

# Curriculum vitae

Mircea Cimpoeaş

## Studies

1999-2003. University of Bucharest, Faculty of Mathematics  
2003-2005. University of Bucharest, Faculty of Mathematics, Master studies.  
2003-2004. Scoala normala superioara Bucuresti (SNSB), Master studies.

## Ph-D studies

2003-2007. University of Bucharest  
**Adviser:** Professor Dorin Popescu  
**Thesis:** *Contributions in combinatorics in commutative algebra*

## Habilitation

SCOSAAR, Romanian Academy, 2020  
**Thesis:** *Combinatorial aspects în algebra and number theory*

## Positions

2004-2007 - Junior Researcher, I.M.A.R.  
2008-2017 - Researcher (CS), I.M.A.R.  
2008-2012 - External lecturer, Technical University of Civil Engineering Bucharest.  
2013-2020 - External lecturer, University Politehnica of Bucharest.  
2018-present - Researcher (CS3), I.M.A.R.  
2020-present - Associated Professor, University Politehnica of Bucharest.

## Research interests

Combinatorial commutative algebra, combinatorial and analytic number theory, theory of characters of finite groups.

## Member in grants

*ID-PCE-2007-51, ID-PCE-2011-102 and PN-III-P1-1.1-TE-2021-1633.*

## Address

University Politehnica of Bucharest, Faculty of Applied Sciences, Department of Mathematical Methods and Models, Bucharest, 060042, Romania and Simion Stoilow Institute of Mathematics, Research unit 5, P.O.Box 1-764, Bucharest 014700, Romania

**Email:** mircea.cimpoeas@upb.ro and mircea.cimpoeas@imar.ro

## List of articles

1. *Finite multicomplexes*, An. St. Univ.Ovidius, seria matematica, **14(2)** (2006), pag. 9–30.
2. *A generalization of Pardue’s formula*, Bull. Math. Soc. Sci. Math. Roumanie, **49 (97)(4)** (2006), pag. 315–334.
3. *Generic initial ideal for complete intersections of embedding dimension three with strong Lefschetz property*, Bull. Math. Soc. Sci. Math. Roumanie **50(98)(1)** (2007), pag. 3 – 31.
4. *A note on the generic initial ideal for complete intersections*, Bull. Math. Soc. Sci. Math. Roumanie **50(98)(2)**(2007), pag.119 – 130.
5. *Regularity for certain classes of monomial ideals*, An. St. Univ. Ovidius Constanta seria matematica **15(1)** (2007), pag. 33 – 46.
6. *A stable property of Borel type ideals*, Communications in Algebra **36(2)** (2008), pag. 674 – 677.
7. *Some remarks on the Stanley’s depth of multigraded modules*, Le Matematiche **63(2)** (2008), pag. 165 – 171.
8. *Stanley depth of complete intersection monomial ideals*, Bull. Math. Soc. Sci. Math. Roumanie **51(99)(3)** (2008), pag. 205 – 211.
9. *Some remarks on Borel type ideals*, Communications in Algebra **37(2)** (2009), pag. 724 – 727.
10. *Stanley depth of monomial ideals with small number of generators*, Central European Journal of Mathematics **7(4)** (2009), pag. 629 – 634.

11. *Lefschetz property of complete intersections*, Analele Universitatii din Bucuresti **58(2)** (2009), pag. 125 – 144.
12. *The Stanley conjecture on monomial almost complete intersection ideals*, Bull. Math. Soc. Sci. Math. Roumanie **55(103)(1)** (2012), pag. 35 – 39.
13. *Several inequalities regarding Stanley depth*, Romanian journal of mathematics and computer science **2(1)** (2012), pag. 28 – 40.
14. *Vertex cover algebras of simplicial multicomplexes*, Romanian journal of mathematics and computer science **3(1)** (2013), pag. 1 – 4.
15. *Stanley depth of squarefree Veronese ideals*, An. St. Univ. Ovidius Constanta seria matematica **21(3)** (2013), pag. 67 – 71.
16. *On the Stanley depth of monomial ideals*, Revue Roumaine de math. pure et appliques **58(2)** (2013), pag. 205 – 212.
17. *Regularity of quasi-symbolic and bracket powers of Borel type ideals*, Romanian J. of Math. and Computer Science **4(1)**(2014), pag.73 – 80.
18. *Stanley Depth of Quotient of Monomial Complete Intersection Ideals*, Communications in Algebra **40(8)** (2014), pag. 2720 – 2731.
19. *On the Stanley depth of edge ideals of line and cyclic graphs*, Romanian Journal of Math. and Computer Science **5(1)** (2015), pag. 70 – 75.
20. *On intersection of complete intersection ideals* (joint work with Dumitru Stamate), Journal of Pure and Applied Algebra, Volume 220, Issue 11, November (2016), pag. 3702-3712.
21. *On the quasi-depth of squarefree monomial ideals and the sdepth of the monomial ideal of independent sets of a graph*, An. Ştiinţ. Univ. Al. I. Cuza Iaşi Mat., **LXII(2) vol 3** (2016), pag. 863-870.
22. *On The Stanley Depth Of The Path Ideal Of A Cycle Graph*, Romanian Journal of Math. and Computer Science **6(2)** (2016), pag. 116 – 120.
23. *Stanley depth of the path ideal associated to a line graph*, Mathematical Reports **vol.19(2)** (2017), pag. 157–164.
24. *A class of square-free monomial ideals associated to two integer sequences*, Communications in Algebra **Volume 46, Issue 3** (2018), pag. 1179–1187.

25. *Stanley depth of certain classes of square-free monomial ideals*, Politehn. Univ. Bucharest Sci. Bull. Ser. A Appl. Math. Phys. **80**, no.2 (2018), pag. 33–40.
26. *On the Stanley depth of powers of some classes of monomial ideals*, Bull. Iranian Math. Soc. **44**, no. 3 (2018), pag. 739–747.
27. *On the restricted partition function* (joint work with Florin Nicolae), Ramanujan J. **47** , no. 3 (2018), pag. 565–588.
28. *On the Stanley depth of a special class of Borel type ideals*, An. Ştiinţ. Univ. Al. I. Cuza Iaşi. Mat. (N.S.) **64**, no. 2 (2018), pag. 369–372.
29. *Independence of Artin L-functions* (joint work with Florin Nicolae), Forum Math. **31**, no. 2 (2019), pag. 529–534.
30. *On the algebraic properties of the ring of Dirichlet convolutions*, ROMAI J. **14** , no. 2 (2018), pag. 41–57.
31. *A zeta-Barnes function associated to graded modules*. Rom. J. Math. Comput. Sci. **9** , no. 1 (2019), pag. 56–65.
32. *Polarization and spreading of monomial ideals*. Comm. Algebra **47** , no. 12 (2019), pag. 5492–5508.
33. *A note on the linear independence of a class of series of functions*. J. Anal. **27** , no. 4 (2019), pag. 1189–1205.
34. *Determinants with Bernoulli polynomials and the restricted partition function*. Politehn. Univ. Bucharest Sci. Bull. Ser. A Appl. Math. Phys. **81** , no. 4 (2019), pag. 39–52.
35. *On the restricted partition function via determinants with Bernoulli polynomials*. Mediterr. J.Math. **17** , no. 2, Paper No. 51(2020),19pp.
36. *On the semigroup ring of holomorphic Artin L-functions*. Colloq. Math. **160** , no. 2 (2020), pag. 283–295.
37. *Artin L-functions of almost monomial Galois groups* (joint work with Florin Nicolae), Forum Math. **32** , no. 4 (2020), pag. 937–940.
38. *Gröbner-nice pairs of ideals* (joint work with Dumitru I. Stamate), Combinatorial structures in algebra and geometry, Springer Proc. Math. Stat., 331, Springer, Cham, (2020), pag. 15–29.

39. *Two semigroup rings associated to a finite set of meromorphic functions*, Math. Slovaca **70** , **no. 5** (2020), pag. 1249–1257.
40. *On the restricted partition function via determinants with Bernoulli polynomials. II.*, Rev. Un. Mat. Argentina **61** , **no. 2** (2020) , pag. 431–440.
41. *Remarks on the restricted partition function.*, Math. Rep. (Bucur.) **23(73)**, **no. 4** (2021), pag. 425–436.
42. *A note on the number of partitions of  $n$  into  $k$  parts*, U.P.B. Sci. Bull., Series A **Vol. 84, Iss. 4** (2022), pag. 131–138.
43. *On supercharacter theoretic generalizations of monomial groups and Artin's conjecture* (joint work with Alexandru Radu), Czechoslovak Mathematical Journal **Vol. 72, No. 4** (2022), pag 1065–1079.

## List of books

1. *Capitole de analiză matematică pentru ingineri*, Politehnica Press, 2021.
2. *Capitole de algebră liniară, geometrie și ecuații diferențiale pentru ingineri*, Politehnica Press, 2021.