

# Publications

Mihai Cipu

## Refereed Articles

- (+ A. I. Bonciocat, N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Apollonius circles and the number of irreducible factors of polynomials, *Bull. Math. Soc. Sci. Math. Roum.* **66** (114) (2023), 119–138.
- (+ G. Kientega, M. Mignotte, S. Nikiema) Sur la hauteur des puissances d'un polynôme à coefficients entiers, *Bull. Math. Soc. Sci. Math. Roum.* **66** (114) (2023), 157–175.
- (+ C. M. Bonciocat, N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Irreducibility criteria for some classes of compositions of polynomials with integer coefficients, *Bull. Math. Soc. Sci. Math. Roum.*, **65** (113) (2022), 149–180.
- (+ G. Kientega, M. Mignotte, S. Nikiema) Sur la hauteur des transformées de Graeffe d'un polynôme à coefficients entiers, *Bull. Math. Soc. Sci. Math. Roum.*, **65** (113) (2022), 213–231.
- (+ A. Dujella, Y. Fujita) Extensions of a Diophantine triple by adjoining smaller elements, *Mediterr. J. Math.* **19** (2022), Article: 187, 1–20.
- (+ N. C. Bonciocat, M. Mignotte) There is no Diophantine  $D(-1)$ -quadruple, *J. London Math. Soc.* **105** (2022), 63–99.
- (+ A. I. Bonciocat, N. C. Bonciocat, Y. Bugeaud) Apollonius circles and irreducibility criteria for polynomials, *Indag. Math.* **33** (2022), 421–439.
- (+ A. Dujella, Y. Fujita) Diophantine triples with largest two elements in common, *Period. Math. Hungar.*, **82** (2021), 56–68.
- (+ A. I. Bonciocat, N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Irreducibility criteria for compositions of multivariate polynomials over arbitrary fields, *Publ. Math. Debrecen* **97** (2020), 321–337.
- (+ A. Filipin, Y. Fujita) Diophantine pairs that induce certain Diophantine triples, *J. Number Theory* **200** (2020), 433–475.
- (+ A. Filipin, Y. Fujita) An infinite two-parameter family of Diophantine triples, *Bull. Malay. Math. Soc.* **43** (2020), 481–498.
- Complete solution of the Diophantine equation  $x^y + y^x = z^z$ , *Czech Math. J.* **69** (2019), no. 2, 479–484.
- (+ Y. Fujita, T. Miyazaki) On the number of extensions of a Diophantine triple, *Internat. J. Number Theory* **14** (2018), no. 3, 899–917.
- Explicit formula for the solution of simultaneous Pell equations  $x^2 - (a^2 - 1)y^2 = 1$ ,  $y^2 - bz^2 = 1$ , *Proc. Amer. Math. Soc.* **146** (2018), no. 3, 983–992.
- (+ N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Irreducibility criteria for compositions of polynomials with integer coefficients, *Monath. Math.*, **182** (2017), no. 3, 499–512.
- (+ Y. Fujita, M. Mignotte) Two-parameter families of uniquely extendable Diophantine triples, *Science in China, Mathematics* **61** (2018), no. 3, 421–438.

- (+ T. S. Trudgian) Searching for Diophantine quintuples, *Acta Arith.* **173** (2016), 365–382.
- (+ A. Filipin, Y. Fujita) Bounds for Diophantine quintuples II, *Publ. Math. Debrecen* **88** (2016), 59–78.
- Quadratic Diophantine equations with infinitely many solutions in positive integers, *Integers* **15** (2015), #47.
- (+ N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Irreducibility criteria for sums of two relatively prime multivariate polynomials, *Publ. Math. Debrecen* **87** (2015), 255–267.
- (+ Y. Fujita) Bounds for Diophantine quintuples, *Glas. Math. Ser. III* **50** (2015), 25–34.
- Further remarks on Diophantine quintuples, *Acta Arith.* **168** (2015), 201–219.
- (+ A. I. Bonciocat, N. C. Bonciocat) Irreducibility criteria for compositions and multiplicative convolutions of polynomials with integer coefficients, *An. St. Univ. Ovidius Constanța* **22** (2014), 73–84.
- (+ N. C. Bonciocat, M.-T. Tsai, A. Zaharescu) Congruences characterizing the bicrossproduct of cyclic groups, *Bull. Math. Soc. Sci. Math. Roum.* **56** (104) (2013), 267–279.
- (+ N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Irreducibility criteria for sums of two relatively prime polynomials, *Intern. J. Number Theory* **9** (2013), 1529–1539.
- (+ Y. Bugeaud, M. Mignotte) On the representation of Fibonacci and Lucas numbers in an integer base, *Annales Sci. Math. Québec* **37** (2013), 31–43.
- (+ N. C. Bonciocat, M. Mignotte) On  $D(-1)$ -quadruples, *Publ. Mat.* **56** (2012), 279–304.
- (+ N. C. Bonciocat, Y. Bugeaud, M. Mignotte) Some Pólya-type irreducibility criteria for multivariate polynomials, *Comm. Alg.* **40** (2012), no. 10, 3733–3744.
- (+ M. I. Qureshi) On the behaviour of Stanley depth under variable adjunction *Bull. Math. Soc. Sci. Math. Roum.* **55** (103) (2012), 129–146.
- (+ M. Mignotte, A. Togbé) On the size of the intersection of two Lucas sequences of distinct type II, *Science China Math.* **54** (2011), 1299–1316.
- Cyclic quadrilaterals associated to squares, *Forum Geom.* **11** (2011), 223–229.
- (+ I. Diouf, M. Mignotte) Testing degenerate polynomials, *Appl. Alg. in Eng. Commun. Comp.* **22** (2011) 289–300.
- Small solutions to systems of polynomial equations with integer coefficients, *An. St. Univ. Ovidius Constanța* **19** (2011), 89–99,
- (+ M. Mignotte) Bounds for counterexamples to Terai’s conjecture, *Bull. Math. Soc. Sci. Math. Roum.* **53** (2010), 231–237.
- (+ N. C. Bonciocat) Strips and hyperbolas for zeros of polynomials in terms of their Hermite expansion, *Math. Inequal. Appl.* **13** (2010), 271–288.
- (+ M. Mignotte) On a conjecture on exponential Diophantine equations, *Acta Arith.* **140** (2009), 251–270.
- A computer-aided proof of a conjecture in Euclidean geometry, *Computers and Math. with Appl.* **56** (2008), 2814–2818.

- (+ S.D. Cohen) Dickson polynomial permutations, *Finite Fields and Applications*, (G.L. Mullen, D. Panario, I.E. Shparlinski, eds.), Contemp. Math. 461, A. M. S., 2008, pp.79–90.
- Gröbner bases and Diophantine analysis, *J. Symb. Comp.* **43** (2008), 681–687.
- (+F. Luca, M. Mignotte) Solutions of the Diophantine equation  $au^x + bv^y + cw^z = n!$ , *Annales Sci. Math. Québec* **31** (2007), 121–127.
- (+F. Luca, M. Mignotte) Solutions of the Diophantine equation  $x^y + y^z + z^x = n!$ , *Glasgow Math. J.* **50** (2008), 217–232.
- (+M. Mignotte) On the number of solutions to systems of Pell equations, *J. Number Theory* **125** (2007), 356–392.
- Pairs of Pell equations having at most one common solutions in positive integers, *An. St. Univ. Ovidius Constanța* **15** (2007), 1–12.
- (+M. Bennett, M. Mignotte, R. Okazaki) On the number of solutions of simultaneous Pell equations, II, *Acta Arith.* **122** (2006), 407–417.
- Dickson polynomials that are permutations, *Serdica Math. J.* **30** (2004), 177–194.
- Upper bounds for norms of products of binomials, *LMS J. Comput. Math.* **7** (2004), 37–49.
- A bound for the solutions of the Diophantine equation  $D_1x^2 + D_2^m = 4y^n$ , *Proc. Japan Acad.* **78**, Ser. A(2002), 179–180 .
- (+ F. Luca) On the Galois group of the generalized Fibonacci polynomial, *An. St. “Ovidius” Univ. Constanța* **9** (2001), 27–38.
- (+ F. Luca) On a Diophantine equation arising from the theory of Fuchsian groups of genus zero, *Rev. Roum. Math. Pures et Appl.* **46** (2001), 19–27.
- Gorenstein Algebras with Pure Resolution, in *Commutative Algebra and Algebraic Geometry* (F. Van Oystaeyen, ed.), Lecture Notes in Pure and Applied Mathematics, **206**, Marcel Dekker, New York, 1999, 47–52.
- The norm of a product of cyclotomic polynomials and the Prouhet-Tarry-Escott problem, *Yearly Conf. Rom. Math. Soc. Cluj-Napoca*, 1998, 41–44.
- A conjecture of McKay via Gröbner bases, *Proc. 6th Rhein Workshop on Computer Algebra*, Bonn, 1998.
- Diophantine equations with at most one positive solution, *Man. Math.* **93** (1997), 349–356.
- (+ A. Cipu) Inequalities for the sum of the distances of a point to the vertices of a triangle, in *Proc. 4<sup>th</sup> Internat. Congress of Geometry, Thessaloniki 1996* (N. K. Artemiadis, N. K. Stephanidis, eds.), 1997, 101–113.
- Replicable functions: a computational approach, *Comp. Sci. J. of Moldova* **4** (1996), 342–359.
- An explicit study of l-sequences, *Comm. Algebra* **24** (1996), 2249–2269.
- (+ A. Cipu) Some triangles inequalities, *Nieuw Archief voor Wiskunde* **13** (1995), 155–163.

- l-sequences, *Commutative Algebra, International Conference, Vechta, 1994*, (W. Bruns, J. Herzog, M. Hochster, U. Vetter, eds.), *Vechtaer Universitätsschriften*, **13** (1994), 41–42.
- (+ J. Herzog, D. Popescu) Indecomposable generalized Cohen-Macaulay modules, *Trans. Amer. Math. Soc.* **342** (1994), 107–136.
- (+ M. Fiorentini) Ubiquity of relative regular sequences and proper sequences, *K-Theory* **8** (1994), 81–106.
- Some properties of the convexity in modules over F-ordered rings, *An. Univ. Bucuresti* **40** (1991), 25–36.
- Generalized Cohen-Macaulay modules over rings with approximation property, *Ann. Univ. Ferrara* **37** (1991), 85–93.
- (+ D. Popescu) A certain desingularization theorem, *An. St. Univ. Iași* **31**, s.I a (1985), 20–22.
- (+ D. Popescu) A desingularization theorem of Néron's type, *Ann. Univ. Ferrara* **30** (1984), 63–76.
- Towards convex programming in modules over F-ordered rings, *Rev. Roum. Math. Pures et Appl.* **27** (1982), 3–9.
- Some extensions of Néron's p-desingularization and approximation, *Rev. Roum. Math. Pures et Appl.* **26** (1981), 1299–1304.

## Books

- Classes of rings and modules (Romanian), Ed. Univ. București, 2002.

## Conference proceedings

- (+ Y. Fujita, M. Mignotte) The unique extension of two parametric Diophantine triples, *RIMS Kôkyûroku*, Proc. Workshop Problems and prospects in Analytic Number Theory, RIMS Kyoto Univ., Oct. 31–Nov. 2 2016, **2203** (2021), 41–47.
- A new approach to the study of  $D(-1)$ -quadruples, *RIMS Kôkyûroku*, Proc. Workshop Analytic Number Theory and Related Areas, RIMS Kyoto Univ., Oct. 30–Nov. 1 2017, **2092** (2018), 122–129.
- Exponential equations with unique solution, *Acta Univ. Apulensis, Math. Inform.*, Proc. ICTAMI 2009, Alba Iulia, 2009, 267–277.
- Tight bounds for the number of solutions to simultaneous Pell equations, *Proc. 6th Congress of Romania Mathematicians Bucharest 2007*, vol. I, (L. Beznea, V. Brînzănescu et al. eds.), Ed. Academiei Române, București, 2009, 21–26.
- Factorisation of integers with elliptic curves, *Proc. 16th National School of Algebra on Elliptic Curves* (Ş. Bărcănescu, C. Flaut, eds.), Seminar Series in Math. Algebra: 5, Ovidius Univ., Constantza, 2008, 29–46.
- Gröbner Bases and Solutions to Diophantine Equation, *Synasc '08 Pre-Proc., Main Track papers*, IeAT Tech. Report 08-11, 152–155.

- Algebraic proofs for geometric statements, *ICTAMI 2003*, Alba-Iulia, *Acta Univ. Apulensis, Math.-Inform.*, **7**(2004), 93–102.
- Variations on a classical theme: Pell equation, *CAIM '99*, Pitesti, *Bul. St. Univ. Pitesti, Ser. Math. Inform.*, **5**(2000), 1–7.
- The norm of a product of cyclotomic polynomials and the Prouhet–Tarry–Escott problem (Romanian), *Yearly Conf. Rom. Math. Soc. Cluj-Napoca*, 1998, 41–44.
- Multiplicities and pure resolutions for Gorenstein codimension four algebras, *Proc. Internat. Congress of Mathematicians*, Berlin, 1998, 15.
- Replicable functions: a computational approach, ISSAC 96, Zürich 1996, poster
- Computer Algebra—a research field of growing interest, *Proc. Nat. Conf. Algebra, June 1986*, Univ. Timișoara, 1987, 7–10.
  - (+ O. Păsărescu) Inele și module Buchsbaum, *Seminar de algebră: Inele și module Cohen-Macaulay*, Univ. Iași, 1986, XIII.1–XIII.11.

### Contributions to *Gazeta Matematică*

- On a Diophantine equation with factorials, *Gaz. Matem. Ser. A* **41 (120)** (2023), 1–7.
- Omul cu compasul, *Didactica Matem.* **11** (2021), no. 1, 10–11.
- (+ R. Gologan, Al. Negrescu) In memoriam Prof. univ. dr. Doru Ștefănescu (1952–2021), *Didactica Matem.* **11** (2021), no. 1, 1–3.
- Variations on an olympiad problem (Romanian), *Gaz. Matem. Ser. A* **31 (110)** (2013), 4–14.
- Prizes in Mathematics (Romanian), *Gaz. Matem., Revistă de cultură matematică* **21** (2003), 220–227.
  - International Congress of Mathematicians Beijing 2002 (Romanian), *Gaz. Matem., Revistă de cultură matematică* **21** (2003), 63–66.
  - A problem for a computer and Ceva (Romanian), *Gaz. Matem.* **106** (2000), 321–328.
  - On a certain Diophantine equation (Romanian), *Gaz. Matem.* **86** (1981), 4–9.

January 2024