

Publication List

April 10, 2007

Journal Articles:

1. Jian Dai, V. P. Nair, “Color Skyrmions in the Quark-Gluon Plasma”, Phys. Rev. **D74** (2006) 085014, hep-ph/0605090.
2. Jian Dai, Xiao-Jun Wang, Yong-Shi Wu, “BPS R-balls in $\mathcal{N} = 4$ SYM on $R \times S^3$, Quantum Hall Analogy and AdS/CFT Holography”, JHEP **0606** (2006) 060, hep-th/0605188.
3. Jian Dai, Xiao-Jun Wang, Yong-Shi Wu, “Dynamics of Giant-Gravitons in the LLM geometry and the Fractional Quantum Hall Effect”, Nucl. Phys. **B731** (2005) 285-308, hep-th/0508177.
4. Jian Dai, Yong-Shi Wu, “Quiver Matrix Mechanics for IIB String Theory (II): Generic Dual Tori, Fractional Matrix Membrane and $SL(2, Z)$ Duality”, Nucl. Phys. **B708** (2005) 72-98, hep-th/0402201.
5. Jian Dai, Yong-Shi Wu, “Quiver Matrix Mechanics for IIB String Theory (I): Wrapping Membranes and Emergent Dimension”, Nucl. Phys. **B684** (2004) 75-99, hep-th/0312028.
6. Jian Dai, Yong-Shi Wu, “Quiver Mechanics for Deconstructed Matrix String”, Phys. Lett. **B576** (2003) 209-218, hep-th/0306216.
7. J. Dai, M. E. Raikh, T. V. Shahbazyan, “Two-Electron Linear Intersubband Light Absorption in a Biased Quantum Well”, Phys. Rev. Lett. **96** (2006) 066803, cond-mat/0501406.
8. Jian Dai, Xing-Chang Song, “Noncommutative Geometry of Lattices and Staggered Fermions”, Phys. Lett. **B508** (2001) 385-391, hep-th/0101130.
9. Jian Dai, Xing-Chang Song, “Pythagoras’ Theorem on a 2D-Lattice from a ‘Natural’ Dirac Operator and Connes’ Distance Formula”, J. Phys. A: Math. & Gen. **34** (2001) 5571-5581, hep-th/0101092.
10. Jian Dai, Xing-Chang Song, “Structure and Representation Theory for Double Group of Four-Dimensional Cubic Group”, J. Math. Phys. **42** (2001) 2213-2235, hep-lat/0102001.
11. Jian Dai, Xing-Chang Song, “Geometric Origin of Staggered Fermion: Direct Product K -Cycle”, Commun. Theo. Phys. **39** (2003) 519-520, hep-lat/0105017.
12. Jian Dai, Xing-Chang Song, “A No-Go Theorem For The Compatibility Between Involution Of First Order Differential on Lattice And Continuum Limit”, Commun. Theo. Phys. **39** (2003) 301-303, hep-lat/0105005.
13. Jian Dai, Xing-Chang Song, Chuan-Sheng Xiong, “Canonical Differential Calculi For Finitely Generated Abelian Group and Their Fermionic Representations”, Commun. Theo. Phys. **37** (2002) 393-396, hep-th/0105119.
14. Jian Dai, Xing-Chang Song, “Vacuum Solutions of Classical Gravity on Cyclic Groups from Non-commutative Geometry”, Commun. Theo. Phys. **37** (2002) 11-14, gr-qc/0102028.
15. Jian Dai, Xing-Chang Song, “Connes’ Distance of One-Dimensional Lattices: General Cases”, Commun. Theo. Phys. **36** (2001) 519-522, math-ph/0104002.
16. Chang-Hui Li, Hao-Gang Ding, Jian Dai, Xing-Chang Song, “Dirac Neutrino Masses in NCG”, Commun. Theo. Phys. **35** (2001) 441-446, hep-th/0111095.

Conference Proceedings:

1. Jian Dai, Xing-Chang Song, “Spontaneous Symmetry Broken Condition in (De)Constructing Dimensions from Noncommutative Geometry”, Proceedings of International Conference on Flavor Physics 2001 (ICFP 2001) 392-396, World Scientific, hep-ph/0105280.
2. Jian Dai, Xing-Chang Song, “Noncommutative Differential Geometry and Classical Field Theory on Finite Groups”, CCAST-WL workshop series 143 (2002) 143-157, hep-th/0110179.

Latest Preprints:

- Jian Dai, “Stability and Evolution of Color Skyrmions in the Quark-Gluon Plasma”, submitted to Phys. Rev. D, hep-ph/0612260.
- Jian Dai, “Gluon Radiation of an Expanding Color Skyrmion in the Quark-Gluon Plasma”, arXiv: 0704.0264 [hep-ph].