

# Andrei ZAROJANU

## CONTACT INFORMATION

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## EDUCATION

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- DECEMBER 2014 Ph. D. in Mathematics  
Faculty of Mathematics and Computer Science, University of Bucharest  
Thesis: Contributions to the study of Stanley's conjecture on monomial ideals  
Coordinator: prof. dr. Dorin POPESCU
- JUNE 2011 Masters Degree in Algebra  
Faculty of Mathematics and Computer Science, University of Bucharest  
Overall GPA: 9.93/10.00  
Dissertation: Stanley depth and Stanley's conjecture  
Coordinator: prof. dr. Dorin POPESCU
- JUNE 2009 Bachelor of Science degree in Mathematics  
Faculty of Mathematics and Computer Science, University of Bucharest  
Overall GPA: 9.45/10.00  
Bachelor thesis: Arithmetic of polynomial rings  
Coordinator: conf. dr. Cornel BAETICA
- JULY 2010 Bachelor of Science degree in Computer Science  
Faculty of Mathematics and Computer Science, University of Bucharest  
Overall GPA: 9.33/10.00  
Bachelor thesis: Huffman trees and forests  
Coordonator: prof. dr. Ioan TOMESCU
- JULY 2010 Bachelor of Sports Science  
Faculty of Physical Education and Sport Science, UNEFS  
Bachelor thesis: Study on the model of the game as a guard in basketball  
Coordinator: conf. dr. Alina MOANTA
- JULY 2006 I graduated from high school C.N. "STEFAN CEL MARE" Suceava,  
Mathematics and Computer Science  
Final Exam GPA: 9.65/10.00

## PUBLICATIONS:

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- D. Zarojanu, B.G. Cazacu, Andrei Zarojanu: **Considerations in determining soil stability by using the criterion of Mohr-Coulomb failure**, 11th National Conference of Geotechnics and foundations, Timisoara, 2008,
- D. Zarojanu D, Andrei Zarojanu: **Energy analysis of slope stability**, Academic days in Timisoara, Timisoara, 2011,
- D. Zarojanu, B.G. Cazacu, Andrei Zarojanu: **The determination of the ground stability in case of distributed load** Albanian geotechnical society landslides and geo-environment geotechnical symposium in balcan region, october 2011
- Andrei Zarojanu: **Stanley Conjecture on intersection of three monomial primary ideals** Bull. Math. Soc. Sc. Math. Roumanie 55 (103), no.3, 2012, 335-339,
- Dorin Popescu, Andrei Zarojanu, **Depth of some square free monomial ideals** Bull. Math. Soc. Sci. Math. Roumanie, 56(104), 2013,117-124,

- Dorin Popescu, Andrei Zarojanu, **Depth of some special monomial ideals** Bull. Math. Soc. Sci. Math. Roumanie, **56(104)**, 2013, 365-368,
- Dorin Popescu, Andrei Zarojanu, **Three generated, squarefree, monomial ideals** Bull. Math. Soc. Sci. Math. Roumanie **58 (106)**, (2015), 359-368, no 3,
- Viviana Ene, Andrei Zarojanu, **On the regularity of binomial edge ideals** Math. Nachr., 288: 19-24. doi:10.1002/mana.201300186,
- Bogdan Ichim, Andrei Zarojanu, **An algorithm for computing the multigraded Hilbert depth of a module** Experimental Mathematics, 23:3, 322-331, DOI: 10.1080/10586458.2014.908753,
- Bogdan Ichim, Andrei Zarojanu, **An introduction to Hilbert depth** Proceedings of the Third Conference of Mathematical Society of Moldova IMCS-50, 2014, 86-89,
- C. Dragoiu, Andrei Zarojanu et al. **Postmortem corneal changes evaluated by fluorescent staining** Rom. J. Leg. Med. 22:1, 13-20, 2014.

## HONORS AND AWARDS:

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- Special prize, Romanian National Olympiad of Mathematics, Sibiu 2003
- 2 participations at the Romanian National Olympiad of Mathematics
- over 30 prizes won at local and national mathematics competitions
- ECDL Certification

## INVITED TALKS

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- The Eighth Congress of Romanian Mathematicians, Iasi, Romania, 2015
- National Algebra School - Algebraic and Combinatorial Applications of Toric Ideals. Romania Sept. 2014
- The Third Conference of Mathematical Society of the Republic of Moldova, Chisinau, Republic of Moldova, August 2014
- National Algebra School - Algebraic Methods in Combinatorics, Bucharest, Romania Sept. 2013
- Special Session on Commutative Algebra in Honor of Prof. Dr. Dorin Popescu, Workshop for Young Researches in Mathematics, Constanta, Romania, May 2012
- National Algebra School - Computer Algebra and Combinatorics, Bucharest, Romania Sept. 2011

## OTHER PARTICIPATIONS TO INTERNATIONAL CONFERENCES

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- Commutative Algebra meeting Algebraic Geometry, Bucharest, June 2017
- National Algebra School - EMS Summer School on Multigraded Algebra and Applications, Moieciu de Sus, Romania, August 2016
- National Algebra School - Interactions of Computer Algebra with Commutative Algebra, Combinatorics and Algebraic Statistics, Bucharest, Romania, Sept. 2015
- CoCoA International School on Computer Algebra, Osnabruck, Germany, June 2013
- National Algebra School - Discrete Invariants in Commutative Algebra and in Algebraic Geometry, Mangalia, Romania, Sept. 2012

## EXPERIENCE

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- March - September 2011, Bitdefender Junior Research Position at the Institute of Mathematics of the Romanian Academy
- 2012 - 2017 Assistant Researcher at the Institute of Mathematics of the Romanian Academy
- 2017 - present Researcher at the Institute of Mathematics of the Romanian Academy
- 2014 - 2015 Teaching Assistant at the University of Bucharest

## PARTICIPATION TO GRANTS

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- POSDRU/159/1.5/S/ 137750 Doctoral and postdoctoral programs-support for increasing the competitiveness of research in the exact sciences, principal investigator Andrei Zarojanu
- ID-PCE-2011-1023 Algorithmic and theoretical methods for studying monomial and binomial ideals with applications in combinatorics, commutative algebra and graph theory, principal investigator Dorin Popescu
- PN-II-RU-TE-2012-3-0161 Algebraic study of some combinatorial problems and associated computational experiments, principal investigator Bogdan Ichim
- PN-III-P2-2.1-PED-2016-0436 Avalanse dense: de la experiment la software, principal investigator Ioan Ionescu