

## Department of Physics & Astronomy 2007-2008 Publication List

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

Individual publication lists can be found on the profile pages of the faculty.

1. *Stripe Sensor Tomography*  
**M.Barbic**, L.Vltava, C.P.Barrett, T.H.Emery, A.Scherer  
Rev.Sci.Instr. **79**, 033705 (2008)
2. *Planar Self-Biased Magnetic Resonance Microscopy Lenses*  
**M.Barbic**, C.P.Barrett, L.Vltava, T.H.Emery, C.Walker, A.Scherer  
Concepts in Mag. Res. B **33**, 21 (2008)
3. *Femto-Newton Force Sensitivity Quartz Tuning Fork Sensor*  
**M.Barbic**, **L.Eliason**, J.Ranshaw  
Sens. and Act. A **136**, 564 (2007)
4. *New Mathematical Tools for Quantum Technology*  
**C.Bracher**, M.Kleber, T.Kramer  
in *Mathematics of Quantum Computation and Technology*, Eds. G.Chen, L.Kauffman, S.Lomonaco, Chapman and Hall/CRC (Boca Raton, FL) p. 115 (2007)
5. *On the Origin of Logarithmic-Normal Distributions: An Analytical Derivation, and its Application to Nucleation and Growth Processes*  
R.B. Bergmann, **A. Bill**  
J. Cryst. Growth **310**, 3135 (2008)
6. *A Universal High energy Anomaly in Angle Resolved Photoemission Spectra of High Temperature Superconductors - Possible Evidence of Spinon and Holon Branches*  
J. Graf, G.H. Gweon, K. McElroy, S.Y. Zhou, C. Jozwiak, E. Rotenberg, **A.Bill**, T. Sasagawa, H. Eisaki, S. Uchida, H. Takagi, D.H. Lee, A. Lanzara  
Phys.Rev.Lett. **98**, 067004 (2007), cond-mat/0607319
7. *Electronic Inhomogeneities and Pairing from Unscreened Interactions in High Temperature Superconductors*  
**A.Bill**, V.Hizhnyakov, G.Seibold, E.Sigmund  
in *High Tc Superconductors and Related Transition Metal Oxides*, Eds. A.Bussmann-Holder, H.Keller, Springer Verlag, p.143 (2007)
8. *Origin of the Anomalous X-ray Diffraction in Phthalocyanine Films*  
G.Liu, **T.Gredig**, I.K.Schuller  
Europhys.Lett. **83**, 56001 (2008)

9. *Ultrathin Organic Transistors for Chemical Sensing*  
R. Yang, **T.Gredig**, C.N.Colesniuc, I.K.Schuller, J.Park, W.C.Park, A.C.Kummel  
Appl.Phys.Lett. **90**, 263506 (2007).
10. *Asymmetric ferro-magnet-superconductor-ferromagnetic switch*  
P.P. Cadden-Zimansky, Ya.B. Bazaliy, L.M. Litvak, J.S. Jiang, J. Pearson, **J.Y. Gu**, Chun-Yeol You, M.R. Beasley, S.D. Bader  
Phys. Rev. B **77**, 184501 (2008)
11. *Amine-Controlled Assembly of Metal-Sulfite Architecture from 1D Chains to 3D Framework*  
C. Austria, J.Zhang, H.Valle, Q.Zhang, E.Chew, D.T.Nguyen, **J.Y.Gu**, P.Feng, X.Bu  
Inorg. Chem. **46**, 6283 (2007)
12. *Preparation of gold nanoisland arrays from polymer-nano-particle multilayer films*  
Young-Seok Shon, Hyung Y. Choi, **M.S.Guerrero**, **C.Kwon**  
Polym. Mat. and Sci. Eng. **99**, 208 (2008)
13. *Role of quantum fluctuations in the vortex solid to vortex liquid transition of type-II superconductors*  
B. J. Taylor, D. J. Scanderberg, M. B. Maple, **C. Kwon**, Q. X. Jia  
Phys. Rev. B **76**, 014518 (2007)
14. *Local Current Transport and Current Sharing Between Filaments in Striated Coated Conductors with Artificial Defects*  
**C. Kwon**, J. L. Young, **R.G.James**, George A. Levin, Timothy J. Haugan, and Paul N. Barnes  
IEEE Trans. Appl. Supercond. **17**, 3191 (2007)
15. *Effects of Local Artificial Defects in Multi-filamentary Coated Conductors with Weak Links*  
**C. Kwon**, J. L. Young, **R.G.James**, George Levin, Timothy J. Haugan, Paul N. Barnes  
J. Appl. Phys. **101**, 083908 (2007)
16. *Coulomb-Strumian separable expansion approach to the Faddeev-type integral equations of three-body Coulomb problem*  
**Z. Papp**  
in *The J-Matrix Method: Developments and Applications*, Eds. A.D. Alhaidari, E.J. Heller, H.A. Yamani and M.S. Abdelmonem, Springer Lecture Notes in Physics, p. 145-172 (2008)
17. *Green's operator for Hamiltonians with Coulomb plus polynomial potentials*  
**E.Kelbert**, **A.Hyder**, **F.Demir**, **Z.T.Hlousek**, **Z.Papp**  
J.Phys. A: Math. Theor. **40**, 7721 (2007).
18. *Modified Faddeev-Noble versus Faddeev-Sasakawa-Sawada equations for the nuclear three-body Coulomb problem*  
J.Zs.Mezei, J.Darai, **Z.Papp**, W.Plessas  
Few-Body Syst. **40**, 165 (2007)
19. *Self-folding Origami Membranes*  
**G.T.Pickett**  
Europhys.Lett. **78**, 48003 (2007)

20. *Octonions and supersymmetry in three dimensions*  
**H. Nishino, S. Rajpoot**  
Cl. Quant. Gravity **25**, 195003 (2008)
21. *Lorentz-Covariant Non-Abelian Gauging of Supermem-Brane*  
**H. Nishino, S. Rajpoot**  
Phys. Rev. D **77**, 106002 (2008)
22. *Dilaton and Axion as Supersymmetric Compensators*  
**H. Nishino, S. Rajpoot**  
Phys. Rev. D **76**, 065004 (2007)
23.  *$N=4$  Supersymmetric Yang-Mills Multiplet in Non-Adjoint Representations*  
**H. Nishino, S. Rajpoot**  
Phys. Rev. D **76**, 047703 (2007), hep-th/0707.2977
24. *Vector Multiplet in Non-Adjoint Representation of  $SO(N)$*   
**H. Nishino, S. Rajpoot**  
Phys. Rev. D **75**, 125018 (2007), hep-th/0704.2905
25. *Self-Dual Yang-Mills Multiplet in Three Dimensions Coupled to Supergravity*  
R. Montalvo, **H. Nishino, S. Rajpoot**  
Phys. Rev. D **75**, 125016 (2007), hep-th/0707.3653
26. *Green-Schwarz, Nambu-Goto Actions and Cayleys Hyperdeterminant*  
**H. Nishino, S. Rajpoot**  
Phys. Lett. B **652**, 135 (2007), hep-th/0709.0973
27. *Inertia and the vacuumview on the emergence of the inertia reaction force*  
A.Rueda, **H.Sunahata**  
in *Beyond the Quantum*, Eds. Th.M.Nieuwenhuizen, V.Spicka, B.Mehmani, M.Jafar- Aghdami, A.Y.Khrennikov, World Scientific (2007)

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