

- publications in journals

1. K. Andrzejewski, J. Gonera, P. Machalski, K. Bolonek-Lasoń: „*On the triviality of higher-derivative theories*”, Physics Letters B 706 (2012) 427-430
2. K. Andrzejewski, J. Gonera, P. Kosiński: „*Nonlinear realizations, the orbit method and Kohn’s theorem*”, Physics Letters B 711 (2012), 439-441
3. C. Gonera, M. Wodzisławski: “*Global space-time symmetries of quantized Euclidean and Minkowski superspaces*”, Journal of High Energy Physics (JHEP) 04(2012)088
4. T. Brzeziński, B. Zieliński: “*Quantum principal bundles over quantum real projective spaces*”, Journal of Geometry and Physics 62 (2012) 1097–1107
5. T. Górski, K. Rzażewski: “*Statistics of population difference for cold bosons in a double-well potential*”, Journal of Physics B: Atomic, Molecular and Optical Physics 45 (2012), 085304
6. K. Andrzejewski, J. Gonera, P. Maślanka: „*The Shrödinger group and the orbit method*”, International Journal of Geometric Methods in Modern Physics, Vol. 9, No. 6 (2012) 1261018
7. P. Kosiński: „*Salpeter equation and causality*”, Progress of Theoretical Physics, Vol. 128, No. 1, July 2012, 59-65
8. C. Gonera: „*On the superintegrability of TTW model*”, Physics Letters A 376 (2012) 2341-2343
9. J. Sławińska, I. Własny, P. Dąbrowski, Z. Klusek, I. Zasada: “*Doping domains in graphene on gold substrates: First-principles and scanning tunneling spectroscopy studies*”, Physical Review B 85, 235430 (2012)
10. K. Andrzejewski, J. Gonera, P. Maślanka: „*Nonrelativistic conformal groups and their dynamical realizations*”, Physical Review D 86, 065009 (2012)
11. T. Górski, K. Rzażewski: „*Statistics of the population difference for cold fermions in a double well potential*”, Journal of Physics B: Atomic, Molecular and Optical Physics 45 (2012), 205302
12. P. Kosiński, P. Maślanka, J. Sławińska, I. Zasada: “*QED₂₊₁ in Graphene: Symmetries of Dirac Equation in 2+1 Dimensions*”, Progress of Theoretical Physics, Vol. 128, No. 4, October 2012, 727-739
13. C. Gonera, M. Wodzisławski: „*N=1/2 Global SUSY: R-Matrix Approach*”, Nuclear Physics B, 863 [PM], 525-541, (2012)
14. P. M. Hajac, A. Kaygun, B. Zieliński: „*Quantum complex projective spaces from Toeplitz cubes*”, Journal of Noncommutative Geometry 6(3) (2012), 603–621
15. A. Skorupski, M. Pawłowski, K. Gracki, P. Kerntopf: „*Modelowanie w FPGA szyfratorów implementowanych w logice odwracalnej*”, Pomiary-Automatyka-Kontrola, vol. 58, nr 7/2012, 620-622
16. M. Szyprowski, P. Kerntopf: “*Odwracalne układy programowalne*”, Pomiary-Automatyka-Kontrola, vol. 58, nr 7/2012, 644-646
17. M. Szyprowski, P. Kerntopf: “*Metody konstrukcji optymalnych układów odwracalnych*”, Pomiary-Automatyka-Kontrola, vol. 58, nr 7/2012, 647-649
18. F. Nichita, B. Zieliński: „*The Duality between Corings and Ring Extensions*”, Axioms 1 (2012), 173-185

- conference publications

1. P. Kerntopf, M. Perkowski, K. Podlaski: „*Synthesis of Reversible Circuits: A View on the State-of-the-Art*” (Invited Talk), Proceedings of the IEEE 12th International Conference on Nanotechnology, 20-23.08.2012, Birmingham UK, 6 pp.
2. M. Perkowski, R. Fiszer, P. Kerntopf, M. Lukac: “*An Approach to Synthesis of Reversible Circuits for Partially Specified Functions*”, Proceedings of the IEEE 12th International Conference on Nanotechnology, 20-23.08.2012, Birmingham UK, 6 pp.
3. M. Szyprowski, P. Kerntopf: “*A Study of Optimal 4-bit Reversible Circuit Synthesis from Mixed-Polarity Toffoli Gates*”, Proceedings of the IEEE 12th International Conference on Nanotechnology, 20-23.08.2012, Birmingham UK, 6 pp.
4. K. Pytel, T. Nawarycz, “*The Fuzzy-Genetic System for Multiobjective Optimization*”, Swarm and Evolutionary Computation, eds. L. Rutkowski et al., Proceedings of International Symposia SIDE 2012 and EC 2012 Held in Conjunction with ICAISC 2012, 29.04-03.05.2012, Zakopane, Polska, series Lecture Notes in Computer Science, vol. 7269, ISBN: 978-3-642-29352-8, ISSN: 0302-9743, Springer-Verlag Berlin Heidelberg 2012, 325-332
5. T. Nawarycz, K. Pytel, L. Ostrowska-Nawarycz, „*Evaluation of Health-Related Fitness Using Fuzzy Inference Elements*”, Artificial Intelligence and Soft Computing, eds. L. Rutkowski et al., Proceedings of 11th International Conference ICAISC 2012, part I, 29.04-03.05.2012, Zakopane, Polska, series Lecture Notes in Artificial Intelligence (część serii Lecture Notes in Computer Science), vol. 7267, ISBN: 978-3-642-29346-7, ISSN: 0302-9743, Springer-Verlag Berlin Heidelberg 2012, 301-309
6. K. Pytel: “*The Fuzzy Genetic System for Multiobjective Optimization*”, Proceedings of the Federated Conference on Computer Science and Information Systems FedCSIS 2012, 9-12.09.2012, Wrocław, Polska, eds. M. Ganzha, L. Maciaszek, M. Paprzycki, ISBN: 978-83-60810-51-4, IEEE Catalog Number CFP1285N-USB, Polskie Towarzystwo Informatyczne, Warszawa, IEEE Computer Society Press, Los Alamitos, CA, USA, 2012, 137-140
7. R. Vorobel, V. Botsian: “*Parameterization Method for Logarithmic Image Processing Model*”, Proceedings of the XIth International Conference Modern Problems of Radio Engineering, Telecommunications and Computer Science TCSET’2012, 21-24.02.2012, Lviv – Slavske, Ukraine, IEEE Catalog Number: CFP1238R-PRT, ISBN: 978-617-607-208-9, Lviv Polytechnic National University 2012, 408
8. R. Vorobel: “*Parameterization of algebraic model based on Frank s-Norm*”, Proceedings of the XIVth International Scientific Kravchuk Conference, vol. 2, 19-21.04. 2012, Kyiv, Ukraine, 30
9. M. Perkowski, R. Fiszer, P. Kerntopf, M. Lukac: “*Synthesis of Reversible Circuits with PSE Gates*”, Proceedings of the 21st International Workshop on Post-Binary ULSI Systems, 13.05.2012, Victoria, British Columbia, Canada, 54-62
10. M. Lukac, M. Kameyama, M. Perkowski, P. Kerntopf: “*Minimization of Quantum Circuits using Quantum Operator Forms*”, Proceedings of the 21st International Workshop on Post-Binary ULSI Systems, 13.05.2012, Victoria, British Columbia, Canada, 88-95
11. M. Szyprowski, P. Kerntopf: „*Generalized Templates for Reversible Logic and Their Uses*”, Proceedings of the 21st International Workshop on Logic & Synthesis, 01-03.06.2012, University of California, Berkeley, California, USA, 18-24

12. M. Szyprowski, P. Kerntopf: „*Optimal 4-bit Reversible Mixed-Polarity Toffoli Circuits*”, Proceedings of the 4th Workshop on Reversible Computation, 02-03.07.2012, Copenhagen, Denmark, 123-135
13. M. Szyprowski, P. Kerntopf: „*Reducing Quantum Cost of Pairs of Multi-Control Toffoli Gates*”, Proceedings of the 10th International Workshop on Boolean Problems, 19-21.09.2012, Freiberg, Germany, ed. B. Steinbach, ISBN 978-3-86012-438-3, Technische Universität Bergakademie Freiberg 2012, 263-268
14. R. Vorobel, V. Botsian: “*Algebraic model for parametric logarithmic image processing*”, Proceedings of the Xth International Conference Mathematical Support and Software Artificial Intelligence (MPZIS-2012), 21-23.11.2012, Dnipropetrovsk, Ukraine, 58-59
15. R. Vorobel, V. Botsian, S. Stepanyuk: “*Robust image smoothing based on contrast*”, Proceedings of the Xth International Conference Mathematical Support and Software Artificial Intelligence (MPZIS-2012), 21-23.11.2012, Dnipropetrovsk, Ukraine, 60-61

- chapters in monographs in English

1. M. Lukac, M. Perkowski, P. Kerntopf, M. Kameyama: “*GPU Acceleration Methods of Representations for Quantum Circuits*”, GPU Computing with Applications in Digital Logic, eds. J. Astola, M. Kameyama, M. Lukac, R.S. Stanković, series TICSP, nr 62, ISBN 978-952-15-2920-7, ISSN 1456-2774, Tampere International Center for Signal Processing, Tampere 2012, 97-159
2. A. Skorupski, M. Pawłowski, K. Gracki, P. Kerntopf: „*FPGA-Based Simulation of a Cipher Unit Built Using Reversible Logic*”, Information Systems Architecture and Technology, eds. Z. Wilimowska, L. Borzemski, A. Grzech, J. Świątek, ISBN 978-83-7493-701-6, Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2012, 79-88
3. P. Milczarski, Ł. Szalecki, „*Advantages of using hibernate in biometric data processing acquired for the asymmetric face project*”, Computer Methods in Practice, eds: A. Cader, M. Jacymirski, K. Przybyszewski, Akademicka Oficyna Wydawnicza EXIT, Warszawa 2012, 87-100

- chapters in monographs in Polish

1. T. Nawarycz, L. Ostrowska-Nawarycz, K. Pytel, Z. Kajdos, M. Gazicki-Lipman, E. Żądzińska, I. Rosset, A. Sitek: „*Interaktywne narzędzia wspomagające pierwotną profilaktykę chorób układu krążenia - propozycja łódzkiej witryny Kalkulatory Zdrowia*”, Wpływ służby zdrowia na rozwój metropolii łódzkiej - funkcje specjalistyczne łódzkiego ośrodka zdrowia, eds.: E. Żądzińska, D. Chlebna-Sokół, T. Nawarycz, ISBN 978-83-7525-762-5, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2012, 99-115