

# LIST OF PUBLICATIONS OF TOMA ALBU

## A: MONOGRAPHS AND TEXTBOOKS

1. *Chapters of Algebraic Number Theory* (in Romanian), Tipografia Universității București, 1979, 352 pages (with I. D. Ion).
2. *Relative Finiteness in Module Theory*, A Series of Monographs and Textbooks, Volume 84, Marcel Dekker, Inc., New York and Basel, 1984, 190 pages (with C. Năstăsescu).
3. *Lessons on Commutative Algebra* (in Romanian), Tipografia Universității București, 1984, 331 pages (with Ș. Raianu).
4. *Chapters of Algebraic Number Theory* (in Romanian), Editura Academiei, 1984, 251 pages (with I. D. Ion).
5. *Themes and Problems for the Preparation of Mathematical Olympiads* (in Romanian), Piatra Neamț, 1984, 204 pages (with T. Andreescu, I. Cuculescu, I. Tomescu et al.).
6. *Problems of Mathematics given at the Contests and Examinations in 1984* (in Romanian), I.P.B.T., Timișoara, 1986, 356 pages (with T. Andreescu, D. Andrica, I. Tomescu et al.).
7. *Seminar of Algebra: Cohen–Macaulay Rings and Modules* (in Romanian), Tipografia Universității "Al. I. Cuza" Iași, 1986, 166 pages (with L. Bădescu, A. Buium, D. Popescu et al.).
8. *Nineteen Lessons on Group Theory* (in Romanian), Tipografia Universității București, 1987, 352 pages (with N. Manolache).
9. *Semisimple Lie Algebras* (in Romanian), Seminariile Institutului de Matematică al Academiei Române, Nr. 1, 1991, 255 pages (with V. Nistor, M. Putinar, F. Rădulescu et al.).
10. *An Elementary Itinerary in Higher Algebra* (in Romanian), Editura All Educational, București, 1997, 210 pages (with I. D. Ion).
11. *Cogalois Theory*, A Series of Monographs and Textbooks, Vol. 252, Marcel Dekker, Inc., New York and Basel, 2003, 368 pages.
12. *Lessons on the Grothendieck Category  $\sigma[M]$* , Editura Universității București, 2004, 122 pages.
13. *From Field Theoretic to Abstract Cogalois Theory*, chapter in "Handbook of Algebra", Vol. 5, Edited by M. Hazewinkel, Elsevier Science B.V, 2008, pp. 3-84.

14. *Problem Book on Modules and Algebras*, Editura Universității București, 2009, to appear. (with T. Dumitrescu and M. Iosif).
15. *Ring and Module Theory*, Trends in Mathematics, Edited by T. Albu, G. F. Birkenmeier, A. Erdogan, A. Tercan, Birkhauser, Basel, approx. 400 pages, 2009, to appear.
16. *Chain Conditions in Modular Lattices*, in preparation (with P.F. Smith).

## B: SCIENTIFIC PAPERS

1. *Monotone mappings between topological spaces* (in Romanian), Stud. Cerc. Mat. **15** (1964), 915-925.
2. *Un problème variationnel dans l'espace de Riemann*, Rev. Roumaine Math. Pures Appl. **10** (1965), 1323-1330 (with T. Zamfirescu).
3. *On the cohomology of adels* (in Romanian), Stud. Cerc. Mat. **22** (1970), 383-390.
4. *Une caractérisation des anneaux de Dedekind*, C. R. Acad. Sci. Paris **270**, Série A (1970), 699-702.
5. *Modules injectifs et modules artiniens sur les anneaux ZPI généraux*, C. R. Acad. Sci. Paris **271**, Série A (1970), 209-212.
6. *Modules de torsion à support fini*, C. R. Acad. Sci. Paris **273**, Série A (1971), 335-338.
7. *Modules décomposables de Dickson*, C. R. Acad. Sci. Paris **273**, Série A (1971), 369-372.
8. *Décomposition primaire dans les modules de torsion*, C. R. Acad. Sci. Paris **273**, Série A (1971), 696-699 (with C. Năstăsescu).
9. *Un critère de décomposabilité des modules de torsion*, Bull. Math. Soc. Sci. Math. R. S. Roumanie **15** (63), (1971), 3-8.
10. *On some classes of modules (I)* (in Romanian), Stud. Cerc. Mat. **24** (1972), 1329-1392.
11. *On some classes of modules (II)* (in Romanian), Stud. Cerc. Mat. **24** (1972), 1455-1501.
12. *Décomposition primaire des modules*, J. Algebra (USA) **23** (1972), 263-270 (with C. Năstăsescu).
13. *Modules injectifs quasi-cycliques*, Rev. Roumanie Math. Pures Appl. **18** (1973), 987-996.
14. *Modules arithmétiques*, Algebra – Berichte, Bericht Nr. **11**, 1973, Seminar F. Kasch – B. Pareigis, Mathematisches Institut der Universität München, Verlag Uni-Druck, 24 pages (with C. Năstăsescu).
15. *Sur la dimension de Gabriel des modules*, Algebra – Berichte, Bericht Nr. **21**, 1974, Seminar F. Kasch – B. Pareigis, Mathematisches Institut der Universität München, Verlag Uni-Druck, 26 pages.
16. *Modules sur les anneaux de Krull*, Algebra – Berichte, Bericht Nr. **25**, 1974, Seminar F. Kasch – B. Pareigis, Mathematisches Institut der Universität München, Verlag Uni-Druck, München, 15 pages (with C. Năstăsescu).
17. *Modules arithmétiques*, Acta Math. Acad. Sci. Hungar. (Hungary) **25** (1974), 299-311 (with C. Năstăsescu).
18. *Quelques caractérisations des modules ayant une dimension de Gabriel*, C. R. Acad. Sci. Paris **280**, Série A (1975), 617-620.

19. *Décompositions primaires dans les catégories de Grothendieck commutatives (I)*, J. Reine Angew. Math. (Germany) **280** (1976), 172-194 (with C. Năstăsescu).
20. *Décompositions primaires dans les catégories de Grothendieck commutatives (II)*, J. Reine Angew. Math. (Germany) **282** (1976), 172-185 (with C. Năstăsescu).
21. *Modules sur les anneaux de Krull*, Rev. Roumanie Math. Pures Appl. **21** (1976), 133-142 (with C. Năstăsescu).
22. *Local cohomology and torsion theory*, Algebra – Berichte, Bericht Nr. **37**, 1979, Seminar F. Kasch – B. Pareigis, Mathematisches Institut der Universität München, Verlag Uni-Druck, München, 38 pages (with C. Năstăsescu).
23. *Une remarque sur les catégories de Grothendieck commutatives*, Bull. Math. Soc. Sci. Math. R. S. Roumanie **23** (71) (1979), 115-116.
24. *On a paper of Uchida concerning simple finite extensions of Dedekind domains*, Osaka J. Math. (Japan), **16** (1979), 65-69.
25. *On commutative Grothendieck categories having a Noetherian cogenerator*, Arch. Math. (Basel) **34** (1980), 210-219.
26. *Some aspects of non-Noetherian local cohomology*, Comm. Algebra (USA) **8** (1980), 1539-1560 (with C. Năstăsescu).
27. *Local cohomology and torsion theory (I)*, Rev. Roumaine Math. Pures Appl. **26** (1981), 3-14 (with C. Năstăsescu).
28. *Cousin complex, local cohomology and torsion theory*, Comm. Algebra (USA) **10** (1982), 1691-1720 (with Ş. Raianu).
29. *Certain Artinian lattices are Noetherian. Applications to the relative Hopkins–Levitzki Theorem*, in “Methods in Ring Theory”, edited by F. Van Oystaeyen, D. Reidel Publishing Company, Dordrecht (Holland), pp. 37-52 (1984).
30. *Gabriel dimension of partially ordered sets (I)*, Bull. Math. Soc. Sci. Math. R. S. Roumanie **28** (76) (1984), 99-108.
31. *Gabriel dimension of partially ordered sets (II)*, Bull. Math. Soc. Sci. Math. R. S. Roumanie **28** (76) (1984), 199-205.
32. *A remark on the spectra of rings having a Gabriel dimension*, Rend. Sem. Mat. Univ. Padova (Italy) **72** (1984), 45-48.
33. *On composition series of a module with respect to a set of Gabriel topologies*, in “Abelian Groups and Modules” edited by R. Göbel, C. Metelli, A. Orsatti, L. Salce, Springer-Verlag, Wien–New York, pp. 467-476 (1984).
34. *Latticial aspects of some relative chain conditions for modules*, An. Ştiinţ. Univ. Al. I. Cuza Iaşi Sect. I a Mat. **31** (1985) (Supplement), 54-57.

35. *F-Semicritical modules, F-primitive ideals and prime ideals*, Rev. Roumaine Math. Pures Appl. **31** (1986), 449-459.
36. *Semicritical modules relative to a torsion theory*, in “Proceedings of the National Conference on Algebra”, June 1985, University of Cluj-Napoca, 1986, pp. 1-2.
37. *Infinite group-graded rings, rings of endomorphisms, and localization*, J. Pure Appl. Algebra (Holland) **59** (1989), 125-150 (with C. Năstăsescu).
38. *Smash products and quotient categories*, in “Proceedings of the National Conference on Algebra”, June 1988, University of Braşov, 1989, pp. 27-30.
39. *Pure ideals, quotient categories and infinite group-graded rings*, Comm. Algebra (USA) **18** (1990), 839-862.
40. *Generators in Grothendieck categories with right perfect endomorphism rings*, Osaka J. Math. (Japan) **28** (1991), 295-304 (with R. Wisbauer).
41. *Kummer extensions with few roots of unity*, J. Number Theory (USA) **41** (1992), 322-358.
42. *The Hopkins-Levitzki Theorem for modular lattices, and Krull dimension*, Analele Ştiinţifice ale Universităţii Ovidius Constanţa **2** (1994), 1-10 (with P. F. Smith).
43. *Kneser field extensions with Cogalois correspondence*, J. Number Theory (USA) **52** (1995), 299-318 (with F. Nicolae).
44. *G-Cogalois field extensions and primitive elements*, in “Symposia Gaussiana”, Conference A: Mathematics and Theoretical Physics, edited by M. Behara, R. Fritsch, R. G. Lintz, Walter de Gruyter & Co., Berlin New York, pp. 233-240 (1995) (with F. Nicolae).
45. *Heckesche Systeme idealer Zahlen und Knesersche Körpererweiterungen*, Acta Arithmetica (Poland) **73** (1995), 43-50 (with F. Nicolae).
46. *Dual relative Krull dimension of modules over commutative rings*, in “Abelian Groups and Modules”, edited by A. Facchini and C. Menini, Kluwer Academic Publisher, Dordrecht (Holland), pp. 1-15 (1995) (with P. F. Smith).
47. *Localization of modular lattices, Krull dimension, and the Hopkins-Levitzki Theorem (I)*, Math. Proc. Cambridge Philos. Soc. (Great Britain) **120** (1996), 87-101 (with P. F. Smith).
48. *Ascending chains of submodules in modules having Krull dimension*, Rev. Roumaine Math. Pures Appl. **41** (1996), 567-581 (with T. H. Lenagan and P. F. Smith).
49. *Some remarks on G-Cogalois extensions*, Rev. Roumaine Math. Pures Appl. **41** (1996), 145-153 (with F. Nicolae and M. Ţena).
50. *Finite radical field extensions and crossed homomorphisms*, J. Number Theory (USA) **60** (1996), 291-309 (with F. Nicolae).
51. *Localization of modular lattices, Krull dimension, and the Hopkins-Levitzki Theorem (II)*, Comm. Algebra (USA) **25** (1997), 1111-1128 (with P. F. Smith).

52. *Kasch modules*, in “Advances in Ring Theory”, edited by S. K. Jain and S. Tariq Rizvi, Birkhäuser, Boston Basel Berlin, pp. 1-16 (1997) (with R. Wisbauer).
53. *M-Density, M-adic completion, and M-subgeneration*, Rend. Sem. Mat. Univ. Padova (Italy) **98** (1997), 141-159 (with R. Wisbauer).
54. *Classes of lattices (co)generated by a lattice and their global (dual) Krull dimension*, Discrete Math. (Holland) **185** (1998), 1-18.
55. *Field extensions having a Cogalois correspondence – A survey*, in “Proceedings of the Annual Meeting of the Romanian Society of Mathematical Sciences, Bucharest, May 29 – June 1, 1997”, Tome 1, edited by M. Becheanu, I. D. Ion and A. Vernescu, pp. 13-22 (1998).
56. *Global Krull dimension and global dual Krull dimension of valuation rings*, in “Abelian Groups, Module Theory, and Topology: Proceedings in Honor of Adalberto Orsatti’s 60th Birthday”, edited by D. Dikranjan and L. Salce, Marcel Dekker, Inc., New York, pp. 37-54 (1998) (with P. Vámos).
57. *Dual Krull dimension and duality*, Rocky Mountain J. Math. (USA) **29** (1999), 1153-1165 (with P. F. Smith).
58. *An example in the dimension theory of modular lattices*, in “Proceedings of the Topology and Geometry Research Center”, edited by Y.H. Kim and J. Jeong, Volume **10**, Kyungpook National University TGRC-KOSEF (Korea), pp. 59-72 (1999). (with M.L. Teply).
59. *Global Krull dimension*, in “Ring Theory and Representations of Algebras”, Proceedings of the Euroconference Interactions between Ring Theory and Representations of Algebras, University of Murcia, January 1998, edited by M. Saorin and F. Van Oystaeyen, Marcel Dekker, Inc., New York Basel, pp. 1-23 (2000) (with P. F. Smith).
60. *Generalized deviation of posets and modular lattices*, Discrete Math. (Holland) **214** (2000), 1-19 (with M. L. Teply).
61. *The double infinite chain condition and generalized deviations of posets and modules*, in “Algebra and its Application”, Proceedings of the International Conference on Algebra and its Applications, Athens, Ohio, 1999, edited by D.V. Huynh, S.K. Jain, and S.R. López-Permouth, Contemporary Math., Vol. 259, American Math. Soc., Providence, pp. 13-43 (2000) (with M. L. Teply).
62. *The nilpotence of the  $\tau$ -closed prime radical in rings with  $\tau$ -Krull dimension*, J. Algebra (USA) **229** (2000), 498-513 (with G. Krause and M.L. Teply).
63. *Generalized deviations of posets with applications to chain conditions on modules*, in “International Symposium on Ring Theory”, Proceedings of the 3rd Korea–China–Japan International Symposium on Ring Theory, edited by G.F. Birkenmeier, J.K. Park, and Y.S. Park, Birkhäuser, Boston Basel Berlin, pp. 1-22 (2000) (with M.L. Teply).
64. *Chain conditions on quotient finite dimensional modules*, Comm. Algebra (USA) **29** (2001), 1909-1928 (with S.T. Rizvi).
65. *Infinite Cogalois Theory*, Mathematical Reports **3 (53)** (2001), 105-132 (with M. Tena).

66.  $\Gamma$ -Deviation and localization, J. Korean Math. Soc. **38** (2001), 937-954 (with M.L. Teply).
67. On the transfinite powers of the Jacobson radical of a DICC ring, J. Korean Math. Soc. **38** (2001), 1117-1123 (with M.L. Teply).
68. Bijective relative Gabriel correspondence over rings with torsion theoretic Krull dimension, J. Algebra (USA) **243** (2001), 644-674 (with G. Krause and M.L. Teply).
69. Corrigendum and Addendum to "Localization of modular lattices, Krull dimension, and the Hopkins-Levitzki Theorem (II)", Comm. Algebra (USA) **29** (2001), 3677-3682 (with P.F. Smith).
70. Infinite field extensions with Cogalois correspondence, Comm. Algebra (USA) **30** (2002), 2335-2353.
71. Some examples in Cogalois Theory with applications to elementary Field Arithmetic, J. Algebra Appl. (USA) **1** (2002), 1-29.
72. Lattice-isomorphic groups, and infinite Abelian  $G$ -Cogalois field extensions, J. Algebra Appl. (USA) **1** (2002), 243-253 (with Ş. Basarab).
73. On radical field extensions of prime exponent, J. Algebra Appl. (USA) **1** (2002), 365-373.
74. Field extensions having the unique subfield property, and  $G$ -Cogalois extensions, Turkish J. Math. **26** (2002), 433-445.
75. Infinite field extensions with Galois-Cogalois correspondence (I), Rev. Roumaine Math. Pures Appl. **47** (2002), 1-20.
76. Infinite field extensions with Galois-Cogalois correspondence (II), Rev. Roumaine Math. Pures Appl. **47** (2002), 149-161.
77. Corrigendum and Addendum to my paper on Kummer extensions with few roots of unity, J. Number Theory (USA) **99** (2003), 222-224.
78. Infinite Cogalois Theory, Clifford extensions, and Hopf algebras, J. Algebra Appl. (USA) **2** (2003), 119-136.
79. Quartic field extensions with no proper intermediate field, Rev. Roumaine Math. Pures Appl. **48** (2003), 1-11 (with L. Panaitopol).
80. Modular QFD lattices with applications to Grothendieck categories and torsion theories, J. Algebra Appl. (USA) **3** (2004), 391-410 (with M. Iosif and M.L. Teply).
81. Divisible groups and an intriguing group isomorphism between the nonzero complex numbers and the unit circle, Bull. Math. Soc. Sci. Math. Roumanie **47** (95) (2004), 15-22.
82. Dual Krull dimension and quotient finite dimensionality, J. Algebra (USA) **284** (2005), 52-79 (with M. Iosif and M.L. Teply).
83. An Abstract Cogalois Theory for profinite groups, J. Pure Appl. Algebra (USA) **200** (2005), 227-250 (with Ş. Basarab).

84. *Field theoretic Cogalois Theory via Abstract Cogalois Theory*, J. Pure Appl. Algebra (USA) **208** (2007), 101-106.
85. *Cogalois Theory: an outline*, in “Encyclopaedia of Mathematics”, Volume 14, Edited by M. Hazewinkel, Kluwer Academic Publishers, Dordrecht, 2008, to appear.
86. *An indecomposable non-locally finitely generated Grothendieck category with simple objects*, J. Algebra (USA) **321** (2009), 1358-1545 (with J. van den Berg).
87. *Completely irreducible meet decompositions in lattices, with applications to Grothendieck categories and torsion theories (I)*, Bull. Math. Soc. Sci. Math. Roumanie **52** (100) (2009), to appear.
88. *Completely irreducible meet decompositions in lattices, with applications to Grothendieck categories and torsion theories (II)*, Bull. Math. Soc. Sci. Math. Roumanie **53** (101) (2010), to appear.
89. *Primality, irreducibility, and complete irreducibility in modules over commutative rings*, submitted (with P.F. Smith).
90. *A seventy year jubilee: The Hopkins-Levitzki Theorem*, in “Ring and Module Theory”, Trends in Mathematics, Edited by T. Albu, G. F. Birkenmeier, A. Erdogan, A. Tercan, Birkhauser, Basel, 2009, to appear.
91. *Applications of Cogalois Theory to elementary Field Arithmetic*, in “Algebra and its Application”, Proceedings of the International Conference on Algebra and its Applications in Honor of 70th Birthday of S. K. Jain, Athens, Ohio, 2008, Trends in Mathematics, Edited by D.V. Huynh and S.R. López-Permouth, Birkhauser, Basel, 2009, to appear.
92. *Primal and primary meet decompositions in modules over arbitrary commutative rings*, in preparation (with P.F. Smith).
93. *CC lattices, with applications to Grothendieck categories and torsion theories*, in preparation (with A. Tercan).
94. *Abstract Kummer Theory via Abstract Cogalois Theory*, in preparation.

## C: DIDACTIC PAPERS

1. *On a geometric inequality* (in Romanian), *Gazeta Matematică*, Ser. B **XII**, Nr. 10 (1961), 597-59
2. *On some classes of rational numbers* (in Romanian), *Gazeta Matematică*, Ser. A **LXX**, Nr. 4 (1965), 129-131.
3. *About the notion of power* (in Romanian), *Gazeta Matematică*, Ser. A **LXX**, Nr. 5 (1965), 176-181 (with C. Bănică).
4. *A geometric locus problem* (in Romanian), *Gazeta Matematică*, Ser. A **LXXI**, Nr. 9 (1966), 330-331.
5. *About the conjugate roots of some algebraic equations* (in Romanian), *Gazeta Matematică*, Ser. A **LXXI**, Nr. 6 (1966), 212-225 (with E. Georgescu-Buzău).
6. *Some applications of the including and excluding principle* (in Romanian), *Gazeta Matematică*, Ser. B **XX**, Nr. 6 (1969), 328-331 (with I. Tomescu).
7. *Admission Contest, September 1982. Faculty of Mathematics. Algebra* (in Romanian), *Gazeta Matematică* **LXXXVIII**, Nr. 6 (1983), 233-237.
8. *A counting method of the group structures on a finite set (I)* (in Romanian), *Gazeta Matematică* **LXXXIX**, Nr. 2 (1984), 49-52.
9. *A counting method of the group structures on a finite set (II)* (in Romanian), *Gazeta Matematică* **LXXXIX**, Nr. 3 (1984), 97-99.
10. *The first Balkan Mathematical Olympiad for highschool students* (in Romanian), *Gazeta Matematică* **LXXXIX**, Nr. 9 (1984), 321-328.
11. *The second Balkan Mathematical Olympiad for highschool students* (in Romanian), *Gazeta Matematică* **XC**, Nr. 12 (1985), 437-443.
12. *The third Balkan Mathematical Olympiad for highschool students, Bucharest - 1986* (in Romanian), *Gazeta Matematică* **XCI**, Nr. 10 (1986), 369-378.
13. *On a property of binomial coefficients* (in Romanian), *Revista Matematică a Elevilor din Timișoara* **XVII**, Nr. 2 (1986), 24-27.
14. *The decomposition in simple fractions* (in Romanian), *Gazeta Matematică*, *Perfecționare Metodică* **VIII**, Nr. 3 (1987), 104-114 (with M. Țena).
15. *Elementary constructions of commutative rings and fields (I)* (in Romanian), *Gazeta Matematică* **XCIII**, Nr. 8 (1988), 305-311.
16. *Elementary constructions of rings and fields (II)* (in Romanian), *Gazeta Matematică* **XCIII**, Nr. 9 (1988), 337-346.

17. *Elementary constructions of rings and fields (III)* (in Romanian), *Gazeta Matematică* **XCIII**, Nr. 10 (1988), 386-396.
18. *An elementary treatment of the structure of finite fields* (in Romanian), *Gazeta Matematică, Perfecționare Metodică* **X**, Nr. 4 (1989), 153-164.
19. *A property of the roots of irreducible polynomials* (in Romanian), *Gazeta Matematică* **XCIV**, Nr. 4-5 (1990), 129-132.
20. *From the irrationality of sums of radicals to Kneser and  $G$ -Cogalois field extensions (I)* (in Romanian), *Gazeta Matematică* **C**, Nr. 9 (1995), 421-430.
21. *From the irrationality of sums of radicals to Kneser and  $G$ -Cogalois field extensions (II)* (in Romanian), *Gazeta Matematică* **C**, Nr. 10 (1995), 611-619.
22. *Polynomials, polynomial functions, and roots (I)* (in Romanian), *Gazeta Matematică, Perfecționare Metodică* **XVI**, Nr. 1 (1998), 4-28.
23. *Polynomials, polynomial functions, and roots (II)* (in Romanian), *Gazeta Matematică, Perfecționare Metodică* **XVI**, Nr. 2 (1998), 82-101.
24. *An intriguing group isomorphism between the nonzero complex numbers and the unit circle* (in Turkish), *Matematik Dnyası* **18** (2009), to appear.