra, May 2019, August 2018, Romania.
-Workshop for Young Researchers in Mathematics, June 2019, May 2018, Romania.
-Seminar on Theoretical Informatics, Algorithms and Bioinformatics, University of Bucharest, December 2017.

Organizational skills:
-Workshop for Young Researchers in Mathematics, 11th Edition, May $19 - 20$, 2022, hybrid conference. I have been a co-organiser of the section Algebra, Geometry, Number theory and Topology.
-Workshop for Young Researchers in Mathematics, 10th Edition, May $20 - 21$, 2021, online conference. I have been a co-organiser of the section Algebra, Geometry, Number theory and Topology.
-Graduate Students Meeting on Applied Algebra and Combinatorics, February $18 - 20$, 2019, Max Planck Institute for Mathematics in the Sciences, Leipzig, Germany. I have been a co-organiser, together with Giulia Cadenotti, Frank Rottger and Tim Seynnaeve.

Teaching experience:
-2022–2023: Linear Algebra (first year, head of tutors), University of Konstanz.
-2021–2022: Algebraic Geometry I: Introduction to schemes (master, exercises), Algebraic Geometry II: Introduction to cohomology (master, exercises), University of Konstanz.
-2020–2021: Algorithmic Algebraic Geometry (bachelor, exercises), Commutative Algebra (bachelor, exercises), Tensors and secant varieties (master, exercises), University of Konstanz.

-2019–2020: Algebra (first year and second year, Mathematics, and first year, Business Administration, seminars), Formal Languages and Automata Theory (first year, Computer Science, seminars), Computational biology course, reading course after the book "Algebraic statistics for computational biology", by L. Pachter and B. Sturmfels, University of Bucharest.

-2018–2019: Polytopes: Algebra and Combinatorics (master, seminar), Normal Superior School of Bucharest, and Algebra (first year, Computer Science, and second year, Mathematics, seminars), Computability and Complexity (second year, Computer Science, seminar), University of Bucharest.

-2017-2018: Algebra (first year, Computer Science, and second year, Mathematics, seminars), Computability and Complexity(second year, Computer Science, seminar), Applied Cryptography(second year of master, Computer Science, seminar and laboratory), Formal Languages and Automata Theory (first year, Computer Science, seminar), Cryptography and Security (third year, Computer Science, seminar), University of Bucharest.

-2016–2017: Formal Languages and Automata Theory (first year, Computer Science, laboratory), University of Bucharest.

Referee for: Journal of Combinatorial Theory A, International Journal of Algebra and Computation.