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List of publications

1. *Thermodynamic Properties of a Shell Molecule-Gas Particles System* (with M. Maciejewski), Journal of Inclusion Phenomena **2** (1984), p. 417-421.
2. *Une description hamiltonienne du frottement et de la viscosite* (On hamiltonian description of friction and viscosity - with J. Kijowski), Comptes Rendues Acad. Sci. Paris, serie II, **301** (1985) p. 221-224.
3. *Unconstrained Degrees of Freedom of Gravitational Field*, preprint, CPT-86/P. 1882 (1986).
4. *A simple argument for positivity of gravitational energy* (with J. Kijowski), in Proceedings of the XV International Conference on Differential Geometric Methods in Theoretical Physics, Clausthall 1986, World Scientific (1987) p.187-194
5. *Positivity of total energy in general relativity* (with J. Kijowski), Physical Review D **36** (1987) p.1041-1044.
6. *Une formulation unifiee des mecaniques relativiste et non relativiste* (An unified formulation of the relativistic and non-relativistic mechanics - with J. Kijowski), Comptes Rendues Acad. Sci. Paris, serie I, **304** (1987) p. 555-558.
7. *Positivity of Mass for Certain Spacetimes with Horizons*, Classical and Quantum Gravity **6** (1989) p. 1535-1539.
8. *On the localization of energy in gauge field theories and in linear gravitation*, General Relativity and Gravitation **22** (1990) p.1283-1307
9. *On the local canonical formalism in gauge field theories*, in Proceedings of the International Conference on Differential Geometry and its Applications, Brno 1989, editors J. Janyska and D. Krupka, World Scientific, (1990).
10. *Thermo-hydrodynamics As a Field Theory*, in Nonequilibrium Theory and Extremum Principles, editors S. Sieniutycz and P. Salamon, Advances of Thermodynamics Vol. **3**, Taylor and Francis Publishing Company, (1990) p. 282-317
11. *Quasi-local hamiltonian of the gravitational field*, in Proceedings of the Sixth Marcel Grossmann Meeting on General Relativity, Part A, editors H. Sato and T. Nakamura, World Scientific, (1992) p. 123-125
12. *Stability of Reissner-Nordström solution with respect to small perturbations of initial data*, Classical and Quantum Gravity **11** (1994) p. 1055-1068
13. *Perturbation of initial data for spherically symmetric charged black hole and Penrose conjecture*, Acta Physica Polonica B **25** (1994) p. 1413-17
14. *The Relation between Metric and Spin-2 Formulations of Linearized Einstein Theory*, General Relativity and Gravitation **27** (1995) p. 821-843
15. *Conformal Yano-Killing tensors and asymptotic CYK tensors for the Schwarzschild metric*, Classical and Quantum Gravity **14** (1997) p. 1679-1688
16. *Bondi Mass in Classical Field Theory*, Acta Physica Polonica B **29** (1998) p. 667-743

17. *Uniqueness of Scalar Field Energy and Gravitational Energy in the Radiating Regime*, (with P. Chruściel and M. MacCallum), *Physical Review Letters* **80** (1998) p. 5052-5055, <http://arxiv.org/abs/gr-qc/9801073>
18. *Uniqueness of the Trautman–Bondi mass* (with P. Chruściel and M. MacCallum), *Physical Review D* **58** (1998) 084001
19. *Gauge-invariant formulation of the linearized Einstein equations on the Schwarzschild background*, in *Proceedings of the International Seminar Current Topics in Mathematical Cosmology*, editors M. Rainer and H-J. Schmidt, World Scientific, (1998) p. 377–386
20. *Energy and angular momentum of the weak gravitational waves on the Schwarzschild background – quasilocal gauge-invariant formulation*, <http://arxiv.org/abs/gr-qc/9801068>, *General Relativity and Gravitation* **31** (1999) p. 1855–1890
21. *Trautman-Bondi mass and angular momentum for scalar field and gravity*, *Ann. Phys. (Leipzig)* **9** (2000) Spec. Issue, SI-92–SI-94
22. *Geometry of null-like surfaces in General Relativity and its application to dynamics of gravitating matter* (with J. Kijowski and E. Czuchry), *Reports on Mathematical Physics* **46** (2000) 399–418
23. *Trautman-Bondi Mass For Scalar Field And Gravity*, <http://arxiv.org/abs/gr-qc/9910085>, in *Coherent States, Quantization and Gravity*, *Proceedings of the XVII-th Workshop on Geometric Methods in Physics*, editors M. Schlichenmaier, A. Strasburger, S. Twareque Ali and A. Odziejewicz, Warsaw University Press (2001), p. 165–180
24. *A Hamiltonian framework for field theories in the radiating regime* (with P. Chruściel and J. Kijowski), *Lecture Notes in Physics* m **70**, Springer-Verlag (2002)
25. *Dynamics of a self gravitating light-like matter shell: a gauge-invariant Lagrangian and Hamiltonian description*, <http://arxiv.org/abs/gr-qc/0110018>, (with E. Czuchry and J. Kijowski), *Physical Review D* **65** (2002), 064036
26. *“Peeling property” for linearized gravity in null coordinates*, <http://arxiv.org/abs/gr-qc/0111030>, *Classical and Quantum Gravity* **19** (2002) 2463–2490
27. *CYK Tensors, Maxwell Field and Conserved Quantities for Spin-2 Field*, <http://arxiv.org/abs/gr-qc/0211039>, *Classical and Quantum Gravity* **19** (2002) 4405–4429
28. *Geometry of crossing null shells*, <http://arxiv.org/abs/gr-qc/0406084>, *Journal of Mathematical Physics* **44**, No. 2 (2003) 641–661
29. *Spacetimes foliated by Killing horizons*, (with J. Lewandowski and T. Pawłowski), <http://arxiv.org/abs/gr-qc/0306107>, *Classical and Quantum Gravity* **21** (2004) 1237–1251
30. *The Trautman-Bondi mass of hyperboloidal initial data sets*, (with P. Chruściel and S. Łęski), <http://arxiv.org/abs/gr-qc/0307109>, *Adv. Theor. Math. Phys.* **8** (2004) 83–139
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32. *Local approach to thermodynamics of black holes*, (with E. Czuchry and J. Kijowski), <http://arxiv.org/abs/gr-qc/0405073>, in *Relativity Today (Proceedings of the Seventh Hungarian Relativity Workshop, 2003)*, Edited by I. Rácz, (Akadémiai Kiadó, Budapest, 2004)

33. *Null hypersurfaces in general relativity*, (with E. Czuchry and J. Kijowski), Proceedings of the Thirteenth Workshop on General Relativity and Gravitation in Japan, Osaka City University Media Center, Osaka City University, Sugimoto Campus, Osaka, Japan, December 1–4, 2003; edited by H. Ishihara, K. Nakao, N. Kanda, H. Nakano, T. Nakamura, K. Tomita; pp. 68–71. Osaka (July 2004)
34. *Dynamics of gravitational field within a wave front and thermodynamics of black holes*, (with E. Czuchry and J. Kijowski), arXiv: gr-qc/0412042v1, Physical Review D **70** (2004), 124010
35. *Unconstrained degrees of freedom for gravitational waves, β -foliations and spherically symmetric initial data*, (with J. Kijowski), ESI preprint 1552 (2004)
36. *Boundary data in canonical gravity and thermodynamics of black holes*, (with J. Kijowski and E. Czuchry), Nuovo Cimento B, Volume 119 Issue 07-09, pp 733-748 (2004)
37. *Thermodynamics of black holes from Hamiltonian point of view*, (with E. Czuchry and J. Kijowski), in Dynamics and Thermodynamics of Black Holes and Naked Singularities, an international workshop (2004), eds. L. Fatibene, M. Francaviglia, R. Giambo, G. Magli; 67-74 (Milano 2004)
38. *Conformal Yano-Killing tensor for the Kerr metric and conserved quantities*, (with M. Łukasik), arXiv: gr-qc/0510058v2 Classical and Quantum Gravity **23** (2006) 2895–2918
39. *Conformal Yano-Killing tensors for the Taub-NUT metric* (with M. Łukasik), arXiv: gr-qc/0610090v1, Classical and Quantum Gravity **24** (2007) 1331–1340
40. *Energy-minimizing two black holes initial data*, (with J. Kijowski and S. Łęski), arXiv: 0706.0129v1 [gr-qc], Physical Review D **76** (2007) 024014
41. *Asymptotic conformal Yano-Killing tensors for asymptotic anti-de Sitter spacetimes and conserved quantities*, arXiv: 0705.4370v1 [gr-qc], Acta Physica Polonica B **39** (2008) 75–114
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43. *Conformal Yano-Killing tensors in anti-de Sitter spacetime*, Class. Quantum Grav. **25** (2008) 065010
44. *Ground state of the two black holes system* (with J. Kijowski and S. Łęski), in Dynamics and Thermodynamics of Black Holes and Naked Singularities, an international workshop (2007), eds. L. Fatibene, M. Francaviglia, R. Giambo, G. Magli; ?? (Milano 2007)
45. *On the existence of Kundt's metrics and degenerate (or extremal) Killing horizons*, Class. Quantum Grav. **26** (2009) 035011 (11pp)
46. *On the existence of Kundt's metrics with compact sections of null hypersurfaces*, in Physics and Mathematics of Gravitation: Proceedings of the Spanish Relativity Meeting 2008, AIP Conf. Proc. **1122** (2009) pp. 312-315
47. *Conformal Yano-Killing tensors in Einstein spacetimes*, (with M. Łukasik), Reports on Mathematical Physics **64** (2009) 205-221
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49. *Conformal Yano-Killing Tensors in General Relativity*, Journal of Physics: Conference Series **314** 012095 (2011) <http://dx.doi.org/10.1088/1742-6596/314/1/012095>
50. *On free general relativistic initial data on the light cone*, (with P.T. Chruściel), Journal of Geometry and Physics (2011), doi:10.1016/j.geomphys.2011.04.015, arXiv: 1010.2098v1 [gr-qc]