

## Anca Măcinic

Simion Stoilow Institute of Mathematics of the Romanian Academy  
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### CURRENT POSITION

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2017- Researcher (CS3), Simion Stoilow Institute of Mathematics of the Romanian Academy

### EDUCATION

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- 2011 **Ph.D. in Mathematics**  
Simion Stoilow Institute of Mathematics of the Romanian Academy, Ph.D. Thesis  
"Algebraic methods in differential topology", Advisor CS1 Dr. Ștefan Papadima,  
thesis sustained 2010 / diploma issued 2011
- 2003-2004 **Master's degree in Mathematics**  
Școala Normală Superioară Bucharest
- 2001-2003 **Undergraduate program**  
Școala Normală Superioară Bucharest
- 1999-2003 **Bachelor's degree**  
Faculty of Math. and Computer Science, Ovidius Univ., Constanța

### EMPLOYMENT

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- 2017 - present **Researcher, CS3**  
Simion Stoilow Institute of Mathematics of the Romanian Academy
- 2011 - 2013 **Researcher, CS3, CNCS grant PN-II-RU-PD-2011-3-0149**  
University of Bucharest
- 2006 - 2017 **Researcher**  
Simion Stoilow Institute of Mathematics of the Romanian Academy
- 2003 - 2006 **Junior Researcher**  
Simion Stoilow Institute of Mathematics of the Romanian Academy

### GRANTS & AWARDS

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- 2021-2023 **Research grant of the Romanian Ministry of Education and Research, CNCS - UEFISCDI, project number PN-III-P4-ID-PCE-2020-2798** (team member), Simion Stoilow Institute of Mathematics of the Romanian Academy
- 2011-2013 **Postdoc grant CNCS grant PN-II-RU-PD-2011-3-0149** (team leader), University of Bucharest
- 2009-2011 **Research grant PN II Idei-1189/2008** (team member), Simion Stoilow Institute of Mathematics of the Romanian Academy
- 2006-2008 **Romanian Ministry of Education and Research, CEEX Grant 2-CEX 06-11-20** (team member), Simion Stoilow Institute of Mathematics of the Romanian Academy
- 2005-2007 **Romanian Ministry of Education and Research, CEEX Grant CEX 05-D11-11** (team member), Simion Stoilow Institute of Mathematics of the Romanian Academy
- 2019 **"GHEORGHE LAZAR" prize of the Romanian Academy**

### PUBLICATIONS

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- 2023 *On plus-one generated conic-line arrangements with simple singularities (with P. Pokora), preprint, arXiv:2309.15228 [link](#)*

- 2023 *A geometric perspective on plus-one generated arrangements of lines (with J. Vallès), preprint , arXiv:2309.10501 [link](#)*
- 2022 *On torsion freeness for the decomposable Orlik-Solomon algebra, preprint arXiv:2212.12275, [link](#)*
- 2021 *On some freeness-type properties for line arrangements (with T. Abe and D. Ibadula), preprint arXiv:2101.02150, [link](#), accepted for publication (2022) in **Annali della Scuola Normale Superiore di Pisa, Classe di Scienze**, DOI: [10.2422/2036 – 2145.202105\\_038](#)*
- 2020 *Numerical invariants and moduli spaces for line arrangements (with A. Dimca and D. Ibadula), **Osaka Journal of Mathematics**, Vol. 57, No.4, 847 – 870 (October 2020), [link](#)*
- 2019 *Freeness for 13 lines arrangements is combinatorial (with A. Dimca and D. Ibadula), **Discrete Mathematics**, Volume: 342, Issue: 8, Pages: 2445-2453 ISSN: 0012-365X, <https://doi.org/10.1016/j.disc.2019.05.016>*
- 2017 *On the geometry and topology of partial configuration spaces of Riemann surfaces (with B. Berceanu, Ş. Papadima and R. Popescu), **Algebraic & Geometric Topology**, 17, no. 2, 1163-1188, DOI: [10.2140/agt.2017.17.1163](#).*
- 2017 *Modular equalities for complex reflection arrangements, (with Ş. Papadima and R. Popescu), **Documenta Mathematica**, Vol. 22, 135–150, [link](#).*
- 2017 *Flat connections and resonance varieties: from rank one to higher ranks, (with Ş. Papadima, R. Popescu and A. Suciu), **Trans. Amer. Math. Soc.** 369, 1309–1343, DOI: <https://doi.org/10.1090/tran/6799>.*
- 2016 *Pencil type line arrangements of low degree: classification and monodromy, (with A. Dimca and D. Ibadula), **Ann. Scuola Norm. Sup. Pisa**, (5) Vol. XV, 249–267, [link](#).*
- 2015 *On the second nilpotent quotient of higher homotopy groups for hypersolvable arrangements (with D. Matei and Ş. Papadima), **International Mathematics Research Notices**, Volume 2015, Issue 24, Pp. 13194–13207, <https://doi.org/10.1093/imrn/rnv080>.*
- 2014 *Some remarks on the realizability spaces of (3, 4)-nets, (with D. Ibadula), Proceedings of the conference "Experimental and Theoretical Methods in Algebra, Geometry and Topology", Bridging Algebra, Geometry, and Topology, **Springer Proceedings in Mathematics & Statistics**, 159–166, [link](#).*
- 2010 *Cohomology rings and formality properties of nilpotent groups, **Journal of Pure and Applied Algebra** 214, pp. 1818–1826, <https://doi.org/10.1016/j.jpaa.2009.12.025>.*
- 2009 *Characteristic varieties of nilpotent groups and applications, (with Ş. Papadima), **Proceedings of the Sixth Congress of Romanian Mathematicians (Bucharest, 2007)**, vol.1, pp. 57–64, Romanian Academy, Bucharest.*
- 2009 *On the monodromy action on Milnor fibers of graphic arrangements, (with Ş. Papadima), **Topology and its Applications** 156, 761-774, <https://doi.org/10.1016/j.topol.2008.09.014>.*
- 2009 *A survey of combinatorial aspects in the topology of complex hyperplane arrangements, **Contemporary Mathematics** 508, 113-128, DOI: [10.1090/conm/502/09859](#).*

## RESEARCH VISITS

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- August 7-19 2016 **Oberwolfach Research Institute for Mathematics, Research In Pairs grant** (with Alexandru Dimca and Denis Ibadula)
- November 18-23 2013 **Osnabrück Univ., Institut für Mathematik**
- March, November 2012 (2 weeks) **Université Sophia-Antipolis Nice**

## TALKS & CONFERENCES

### ATTENDED

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- July 7-11, 2023* "A Yoshinaga-type criterion for POG arrangements", talk presented at Geometry, Topology and Algebra of Singular Spaces, IMAR, Bucharest, Romania.
- May 18-19, 2023* "Ziegler restrictions and combinatorics of line arrangements", talk presented at Workshop for Young Researchers in Mathematics, 12th edition, Alexandru Ioan Cuza University, Iași, Romania.
- May 20-24, 2019* "Freeness and variations", talk presented at The 27th National School on Algebra, IMAR Bucharest.
- June 26 - July 1, 2015* "(Multi)nets and monodromy", talk presented at the 8-th Congress of the Romanian Mathematicians, Alexandru Ioan Cuza University, Iasi.
- November 19, 2013* "Combinatorics in the topology of hyperplane arrangements", talk presented at the "Graduierntenkollegseminar on combinatorial structures in geometry", Osnabrück Univ., Institut für Mathematik.
- May 09 - May 10, 2013* "Orlik-Solomon algebras", talk presented at the Workshop for Young Researchers in Mathematics, Ovidius University, Constanta, Romania.
- June 27 - 30, 2013* "On the second nilpotent quotient of higher homotopy groups for hypersolvable arrangements", talk presented at the Joint International Meeting of the AMS and the Romanian Mathematical Society, Special Session: Topics in Geometric and Algebraic Topology, "1 Decembrie 1918" University of Alba Iulia, Romania.
- September 2-6, 2013* "Hyperplane arrangements", talk presented at The 21st National School on Algebra "Algebraic Methods in Combinatorics", IMAR Bucharest.
- August 29-September 1, 2013* "Pencil type line arrangements of low degree and monodromy", talk presented at the Anniversary Conference Faculty of Sciences - 150 years, Faculty of Mathematics and Computer Science, University of Bucharest.
- June 11 - 15, 2012* "(Partial) formality", talk presented at the conference Arrangements in Pyrénées School on hyperplane arrangements and related topics, Université de Pau.
- March 6, 2012* "Graphic arrangements, combinatorial computations and monodromy action on the Milnor fiber", talk presented at the conference Hyperplane Arrangements and Related Topics, Université Sophia-Antipolis Nice.
- May 12 - 13, 2011* "Partial formality and cohomology jump loci", talk presented at the Workshop for Young Researchers in Mathematics, Ovidius University Constanta.
- June 28 June - July 4, 2007* "Cohomology jumping loci and formality properties of nilpotent groups", talk presented at The 6th International Congress of the Romanian Mathematicians, Bucharest, Romania.
- August, 2006* "On the monodromy action on Milnor fibers of graphic arrangements", talk presented at the workshop "Recent developments in Arrangements and Configuration Spaces", MSRI, Berkeley, US.
- August 29 - September 2, 2005* "The Milnor fiber associated to graphic arrangements", talk presented at the workshop "Hyperplane arrangements and constructible sheaves", Constanta, Romania.

### EVENTS ORGANIZED

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- June 28 - July 3, 2019* "Selected Topics in Complex and Differential Geometry, Topology, and Singularities", Special Session of The Ninth Congress of Romanian Mathematicians, "Dunarea de Jos" University of Galati, Romania (co-organizer).
- June 3-4, 2019* "Workshop for Young Researchers in Mathematics", University of Bucharest (co-organizer).

- May 28 - 31, 2018* **"Topology and Geometry: A conference in memory of Stefan Papadima"**, Simion Stoilow Institute of Mathematics of the Romanian Academy(co-organizer).
- May 17 - 18, 2018* **"Workshop for Young Researchers in Mathematics"**, Simion Stoilow Institute of Mathematics of the Romanian Academy(co-organizer).
- May 17 - 20, 2017* **"Workshop for Young Researchers in Mathematics"**, Simion Stoilow Institute of Mathematics of the Romanian Academy(co-organizer).
- May 19 - 22, 2016* **"Workshop for Young Researchers in Mathematics"**, Ovidius University Constanta (co-organizer).
- July 6 - 10, 2015* **"Computational Geometric Topology in Arrangement Theory"**, ICERM, Brown University, USA (co-organizer).
- May 21-- 24, 2015* **"Workshop for Young Researchers in Mathematics"**, Ovidius University Constanta (co-organizer).
- May 22--23, 2014* **"Workshop for Young Researchers in Mathematics"**, Ovidius University Constanta (co-organizer).
- May 9--10, 2013* **"Workshop for Young Researchers in Mathematics"**, Ovidius University Constanta (co-organizer).
- June 21--24, 2013* **"Experimental and Theoretical Methods in Algebra, Geometry and Topology"**, Eforie Nord, Ovidius University Constanta & IMAR (co-organizer).