

Department of Physics & Astronomy 2003-2006 Publication List

The list is by year and by alphabetic order of faculty members (names in bold-face.)
Underlined authors are undergraduate and graduate students.

Recent publications (after 2006) can be found on the website.

Individual publication lists and years before 2003 can be found on the profile pages of the faculty.

2005-2006

1. *Stray Field Magnetic Resonance Tomography using Ferromagnetic Spheres*
M.Barbic, A.Scherer
J. Mag. Res. **181**, 223 (2006)
2. *Angular Dependence of Reversible Transverse Susceptibility in Magnetic Nanoparticles*
M.Brady, **M.Barbic**
IEEE Trans.on Magn. **42**, 3231 (2006)
3. *Magnetic nanostructures as amplifiers of transverse fields in magnetic resonance*
M.Barbic, A.Scherer
Sol.State Nucl.Mag.Res. **28**, 91 (2005)
4. *Nanomagnetic planar magnetic resonance microscopy lens*
M.Barbic, A.Scherer
Nanoletters **5**, 787 (2005)
5. *Composite nanowire-based probes for magnetic resonance force microscopy*
M.Barbic, A.Scherer
Nanoletters **5**, 187 (2005)
6. *Mapping the Current Distribution in YBCO Thin Films with Striations*
L.B.Wang, M.B.Price, J.L.Young, **C.Kwon**, George A.Levin, Timothy J.Haugan, Paul N.Barnes
Physica C **419**, 79 (2005)
7. *The Distribution of Transport Current in the YBCO Coated Conductor with Zipper Striations*
L.B.Wang, P.Selby, C.Khanal, George Levin, Timothy J.Haugan, Paul N.Barnes, **C.Kwon**
IEEE Trans. on Appl. Supercond. **15**, 2950 (2005)
8. *Investigation of Current Percolation Characteristics in Coated Conductors*
L.B.Wang, G.You, K.R.Barraca, K.Waller, J.M.Mahoney, J.L.Young, and **C.Kwon**
IEEE Trans. on Appl. Supercond. **15**, 3676 (2005)
9. *Radius of gyration of a sphere and a barrel*
A.Leung
The Physics Teacher **44**, 222 (2006)

10. *Coulomb-sturmian separable expansion approach to the Faddeev-type integral equations of three-body Coulomb problem in J-matrix method and its applications*
Z.Papp
Springer Lecture Notes in Physics, Eds.A.D.Alhaidari, E.J.Heller, H.A.Yamani, M.S.Abdelmonem, Springer Verlag (2006)
11. *Coulomb-sturmian matrix elements of the Coulomb Greens operator*
F.Demir, Z.T.Hlousek, Z.Papp
Phys. Rev. A **74**, 014701 (2006)
12. *Positronium annihilation above the positronium formation threshold in $e(+)-H$ scattering*
C.Y.Hu, S.L.Yakovlev, Z.Papp
Phys. Rev. B **247**, 25 (2006)
13. *Efimov resonances in atomic three-body systems*
J.Z.Mezei, Z.Papp
Phys. Rev. A **73**, 030701(R) (2006)
14. *$p-d$ scattering with nonlocal nucleon-nucleon potential below the breakup threshold*
P.Doleschall, Z.Papp
Phys. Rev. C **72**, 044003 (2005)
15. *Accumulation of resonances in three-body Coulombic systems*
Z.Papp, J.Darai, J.Zs.Mezei, Z.T.Hlousek, C.Y.Hu
AIP Conference Proceedings **768**, 436 (2005)
16. *Accumulation of three-body resonances above two-body thresholds*
Z.Papp, J.Darai, J.Zs.Mezei, Z.T.Hlousek, C.Y.Hu
Phys. Rev. Lett. **94**, 143201 (2005)
17. *Spin dependence and non-locality in NN interactions*
S.A.Moszkowski, P.Doleschall, Z.Papp
AIP Conf. proceedings **768**, 72 (2005)
18. *DNA-Origami Technique for Olympic Gels*
G.T.Pickett
Europhys.Lett. **76**, 616 (2006)
19. *DNA-Nanotechnology Technique for Monodisperse Synthesis*
G.T.Pickett
Macromolecules **39**, 9557 (2006)
20. *Hodge duality and cosmological constant*
H.Nishino, S.Rajpoot
Mod.Phys.Lett. A**21**, 127 (2006), hep-th/0404088
21. *Interacting vector-spinor gauge field for nilpotent supersymmetry*
H.Nishino, S.Rajpoot
Class. & Quant Grav. **23**, 5215 (2006)
22. *(Curvature)²-terms in supergravity in three dimensions*
H.Nishino, S.Rajpoot
Phys.Lett.B **639**, 110 (2006)

23. *Broken scale invariance in the standard model*
H.Nishino, S.Rajpoot
AIP conference proceedings, Melville Eds., 2006
24. *Nilpotent spinor symmetry with interactions*
H.Nishino, S.Rajpoot
Proceedings for SUSY06, 2006
25. *Supermembrane with non-abelian gauging and Chern-Simon quantization*
H.Nishino, S.Rajpoot
Eur.Phys.J. C **39**, 389 (2005), hep-th/0309100
26. *Supersymmetric Dirac-Born-Infeld action with self-dual mass term*
H.Nishino, S.Rajpoot, K.Reed
Class. & Quant. Grav. **22**, 1553 (2005), hep-th/0410052
27. *Dual vector multiplet coupled to dual $N=1$ supergravity in 10D*
H.Nishino, S.Rajpoot
Phys. Rev. D **71**, 085011 (2005), hep-th/0502089
28. *Alephnull-hypegravity in three dimensions*
H.Nishino, S.Rajpoot
Phys. Rev. D **71**, 125002 (2005)
29. *Non-abelian tensor with consistent interactions*
H.Nishino, S.Rajpoot
Phys. Rev. D **72**, 085020 (2005), hep-th/0508076

2003-2004

1. *Sensitive Measurement of Reversible Parallel and Transverse Susceptibility by Alternating Gradient Magnetometry*
M.Barbic
Rev. of Sc. Inst. **75**, 5016 (2004)
2. *Two-Dimensional Magnetic Resonance Tomographic Microscopy using Ferromagnetic Probes*
M.Barbic, A.Scherer
J. of Appl.Phys. **95**, 3598 (2004)
3. *Observation of Nonuniform Current Transport in Epitaxial $YBa_2Cu_3O_{7-x}$ Film Near the Superconducting Transition Temperature*
L.B.Wang, M.B.Price, J.L.Young, **C.Kwon**, T.J.Haugan, P.N.Barnes
Physica C **405**, 240 (2004)
4. *Spatial Distribution Analyses of Critical Temperature in Epitaxial Y-Ba-Cu-O Film Using Variable Temperature Scanning Laser Microscopy*
C.Kwon, L.B.Wang, S.Seo, B.H.Park, Q.X.Jia
IEEE Trans. on Appl.Supercond. **13**, 2894 (2003)
5. *Variable Temperature Scanning Laser Microscopy of Wider Width High Temperature Superconducting Films*
L.B.Wang, M.B.Price, **C.Kwon**, and Q.X.Jia
IEEE Trans. on Appl.Supercond. **13**, 2611 (2003)

6. *Modified Faddeev-Noble equations for the three-body Coulomb problem*
J.Darai, J.Zs.Mezei, **Z.Papp**
Proceedings of the 23rd International Workshop on Nuclear Theory, Rila Mountains, Bulgaria, 14-19 June, 2004. Ed.: Dimitrova, S.Sofia, Heron Press (Heron Press Science Series),p.159, (2004)
7. *Three-nucleon bound states with phenomenological nonlocal nucleon-nucleon interactions*
P.Doleschall, I.Borbely, **Z.Papp**, W.Plessas
Few-Body Systems. Suppl. **14**, 131 (2003)
8. *Nonlocality in the nucleon-nucleon interaction and three-nucleon bound states*
P.Doleschall, I.Borbely, **Z.Papp**, W.Plessas
Phys. Rev. C **67**, 064005 (2003)
9. *Three-body confinement force in a realistic constituent quark model*
Z.Papp, Fl.Stancu
Nucl.Phys. A **726**, 327 (2003)
10. *Linear gradient copolymer melt brushes*
G.T.Pickett
J.Chem.Phys. **118**, 3898 (2003)
11. *Hollow-core dendrimers revisited*
T.C.Zook, **G.T.Pickett**
Phys. Rev. Lett. **90**, 015502 (2003)
12. *Dendrimer-dendrimer copolymer melts*
G.E.Rios, **G.T.Pickett**
Macromolecules **36**, 2967 (2003)
13. *Self-consistent field investigation of pattern-forming electroneutral blends of charged polymers*
W-M.Tam, **G.T.Pickett**
Langmuir **19**, 1410 (2003)
14. *Aleph(0)-Extended Supersymmetric Chern-Simons Theory for Arbitrary Gauge Groups*
H.Nishino, **S.Rajpoot**
Phys. Rev. D **70**, 027701 (2004)
15. *Octonions, G(2) symmetry, generalized self-duality and supersymmetries in dimensions D j= 8*
H.Nishino, **S.Rajpoot**
J. High En. Phys. **4**, 020 (2004)
16. *Noncommutative self-dual supersymmetric Yang-Mills theory*
H.Nishino, **S.Rajpoot**
Phys. Lett. B **572**, 91 (2003)
17. *Self-dual supergravity in seven dimensions with reduced holonomy G(2)*
H.Nishino, **S.Rajpoot**
Phys. Lett. B **569**, 102 (2003)
18. *Self-dual N = (1,0) supergravity in eight dimensions with reduced holonomy Spin(7)*
H.Nishino, **S.Rajpoot**
Phys. Lett. B **564**, 269 (2003)

19. *Topological gauging of $N = 16$ supergravity in three dimensions*
H.Nishino, S.Rajpoot
Phys. Rev. D **67**, 025009 (2003)

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