

ANDRZEJ KRASIŃSKI
LIST OF ALL PUBLICATIONS
(where no names are listed, A. K. is the sole author)

1 Textbooks and Monographs

- [1] 1. Inhomogeneous cosmological models [a monograph]. Cambridge University Press, Cambridge 1997, 317 pp, ISBN 0 521 48180 5. Paperback re-edition 2006; electronic re-edition 2010.
- [2] 2. Jerzy Plebański and A. Krasinski, An introduction to general relativity and cosmology [a textbook]. Cambridge University Press 2006, 534 pp, ISBN 0-521-85623-X. Paperback re-edition 2012.

The list of corrections to errors and typos found (by Mr. Przemysław Jacewicz) after publication of the book is available from the web page:

http://www.cambridge.org/gb/knowledge/isbn/item1173175/?site_locale=en_GB
(click on “Resources” and then on “New errata”)

- [3] 3. Krzysztof Bolejko, A. Krasinski, Charles Hellaby and Marie-Noëlle Célérier, Structures in the Universe by exact methods – formation, evolution, interactions [a monograph]. Cambridge University Press 2010, 242 pp, ISBN 978-0-521-76914-3.

2 Other books

- [4] 1. A. Krasinski, George F. R. Ellis, Malcolm A. H. MacCallum (editors). Golden Oldies in general relativity. Hidden gems. Springer, Heidelberg 2013, 493 pp, ISBN 978-3-642-34504-3.

3 Main research papers

- [5] 1. Solutions of the Einstein field equations for a rotating perfect fluid, Part 1 - Presentation of the flow-stationary and vortex- homogeneous solutions. *Acta Phys. Polon.* **B5**, 411 (1974).
- [6] 2. Solutions of the Einstein field equations for a rotating perfect fluid, Part 2 - Properties of the flow-stationary and vortex- homogeneous solutions. *Acta Phys. Polon.* **B6**, 223 (1975).

- [7] 3. Solutions of the Einstein field equations for a rotating perfect fluid, part 3 - A survey of models of a rotating perfect fluid or dust. *Acta Phys. Polon.* **B6**, 239 (1975), also published in a largely expanded form as a preprint.
- [8] 4. Some solutions of the Einstein field equations for a rotating perfect fluid distribution. *J. Math. Phys.* **16**, 125 (1975).
- [9] 5. All flow-stationary cylindrically symmetric solutions of the Einstein field equations for a rotating isentropic perfect fluid. *Rep. Math. Phys.* **14**, 225 (1978).
- [10] 6. Ellipsoidal spacetimes, sources for the Kerr metric. *Ann. Phys.* **112**, 22 (1978).
- [11] 7. A. Krasinski, Jerzy Plebański, N-dimensional complex Riemann-Einstein spaces with $O(n-1, C)$ as the symmetry group. *Rep. Math. Phys.* **17**, 217 (1980).
- [12] 8. A Newtonian model of the source of the Kerr metric. *Phys. Lett.* **A80**, 238 (1980).
- [13] 9. A. Krasinski, Marek Perkowski, ORTOCARTAN - a new computer program for analytic calculations in general relativity. *Gen. Relativ. Gravit.* **13**, 67 (1981).
- [14] 10. A. Krasinski, Marek Perkowski, ORTOCARTAN - a new computer program for algebraic calculations. *Computer Phys. Commun.* **22**, 269 (1981).
- [15] 11. Spacetimes with spherically symmetric hypersurfaces. *Gen. Relativ. Gravit.* **13**, 1021 (1981).
- [16] 12. On the global geometry of the Stephani Universe. *Gen. Relativ. Gravit.* **15**, 673 (1983).
- [17] 13. ORTOCARTAN - a program for algebraic calculations in general relativity. *SIGSAM Bulletin* **17** no 3 - 4, 12 (1983).
- [18] 14. A. Krasinski, Stanisław Bazański and Renata Kaczyńska, Physical properties of the extended Chasles equilibrium figure. *Phys. Lett.* **A 115**, 33 (1986).
- [19] 15. On the equations of state and on flow of perfect fluids in general relativity (comments to two papers by V. I. Obzov). *Acta Phys. Polon.* **B19**, 801 (1988).
- [20] 16. Shearfree normal cosmological models. *J. Math. Phys.* **30**, 433 (1989).
- [21] 17. A note on the uniqueness of the Wyman solution. *Rep. Math. Phys.*, **29**, 337 (1991).
- [22] 18. The program ORTOCARTAN for algebraic calculations in relativity. *Gen. Relativ. Gravit.* **25**, 165 (1993).
- [23] 19. Bibliography on inhomogeneous cosmological models. *Acta Cosmologica* **20**, 67 (1994).

- [24] 20. A. Krasinski, Hernando Quevedo and Roberto Sussman, On the thermodynamical interpretation of perfect fluid solutions of the Einstein equations with no symmetry. *J. Math. Phys.* **38**, 2602 (1997).
- [25] 21. Rotating dust solutions of Einstein's equations with 3-dimensional symmetry groups; Part 1: Two Killing fields spanned on u^α and w^α . *J. Math. Phys.* **39**, 380 (1998).
- [26] 22. Rotating dust solutions of Einstein's equations with 3-dimensional symmetry groups; Part 2: One Killing field spanned on u^α and w^α . *J. Math. Phys.* **39**, 401 (1998).
- [27] 23. Rotating dust solutions of Einstein's equations with 3-dimensional symmetry groups; Part 3: All Killing fields linearly independent of u^α and w^α . *J. Math. Phys.* **39**, 2148 (1998).
- [28] 24. The newest release of the Ortocartan set of programs for algebraic calculations in relativity. *Gen. Relativ. Gravit.* **33**, 145 (2001).
- [29] 25. Rotating Bianchi type V dust models generalizing the $k = -1$ Friedmann models. *J. Math. Phys.* **42**, 355 (2001).
- [30] 26. Friedmann limits of hypersurface-homogeneous rotating dust models. *J. Math. Phys.* **42**, 3628 (2001).
- [31] 27. A. Krasinski and Charles Hellaby, Structure formation in the Lemaitre – Tolman model. *Phys. Rev.* **D65**, 023501 (2002).
- [32] 28. Charles Hellaby and A. Krasinski, You cannot get through Szekeres wormholes: Regularity, topology and causality in quasi-spherical Szekeres models. *Phys. Rev.* **D66**, 084011 (2002).
- [33] 29. A. Krasinski and Charles Hellaby, More examples of structure formation in the Lemaitre – Tolman model. *Phys. Rev.* **D69**, 023502 (2004).
- [34] 30. A. Krasinski and Charles Hellaby, Formation of a galaxy with a central black hole in the Lemaitre – Tolman model. *Phys. Rev.* **D69**, 043502 (2004).
- [35] 31. Krzysztof Bolejko, A. Krasinski and Charles Hellaby, Formation of voids in the Universe within the Lemaitre–Tolman model. *Mon. Not. Roy. Astr. Soc.* **362**, 213 (2005).
- [36] 32. Charles Hellaby and A. Krasinski, Alternative methods of describing structure formation in the Lemaitre – Tolman model. *Phys. Rev.* **D73**, 023518 (2006).
- [37] 33. A. Krasinski and Krzysztof Bolejko, Avoidance of singularities in spherically symmetric charged dust. *Phys. Rev.* **D73**, 124033 (2006) + erratum *Phys. Rev.* **D75**, 069904 (2007). Fully corrected text available from gr-qc 0602090.

- [38] 34. A. Krasinski and Krzysztof Bolejko, Can a charged dust ball be sent through the Reissner – Nordström wormhole? *Phys. Rev.* **D76**, 124013 (2007).
- [39] 35. Charles Hellaby and A. Krasinski, Physical and Geometrical Interpretation of the $\epsilon \leq 0$ Szekeres Models. *Phys. Rev.* **D77**, 023529 (2008).
- [40] 36. Geometry and topology of the quasi-plane Szekeres model. *Phys. Rev.* **D78**, 064038 (2008) + erratum *Phys. Rev.* **D85**, 069903(E) (2012). Fully corrected text: arxiv:0805.0529v4.
- [41] 37. Marie-Noëlle Célérier, Krzysztof Bolejko and A. Krasinski, A (giant) void is not mandatory to explain away dark energy with a Lemaître – Tolman model. *Astronomy and Astrophysics* **518**, A21 (2010).
- [42] 38. A. Krasinski, Charles Hellaby, Krzysztof Bolejko and Marie-Noëlle Célérier, Imitating accelerated expansion of the Universe by matter inhomogeneities – corrections of some misunderstandings. *Gen. Relativ. Gravit.* **42**, 2453 (2010).
- [43] 39. A. Krasinski and Krzysztof Bolejko, Redshift propagation equations in the $\beta' \neq 0$ Szekeres models. *Phys. Rev.* **D83**, 083503 (2011).
- [44] 40. Krzysztof Bolejko, Marie-Noëlle Célérier and A. Krasinski, Inhomogeneous cosmological models: exact solutions and their applications. *Class. Quant. Grav.* **28**, 164002 (2011).
- [45] 41. Repeatable light paths in the shearfree normal cosmological models. *Phys. Rev.* **D84**, 023510 (2011).
- [46] 42. Cosmological models and misunderstandings about them. *Acta Phys. Polon.* **B42**, 2263 (2011).
- [47] 43. Przemysław Jacewicz and A. Krasinski, Formation of Gyrs old black holes in the centers of galaxies within the Lemaître–Tolman model. *Gen. Relativ. Gravit.* **44**, 81–105 (2012).
- [48] 44. A. Krasinski and Gabriel Giono, The charged dust solution of Ruban – matching to Reissner–Nordström and shell crossings. *Gen. Relativ. Gravit.* **44**, 239–251 (2012).
- [49] 45. A. Krasinski and Krzysztof Bolejko, Apparent horizons in the quasi-spherical Szekeres models. *Phys. Rev.* **D85**, 124016 (2012).
- [50] 46. Repeatable light paths in the conformally flat cosmological models. *Phys. Rev.* **D86**, 064001 (2012).
- [51] 47. A. Krasinski and Krzysztof Bolejko, Geometry of the quasi-hyperbolic Szekeres models. *Phys. Rev.* **D86** 104036 (2012).

- [52] 48. Accelerating expansion or inhomogeneity? A comparison of the Λ CDM and Lemaître – Tolman models. *Phys. Rev.* **D89**, 023520 (2014); erratum: *Phys. Rev.* **D89**, 089901(E) (2014).
- [53] 49. Accelerating expansion or inhomogeneity? Part 2: Mimicking acceleration with the energy function in the Lemaître – Tolman model. *Phys. Rev.* **D90**, 023524 (2014).
- [54] 50. Mimicking acceleration in the constant-bang-time Lemaître – Tolman model: Shell crossings, density distributions and light cones. *Phys. Rev.* **D90**, 064021 (2014).
- [55] 51. Blueshifts in the Lemaître – Tolman models. *Phys. Rev.* **D90**, 103525 (2014).
- [56] 52. Cosmological blueshifting may explain the gamma ray bursts. *Phys. Rev.* **D93**, 043525 (2016).
- [57] 53. Existence of blueshifts in quasi-spherical Szekeres spacetimes. *Phys. Rev.* **D94**, 023515 (2016).
- [58] 54. Properties of blueshifted light rays in quasi-spherical Szekeres metrics. *Phys. Rev.* **D97**, 064047 (2018).
- [59] 55. Short-lived flashes of gamma radiation in a quasi-spherical Szekeres metric. arXiv 1803.10101, not to be published in consequence of extremely adverse reaction of the referees.
- [60] 56. Gamma radiation from areal radius minima in a quasi-spherical Szekeres metric. *Acta Phys. Polon.* **B51**, 483 (2020).
- [61] 57. Expansion of bundles of light rays in the Lemaître – Tolman models. *Rep. Math. Phys.* **88**, 203 (2021).

4 Research work published in refereed proceedings of international conferences

- [62] 1. The Universe with time-varying spatial curvature index. In: *The birth of the Universe*. Edited by J. Audouze and J. Tran Thanh Van. Proceedings of the 17-th Rencontre de Moriond 1982, vol. 34. Editions Frontieres, Gif sur Yvette 1982, p. 15.
- [63] 2. A generalization of the Lemaître models. In: *The Big Bang and Georges Lemaître*. Edited by A. Berger. D. Reidel Publishing Company, Dordrecht 1984, p. 63.
- [64] 3. Generalized cosmological models. In: *Proceedings of the Sir Arthur Eddington Centenary Symposium, Vol. I: Relativistic astrophysics and cosmology*. Edited by V. de Sabbata and T. M. Karade. World Scientific Publishing Company, Singapore 1984, p. 45.

- [65] 4. The program ORTOCARTAN for applications in Einstein's relativity theory. In: *EUROCAL'85, European Conference on Computer Algebra, Linz, Austria, 1985. Proceedings, vol. 2: Research contributions*. Edited by B. F. Caviness. Lecture Notes in Computer Science vol. 204. Springer, Berlin 1985, p. 159.
- [66] 5. A spatially periodic generalization of the FLRW cosmological models. In: *Proceedings of the 4th Marcel Grossman Meeting on General Relativity*. Edited by R. Ruffini. Elsevier Science Publishers B. V., Amsterdam 1986, p. 989.
- [67] 6. Inhomogeneous generalizations of the Robertson-Walker cosmological models. In: *Gravitational Collapse and Relativity, Proceedings of Yamada Conference XIV*. Edited by H. Sato and T. Nakamura. World Scientific Publishing Company, Singapore 1986, p. 500.
- [68] 7. The program ORTOCARTAN for applications in the relativity theory. In: *International Conference on Computer Algebra and its Applications in Theoretical Physics*. Edited by N. N. Govorun. Joint Institute for Nuclear Research, Dubna 1986, p. 50.
- [69] 8. Early inhomogeneous cosmological models in Einstein's theory. In: *Modern Cosmology in Retrospect*. Edited by B. Bertotti, R. Balbinot, S. Bergia and A. Messina. Cambridge University Press, Cambridge 1990, p. 115.
- [70] 9. User-friendly features of ORTOCARTAN. In: *Computer Algebra in Physical Research*. Edited by D. V. Shirkov, V. A. Rostovtsev and V. P. Gerdt. World Scientific, Singapore 1991, p. 66.
- [71] 10. A survey of cosmological exact solutions. In: *Proceedings of the 6th Marcel Grossman Meeting on General Relativity*. Edited by H. Sato and T. Nakamura. World Scientific, Singapore 1992, p. 642.
- [72] 11. Physics in an inhomogeneous Universe. In: *Inhomogeneous cosmological models. Proceedings of the 1994 Spanish Relativity Meeting*. Edited by J. M. M. Senovilla and A. Molina. World Scientific, Singapore, 1995, p. 27.
- [73] 12. Overview of inhomogeneous cosmological models. In: *Recent developments in gravitation and mathematical physics*. Edited by A. Macias, T. Matos, O. Obregon and H. Quevedo. World Scientific, Singapore 1996, p. 163.
- [74] 13. Physics and cosmology in an inhomogeneous Universe. In: *Black holes and high energy astrophysics. Proceedings of the 49th Yamada Conference*. Edited by H. Sato and N. Sugiyama. Universal Academy Press, Tokyo 1998, p. 133.
- [75] 14. The ultimate extension of the Bianchi classification for rotating dust models. In: *On Einstein's path: Essays in honor of Engelbert Schucking*. Edited by A. Harvey. Springer, New York 1999, p. 283.

- [76] 15. Rotating dust models in relativity. In: *Coherent states, quantization and gravity. Proceedings of the XVIIth Workshop on Geometric Methods in Physics, Białowieża (Poland) 1998*. Edited by M. Schlichenmaier, A. Strasburger, S. Twareque Ali and A. Odziejewicz. Warsaw University Press, Warsaw 2001, p. 199.
- [77] 16. Inhomogeneous cosmology – workshop report (Edited by A. Krasinski). In: *The Ninth Marcel Grossman Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories*. Edited by V. G. Gurzadyan, R. T. Jantzen and R. Ruffini. World Scientific, New Jersey, London, Singapore, Hong Kong 2002, p. 627.
- [78] 17. Recent developments in the system Ortocartan. In: *The Ninth Marcel Grossman Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories*. Edited by V. G. Gurzadyan, R. T. Jantzen and R. Ruffini. World Scientific, New Jersey, London, Singapore, Hong Kong 2002, p. 1701.
- [79] 18. A. Krasinski and Charles Hellaby, Structure formation in the Universe by exact methods. In: *“Mathematics of Gravitation II”*. Proceedings of the conference held in Warsaw, 2003. Published in the web page <http://www.impan.pl/BC/Arch/2003/Gravitation/ConfProc/index.html>
- [80] 19. Charles Hellaby and A. Krasinski, Szekeres models and their wormholes. In: *The Tenth Marcel Grossman Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories*. Edited by M. Novello, S. P. Bergliaffa and R. Ruffini. World Scientific, New Jersey, London, Singapore, Beijing, Shanghai, Hong Kong, Taipei, Chennai 2005, p. 29.
- [81] 20. A. Krasinski and Charles Hellaby, Structure formation in the Universe by exact methods. In: *The Tenth Marcel Grossman Meeting on Recent Developments in Theoretical and Experimental General Relativity, Gravitation and Relativistic Field Theories*. Edited by M. Novello, S. P. Bergliaffa and R. Ruffini. World Scientific, New Jersey, London, Singapore, Beijing, Shanghai, Hong Kong, Taipei, Chennai 2005, p. 80.
- [82] 21. A. Krasinski and Charles Hellaby, Structure formation in the Lemaitre–Tolman cosmological model (a non-perturbative approach). In: *Topics in mathematical physics, general relativity and cosmology, in honor of Jerzy Plebański*. Proceedings of 2002 international conference. Edited by H. Garcia-Compean, B. Mielnik, M. Montesinos and M. Przanowski. World Scientific, New Jersey, London, Singapore, Beijing, Shanghai, Hong Kong, Taipei, Chennai 2006, p. 279.
- [83] 22. A. Krasinski and Krzysztof Bolejko, Nonsingular collapse of spherically symmetric charged dust. In: *Proceedings of 11th Marcel Grossman Meeting*. Edited by H. Kleinert, R.T. Jantzen and R. Ruffini, World Scientific, Singapore, 2008, p. 700.

- [84] 23. A. Krasinski and Krzysztof Bolejko, Exact inhomogeneous models and the drift of light rays induced by nonsymmetric flow of the cosmic medium. In: *Proceedings of 13th Marcel Grossman Meeting*. Edited by R. T. Jantzen, K. Rosquist and R. Ruffini, World Scientific, New Jersey, London, Singapore, Beijing, Shanghai, Hong Kong, Taipei, Chennai 2015, p. 922. Also published in *International Journal of Modern Physics D***22**, 1330013 (2013).
- [85] 24. Singularities you might not be familiar with (i.e. strange kinds of Big Bang). In: “*Singularities of general relativity and their quantum fate*”. Proceedings of the conference held in Warsaw, 2016. Published in the web page http://bcc.impan.pl/16SingGR/uploads/Singularity/Andrzej_Krasinski.pdf, and also accessible as a You Tube recording at <https://www.youtube.com/watch?v=0KE1NKMcqB8>

5 Communications printed in conference volumes (Note: short conference abstracts are not included in this list at all)

- [86] 1. A class of rotating and expanding Universes. In: *8th International Conference on General Relativity and Gravitation*. University of Waterloo 1977, p. 216.
- [87] 2. Ellipsoidal spacetimes. In: *8th International Conference on General Relativity and Gravitation*. University of Waterloo 1977, p. 217.
- [88] 3. A. Krasinski and Marek Perkowski, ORTOCARTAN - a computer program for calculating curvature tensors. In: *9th International Conference on General Relativity and Gravitation*. University of Jena 1980, p. 106.
- [89] 4. Spacetimes with intrinsic spherical symmetry. In: *9th International Conference on General Relativity and Gravitation*. University of Jena 1980, p. 44.
- [90] 5. A Newtonian model of the Kerr gravitational field. In: *9th International Conference on General Relativity and Gravitation*. University of Jena 1980, p. 46.
- [91] 6. Symmetries of the Riemann tensor. In: *10th International Conference on General Relativity and Gravitation*. University of Padua 1983, p. 290.
- [92] 7. The program ORTOCARTAN for algebraic calculations - new developments. In: *10th International Conference on General Relativity and Gravitation*. University of Padua 1983, p. 433.
- [93] 8. The Universe with varying topology of spatial slices. In: *10th International Conference on General Relativity and Gravitation*. University of Padua 1983, p. 841.

- [94] 9. The program ORTOCARTAN - developments since 1983. In: *11th International Conference on General Relativity and Gravitation*. University of Stockholm 1986, p. 58.
- [95] 10. Spacetimes with conformally flat flow-orthogonal sections. In: *11th International Conference on General Relativity and Gravitation*. University of Stockholm 1986, p. 327.
- [96] 11. A unified representation of the shearfree normal models. In: *12th International Conference on General Relativity and Gravitation*. University of Colorado at Boulder 1989, p. 341.
- [97] 12. Cosmological exact solutions. In: *12th International Conference on General Relativity and Gravitation*. University of Colorado at Boulder 1989, p. 340.
- [98] 13. The program ORTOCARTAN - now available on Atari. In: *13th International Conference on General Relativity and Gravitation*. University of Cordoba 1992, p. 305.
- [99] 14. Cosmology in an inhomogeneous Universe. In: *13th International Conference on General Relativity and Gravitation*. University of Cordoba 1992, p. 378.

6 Technical reports (distributed as preprints or electronic recordings; not otherwise published)

- [100] 1. A. Krasinski, Marek Perkowski and Zdzisław Otwinowski, The system ORTOCARTAN for analytic calculations. Detailed description. Preprint (1979), documentation to the program.
- [101] 2. A. Krasinski and Marek Perkowski, The system ORTOCARTAN - user's manual. Preprint (1st issue 1979, 2nd issue 1980), documentation to the program.
- [102] 3. A. Krasinski and Marek Perkowski, The system ORTOCARTAN - user's manual. Third edition, Cologne 1983. Updated documentation to the program, stored and distributed on a magnetic tape.
- [103] 4. A. Krasinski, Marek Perkowski, Zdzisław Otwinowski and Marek Kwaśniewski, The system ORTOCARTAN for analytic calculations. Detailed description. Second edition, Warsaw 1984. Updated documentation to the program, stored and distributed on a magnetic tape.
- [104] 5. The system ORTOCARTAN - user's manual. Supplement to the second edition. Preprint (1984), documentation to the program (included in later updates).

- [105] 6. A. Krasieński and Marek Perkowski, The system ORTOCARTAN - user's manual. Fourth edition, Warsaw 1992. Revised and extended documentation to the program, stored and distributed on diskettes.
- [106] 7. A. Krasieński and Marek Perkowski, The system ORTOCARTAN - user's manual. Fifth edition, Warsaw 2000. Revised and extended documentation to the program, stored on disk, distributed by email only.

7 Notes of lecture courses given at research schools (those given in Poland are marked with PPP)

- [107] 1. A survey of cosmological models. *Acta Cosmologica* **7**, 101 (1978). (PPP)
- [108] 2. Rotational motion of matter in general relativity. *Acta Cosmologica* **7**, 119 (1978). (PPP)
- [109] 3. Cylindrical rotating Universe. *Acta Cosmologica* **7**, 133 (1978). (PPP)
- [110] 4. Symmetries of manifolds and tensor fields and the Bianchi classification. In: *Proceedings of the Instructional Workshop on Advanced Aspects of General Relativity, vol. I*. Edited by A. Banerjee. Jadavpur University and the Indian Association for the Cultivation of Science, Calcutta 1989, p. 6.

8 Semi-popular texts for physicists + review papers (all in Polish)

- [111] 1. Models of the Universe in general relativity. *Postępy Astronomii* **23**, 97 (1975).
- [112] 2. Is the Sun spherical? *Postępy Astronomii* **23**, 159 (1975).
- [113] 3. A. Krasieński and Marek Perkowski, Symbolic algebraic computer programs, Part 1 - The LISP programming language. *Postępy Astronomii* **25**, 203 (1977).
- [114] 4. A. Krasieński and Marek Perkowski, Symbolic algebraic computer programs, Part 2 - Applications and perspectives. *Postępy Astronomii* **26**, 33 (1978).
- [115] 5. Figures of equilibrium, Part 1 - Basic theorems. *Postępy Astronomii* **28**, 271 (1980).
- [116] 6. Figures of equilibrium, Part 2 - Homogeneous figures. *Postępy Astronomii* **29**, 31 (1981).

- [117] 7. Figures of equilibrium, Part 3 - Inhomogeneous figures. *Postępy Astronomii* **29**, 87 (1981).
- [118] 8. Physics in an inhomogeneous Universe. *Postępy Fizyki* **43**, 415 (1992).
- [119] 9. The Galileo affair. *Postępy Fizyki* **44**, 487 (1993); same text: *Postępy Astronomii* **41**, 109 (1993) - part 1, **41**, 183 (1993) - part 2.
- [120] 10. What is space and what space do we live in? (the point of view of a nonquantum physicist). In: *Space in Contemporary Science*. Edited by S. Symotiuk and G. Nowak. Publishing House of the Maria Curie-Skłodowska University, Lublin 2000, p. 11.
- [121] 11. How the theory of relativity had been taking shape. *Postępy Fizyki* **54**, 95 (2003).
- [122] 12. Un-recognised discoveries. Unknown episodes of the history of general relativity. *Postępy Fizyki* **58**, 104 (2007).
- [123] 13. On cosmological models and some misunderstandings about them. *Postępy Fizyki* **60**, 98 (2009).
- [124] 14. On Charles Babbage’s difference engine and other old computers. *Postępy Fizyki* **61**, 229 (2010).
- [125] 15. Premature Nobel Prize decision? (includes a translation of a letter by Yousaf M. Butt from *Physics Today* **65**, February 2012, p. 10). *Postępy Fizyki* **63**, 50 (2012).
- [126] 16. 100 years of general relativity. *Nauka* quarterly, No 1/2016, 11 (2016).

9 Short notes correcting errors in published papers by other authors

- [127] 1. Comment on “Space-times with plane-symmetric scalar waves” [J. Math. Phys. **33**, 3506 (1992)], *J. Math. Phys.* **35**, 527 (1994).
- [128] 2. Stationary cylindrically symmetric vacuum solutions with Λ [Comment on the paper by Santos, CQG **10**, 2401 (1993)], *Class. Quant. Grav.* **11**, 1373 (1994).
- [129] 3. Comment on “A cylindrically symmetric solution approaching Einstein universe” [by M. Iftime, CQG **19**, L81 (2002)], *Class. Quant. Grav.*, **19**, 5273 (2002).

10 Editorial notes about classic papers on relativity

- [130] 1. [The Lanczos 1924 paper on rotating dust] *Gen. Relativ. Gravit.* **29**, 359 (1997).

- [131] 2. [The Lemaitre 1933 paper on his inhomogeneous cosmological model] *Gen. Relativ. Gravit.* **29**, 637 (1997).
- [132] 3. [The Tolman 1934 paper on the Lemaitre model] *Gen. Relativ. Gravit.* **29**, 931 (1997).
- [133] 4. [The Sen 1934 paper on the Lemaitre-Tolman model] *Gen. Relativ. Gravit.* **29**, 1473 (1997).
- [134] 5. [The McCrea 1939 paper on observations in inhomogeneous models] *Gen. Relativ. Gravit.* **30**, 311 (1998).
- [135] 6. [The Kustaanheimo-Qvist 1948 paper on spherically symmetric shearfree solutions] *Gen. Relativ. Gravit.* **30**, 659 (1998).
- [136] 7. [The Bonnor 1956 paper on the formation of “nebulae”] *Gen. Relativ. Gravit.* **30**, 1111 (1998).
- [137] 8. [The Shirokov-Fisher 1962 paper on averaging out spatial inhomogeneities in cosmological models] *Gen. Relativ. Gravit.* **30**, 1407 (1998).
- [138] 9. [The Kantowski 1965 PhD Thesis on properties of the “Kantowski-Sachs” class of models] *Gen. Relativ. Gravit.* **30**, 1663 (1998).
- [139] 10. [The Vaidya papers on his radiating metric] *Gen. Relativ. Gravit.* **31**, 115 (1999).
- [140] 11. [The Nariai papers on his special spherical solution] *Gen. Relativ. Gravit.* **31**, 945 (1999).
- [141] 12. [The Datt paper on the inhomogeneous generalization of the Kantowski-Sachs models] *Gen. Relativ. Gravit.* **31**, 1615 (1999).
- [142] 13. [The Bondi paper on the Lemaitre-Tolman model] *Gen. Relativ. Gravit.* **31**, 1777 (1999).
- [143] 14. A. Krasinski and George F. R. Ellis, [The classic Friedmann papers] *Gen. Relativ. Gravit.* **31**, 1985 (1999).
- [144] 15. [The Milne-McCrea papers on Newtonian cosmology] *Gen. Relativ. Gravit.* **32**, 1933 (2000).
- [145] 16. [The Ruban papers on properties of the Datt solution] *Gen. Relativ. Gravit.* **33**, 363 (2001).
- [146] 17. [The Novikov paper on properties of the Schwarzschild solution] *Gen. Relativ. Gravit.* **33**, 2255 (2001).

- [147] 18. [The Rindler paper on horizons in cosmological models] *Gen. Relativ. Gravit.* **34**, 131 (2002).
- [148] 19. A. Krasinski, Christoph G. Behr, Engelbert Schücking, Frank B. Estabrook, Hugo D. Wahlquist, George F. R. Ellis, Robert Jantzen and Wolfgang Kundt, The Bianchi classification in the Schücking–Behr approach. *Gen. Relativ. Gravit.* **35**, 475 (2003).
- [149] 20. Jürgen Ehlers and A. Krasinski, Comment on the paper by J. T. Jebsen reprinted in *Gen. Relativ. Gravit.* **37**, 2253 - 2259 (2005). *Gen. Relativ. Gravit.* **38**, 1329 (2006).
- [150] 21. Golden Oldies – a reactivation (editorial). *Gen. Relativ. Gravit.* **39**, 1043 (2007).
- [151] 22. Varun Sahni and A. Krasinski, [The Zeldovich paper on the interpretation of the cosmological constant in terms of quantum field theory] *Gen. Relativ. Gravit.* **40**, 1557 (2008).
- [152] 23. A. Krasinski and Maciej Przanowski, [The Goldberg – Sachs paper on their theorem about Petrov types] *Gen. Relativ. Gravit.* **41**, 421 (2009).
- [153] 24. A. Krasinski, Enric Verdaguier and Roy Patrick Kerr, [The Kerr – Schild paper on the derivation of the Kerr solution] *Gen. Relativ. Gravit.* **41**, 2469 (2009).
- [154] 25. Niky Kamran and A. Krasinski, [The Carter Les Houches 1972 lectures on the Kerr metric and black holes] *Gen. Relativ. Gravit.* **41**, 2867 (2009).

11 Short biographies of relativists (accompanying the Oldies from the previous section)

- [155] 1. Kornel Lanczos, *Gen. Relativ. Gravit.* **29**, 360 (1997).
- [156] 2. Georges Lemaitre, *Gen. Relativ. Gravit.* **29**, 639 (1997).
- [157] 3. Richard Chace Tolman, *Gen. Relativ. Gravit.* **29**, 932 (1997).
- [158] 4. Mikhail Fedorovich Shirokov, *Gen. Relativ. Gravit.* **30**, 1408 (1998).
- [159] 5. Alexandr Friedmann, *Gen. Relativ. Gravit.* **31**, 1989 (1999).
- [160] 6. Kurt Gödel, *Gen. Relativ. Gravit.* **32**, 1407 (2000).
- [161] 7. Edward Arthur Milne, *Gen. Relativ. Gravit.* **32**, 1935 (2000).
- [162] 8. Ivor Malcolm Haddon Etherington, *Gen. Relativ. Gravit.* **39**, 1053 (2007).
- [163] 9. Rainer Sachs, George F. R. Ellis and A. Krasinski [Rainer K. Sachs: a brief biography]. *Gen. Relativ. Gravit.* **39**, 1941 (2007).

- [164] 10. Edward Kasner, *Gen. Relativ. Gravit.* **40**, 868 (2008).
- [165] 11. Yakov Borisovich Zeldovich, *Gen. Relativ. Gravit.* **40**, 1560 (2008).
- [166] 12. Fritz Zwicky, *Gen. Relativ. Gravit.* **41**, 204 (2009).
- [167] 13. Hermann Weyl, *Gen. Relativ. Gravit.* **41**, 1657 (2009).
- [168] 14. Pascual Jordan, *Gen. Relativ. Gravit.* **41**, 2182 (2009).
- [169] 15. Roy Patrick Kerr, *Gen. Relativ. Gravit.* **41**, 2482 (2009).
- [170] 16. Jerome Kristian, *Gen. Relativ. Gravit.* **43**, 335 (2011).
- [171] 17. Tullio Levi-Civita, *Gen. Relativ. Gravit.* **43**, 2301 (2011).
- [172] 18. Howard Percy Robertson, *Gen. Relativ. Gravit.*, **44**, 2109 (2012).
- [173] 19. Hans Thirring, *Gen. Relativ. Gravit.*, **44**, 3221 (2012).
- [174] 20. Evgenii Mikhailovich Lifshitz, *Gen. Relativ. Gravit.*, **49**:17, p. 25 (2017).

12 Popular articles for open public (all in Polish)

- [175] 1. What is relativity theory; part 1: Geometrical foundations. *Delta* no 5 (1978), p. 6.
- [176] 2. What is relativity theory; part 2: Experimental tests. *Delta* no 6 (1978), p. 4.
- [177] 3. Relativity of simultaneity. *Delta* no 12 (1979), p. 10.
- [178] 4. Inertial forces. *Delta* no 3 (1980), p. 10.
- [179] 5. The Archimedes law. *Delta* no 5 (1980), p. 8.
- [180] 6. Does Nature use tools? *Delta* no 8 (1980), p. 12 (same text later reprinted in the book "To see differently", Alfa publishers, Warsaw 1986, p. 69, without my name signed).
- [181] 7. How the chemical elements came into being; part 1. *Urania* **60** no 9, 258 (1989).
- [182] 8. How the chemical elements came into being; part 2. *Urania* **60** no 10, 290 (1989).
- [183] 9. Tidal forces on the Earth and in the Solar System. *Delta* no 11 (1991), p. 1.
- [184] 10. Physics in an inhomogeneous Universe. *Urania - Postępy Astronomii* **41** no 1, 29 (1993).
- [185] 11. Gravitational lenses. *Delta* no 7 (1995), p. 1.

- [186] 12. More on gravitational lenses. *Urania - Postępy Astronomii* **43** no 3, 124 (1995).
- [187] 13. Gravitational radiation. *Urania - Postępy Astronomii* **44** no 1, 124 (1996).
- [188] 14. What is a black hole. *Urania - Postępy Astronomii* **71** no 2, 58 (2000).
- [189] 15. Theory of relativity – what is it and what is it used for? *Urania - Postępy Astronomii* **73** no 5, 196 (2002).
- [190] 16. Behind the cosmic event horizon. *Urania - Postępy Astronomii* **75** no 1, 6 (2004).
- [191] 17. Progress in cosmology after 1974 [the year that *Delta* was founded]. *Delta* no 1 (2016), p. 15.

13 Other popular texts

- [192] 1. Dictionary of geophysics, astrophysics and astronomy. Edited by R. A. Matzner. CRC Press, Boca Raton, London, New York, Washington D. C., 2001. Joint work of 51 authors, I contributed 68 definitions.

14 Short popular notes (all in Polish)

- [193] 1. Praise to precision. *Delta* no 1 (1980), p. 2.
- [194] 2. Nobel for the diligent. *Delta* no 1 (1980), p. 4.
- [195] 3. Praise to imprecision. *Delta* no 1 (1980), p. 6.
- [196] 4. What do we like less. *Delta* no 1 (1980), p. 9.
- [197] 5. Praise to restraint. *Delta* no 1 (1980), p. 11.
- [198] 6. [A problem to solve]. *Delta* no 1 (1980), p. 13.
- [199] 7. [Three problems to solve]. *Delta* no 3 (1980), p. 4.
- [200] 8. When I was a fish. *Delta* no 8 (1980), p. 17.

15 Other short notes

- [201] 1. Second-hand abstracts. *Phys. Today* **31** no 3, 15 (1978).

16 Texts on science policy matters

- [202] 1. University rankings smarten up (in Polish, includes a translation from *Nature* **464**, no 7285, pp. 7–8 and 16–17, 4 March 2010). *Postępy Fizyki* **63**, 32 (2012).

17 Book reviews

- [203] 1. Michał Heller, The evolution of cosmos and of cosmology (in Polish). *Postępy Fizyki* **35**, 436 (1984).
- [204] 2. Michał Heller, Theoretical foundations of cosmology (in Polish). *Postępy Fizyki* **42**, 105 (1991).
- [205] 3. Stephen Hawking, Black holes and baby Universes (in Polish). *Postępy Fizyki* **45**, 603 (1994).
- [206] 4. Stephen Hawking, A brief history of time (in Polish). *Postępy Fizyki* **45**, 605 (1994).
- [207] 5. Hans Ohanian and Remo Ruffini, Gravitation and spacetime. *Classical and Quantum Gravity* **12**, 2361 (1995).
- [208] 6. James Reston, Galileo (in Polish). *Postępy Fizyki* **50**, 211 (1999).
- [209] 7. Ernan McMullin (ed.), The Church and Galileo; Maurice Finocchiaro, Retrying Galileo; both books reviewed (in Polish) in one article in *Urania – Postępy Astronomii* **77** no 4, 148 (2006).

18 Translations from foreign languages to Polish

- [210] 1. Research on thermonuclear fusion at the Max Planck Plasma Physics Institute (by B. Röthlein, translated from English, from submitted manuscript). *Delta* no 11 (1980), p. 6.
- [211] 2. Electromagnetic detectors of gravitational waves (by L. Grishchuk and M. Sazhin, translated from Russian, from submitted manuscript). *Delta* no 3 (1981), p. 4.
- [212] 3. Metaflation? (by G. F. R. Ellis and T. Rothman, translated from English, from a Univ. of Cape Town preprint). *Postępy Fizyki* **38**, 511 (1987); same text: *Postępy Astronomii* **35**, 169 (1987).

19 Research papers not intended for publication

- [213] 1. The Universe that can open up or close. Paper awarded the “honorable mention” award in the 1981 Gravity Research Foundation Competition.
- [214] 2. Irregular cosmological models. Summary of the habilitation work, submitted for promotion to Associate Professor (1983).