

Dr hab. Tomasz Dobrowolski,
Professor UP

e-mail: dobrow@up.krakow.pl

e-mail: sfdobrow@cyf-kr.edu.pl

Publications

1. **T. Dobrowolski**
"Kink profile in a curved space."
Acta Physica Polonica B, accepted (2015).
2. **T. Dobrowolski and P.Koc**
"Construction of the Shell in Nonsymmetric Gravity."
Journal of Geometry and Symmetry in Physics, accepted (2015) .
3. **T. Dobrowolski**
„The Fluxion in a Curved Josephson Junction."
Journal of Geometry and Symmetry in Physics 34, 13 (2014) .
4. **T. Dobrowolski**
„Possible curvature effects in Josephson Junction."
The European Physical Journal B, 86, 346 (2013).
5. **T. Dobrowolski**
„Curved Josephson Junction."
Annals of Physics 327, 1336 (2012).
6. **T. Dobrowolski**
„ The dynamics of the kink in curved large area Josephson Junction."
Discrete and Continuous Dynamical Systems S 4, 1095 (2011).
7. **T. Dobrowolski**
„Geometry of vortices and domain walls."
Journal of Geometry and Symmetry in Physics 22, 1 (2011).
8. **T. Dobrowolski**
„An influence of the curvature on kink creation in the long Josephson junction."
Canadian Journal of Physics 88, 627 (2010).
9. **T. Dobrowolski**
„The studies on the motion of the sine-Gordon kink on a curved surface."
Annalen der Physik 522, 574 (2010).
10. **T. Dobrowolski**
„Construction of curved global vortex. "
Annals of Physics 324, 2473 (2009).

11. **T. Dobrowolski**
„Kink properties on curved manifold.”
Physics Letters A **373**, 3867 (2009).
12. **T. Dobrowolski**
„The kink motion in a curved Josephson junction.”
Physical Review **E 79**, 046601 (2009).
13. **T. Dobrowolski**
„An influence of the curvature on the kink dynamics in the spherical Josephson junction.”
Archives of Materials Science and Engineering **39**, 116 (2009).
14. **T. Dobrowolski**
„Construction of curved domain walls.”
Physical Review **E 77**, 056608 (2008).
15. **T. Dobrowolski, P.Tatrocki,**
„Evolution of kink network in inhomogenous systems.”
Journal of Nonlinear Mathematical Physics, **15**, 134 (2008).
16. **T. Dobrowolski, P.Tatrocki,**
„A numerical test of the collective coordinate method.”
Physics Letters A **372**, 2834 (2008).
17. **T. Dobrowolski**
„Precise tuning of the kink width in the long Josephson junction.”
Archives of Materials Science and Engineering **33**, 107 (2008).
18. **P.Tatrocki, T. Dobrowolski**
„Defect production behind the shock wave front of an inhomogeneous quench.”
Physical Review **E69** 016209 (2004).
19. **T. Dobrowolski**
„Creation of strings in the early Universe.”
Classical and Quantum Gravity **19**, 3153 (2002).
20. **T. Dobrowolski**
„Production of vortices in the dual Ginzburg-Landau theory.”
Journal of Physics A **35**, 10739 (2002).
21. **T. Dobrowolski**
„Kink production in the presence of impurities.”
Physical Review **E 65**, 036136 (2002).
22. **T. Dobrowolski**
„Kink production in the presence of random distributed impurities.”
Physical Review **E 65**, 046133 (2002) .

23. **T. Dobrowolski**
 "Kinks of arbitrary width."
Physical Review E66 066112 (2002).
24. **T. Dobrowolski**
 "Hedgehog production in spatially correlated noise."
European Physical Journal B29, 269 (2002).
25. **T. Dobrowolski**
 "Kink production in the presence of spatio-temporal correlated noise."
Europhysics Letters 56, 36 (2001).
26. **T. Dobrowolski**
 "Initial monopole density in an inflationary Universe."
Classical and Quantum Gravity 18, 3019 (2001).
27. **T.Dobrowolski, J.Szczęśny**
 "Higgs mass as a signature of chaos in YMH system."
Annalen der Physik, 9, 571 (2000) .
28. **J.Szczęśny, T.Dobrowolski**
 "Geodesic deviation equation approach to chaos."
Annals of Physics 277, 161 (1999).
29. **J.Szczęśny, T.Dobrowolski**
 "Chronostructures of Special Relativity Theory."
General Relativity and Gravitation 30, 487 (1999).
30. **T.Dobrowolski**
 "Excitations of vortices in Abelian Higgs model."
Journal of Physics A 30, 1191 (1997).
31. **T.Dobrowolski**
 "On curved vortex solutions in Abelian Higgs model."
Journal of Mathematical Physics 36, 1054 (1995).
32. **T.Dobrowolski**
 "Applications of membranes in Abelian Higgs model."
Physical Review D50, 6503 (1994) .

OTHER (proceedings, preprints)

33. **T. Dobrowolski**
 „The Fluxion in a Curved Josephson Junction."
Proceedings of the conference „Geometry, Integrability and Quantization“
(Varna), ISSN 1314-3247 (2014) .
34. **T.Dobrowolski**
 The dynamics of the fluxion in curved Josephson junction. **Abstract "Applied Mathematics, Modeling and Computational Science (2013)."**

35. **T. Dobrowolski**
 „Geometry of minimally deformed vortices and domain walls.”
Proceedings of the conference „Geometry, Integrability and Quantization“
(Varna), ISSN 1314-3247 (2011) .

36. **T.Dobrowolski**
 "An influence of impurities on production of kinks."
Proceedings of the workshop „Nonlinear Physics: Theory and
Experiment. II “ (Lecce), World Scientific Pub. Company, (2003) .

37. **T. Dobrowolski**
 “Production of kinks in an inhomogenous medium”
cond-mat/0307522 (2003).

38. **T.Dobrowolski**
 ” Produkcja defektów topologicznych w przemianach fazowych drugiego
 rodzaju.”
Raport IFJ - Nr 1904/PS (2002).
 lub
 „Topological defects in the second-class phase transformations”
wg. CERN Dokument Server: Raport INP-1904-PS

39. **T.Dobrowolski**
 "Geodesic deviation equation in perception of the sensitive dependence on
 initial conditions.”
Proceedings of the workshop „Nonlinearity Integrability and all that:
Twenty years after needs 79” (Lecce), World Scientific Pub. Company,
101 (2000) .

40. **T.Dobrowolski, P.Koc**
 "On the collapse of shell in nonsymmetric gravity.”
Preprint – TPJU – 2/96 (1996).

41. **T.Dobrowolski**
 "Membrane method in action.”
Preprint – TPJU – 28/94 (1994) .

42. **T.Dobrowolski ,**
 „On curved vortex solutions in the Abelian Higgs model.”
Preprint – TPJU – 6/93 (1993).

43. **T.Dobrowolski ,** „Applications of membranes in Abelian Higgs model”
Preprint – TPJU – 27/93 (1993).

POPULARIZATION OF SCIENCE

44. **Współautorstwo**
Informator z okazji Jubileuszu UP, 2015.

45. T. Dobrowolski

Komentarz dotyczący nagrody Nobla dla Y. Namu, T. Maskawy raz M. Kobayasi

Dziennik Polski, 8 X 2008.

46. Współautorstwo

„FIZYKA – encyklopedia szkolna”

ISBN 83-7435-124-1

Wydawnictwo – Zielona Sowa, 2006.