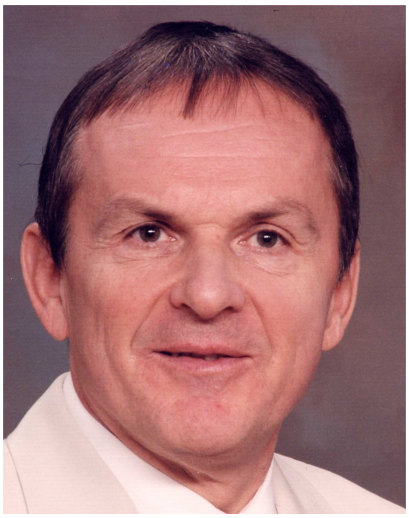
Kleinert Hagen



Position: Richard Feynman Professor
Period covered: 2009

2010 List of Publications

H. Kleinert, From Landau's Order Parameter to Modern Disorder Field Theory in L.D. Landau and his Impact on Contemporary Theoretical Physics, Horizons in World Physics 264 (2008), A. Sakaji and I. Licata (preprint).

P. Jizba, H. Kleinert, and P. Haener Perturbation Expansion for Option Pricing with Stochastic Volatility Physica A 388 (2009) 3503 (preprint)

P. Jizba, H. Kleinert, and F. Scardigli Uncertainty Relation on World Crystal and its Applications to Micro Black Holes (arXiv:0912.2253) Phys. Rev. D 81, 084030 (2010)

H. Kleinert New Gauge Symmetry in Gravity and the Evanescent Role of Torsion (arxiv/1005.1460) EJTP 24, 287 (2010)

H. Kleinert Converting Divergent Weak-Coupling into Exponentially Fast Convergent Strong-Coupling Expansions (arXiv:1006.2910) preprint (2010)

Petr Jizba and Hagen Kleinert Superstatistics approach to path integral for a relativistic particle (arxiv/1007.1007.3922) Phys. Rev. D 82, 085016 (2010) (2010) II Conferences and educational activities

Work With Students

- Tim X.J. Chen (FU-Berlin, Germany)
- Konstantin Glaum (FU-Berlin, Germany)
- Sonja Overesch (FU-Berlin, Germany)
- Walja Korolevski (FU-Berlin, Germany)
- Mathias Ohlinger (FU-Berlin, Germany)
- Moritz Sch ¨ utte (FU-Berlin, Germany)
- Steffen R¨othel (FU-Berlin, Germany)
- Matthias Ohliger (FU-Berlin, Germany)
- Pascal Mattern (FU-Berlin, Germany)1469
- Ednilson Santos (FU-Berlin, Germany)
- Alexander Hoffmann (FU-Berlin, Germany)
- Parvis Soltan-Panahi: Thermodynamic Properties of F=1 Spinor Bose-Einstein Condensates; (2006)
- Markus Dttmann: Variational Methods in Disorder Problems – Testing Approximation Techniques with and without Replicas on a Zero-Dimensional Disorder Model; (2009)
- Oliver Gabel: Non-Equilibrium Quantum Statistics of Trapped Ideal Bose Gases; (2009)
- Tobias Grass: Real-Time Ginzburg-Landau Theory for Bosonic Gases in Optical Lattices; (2009)
- Pascal Mattern: Quench Dynamics of Bosons in Optical Lattices; (2009)
- Lance Labun (USA): Dipolar Bose Gases; DAAD-RISE-Program
- Henrik Enoksen (Norway): Green's Function of Bosons in Optical Lattices; DAAD-IAESTE-Program (2007)
- Kiel Howe (USA): Rotating Spinor-Fermi Gases; DAAD-RISE-Program (2008)
- Barry Bradlyn (USA): Effective Action of Bosons in Optical Lattices; DAADRISE-Program (2008)

• Isaac Abban-Mensah (Ghana): Hanbury Brown-Twiss-Effect of Bosons in Optical Lattices; DAAD-IAESTE-Program (2008)
• Melek K¨ uc ¨ uktalaslio (Turkey): Green's Function of Bose-Fermi Mixture in Optical Lattices; DAAD-IAESTE-Program (2008)
• Avinash Kumar (India): Fidelity of a Quantum Mechanical Particle in Random Potential; SFB/TR 12 (2008)
• Srinivas Kumar (India): Vortices in Bose-Einstein Condensates (2009)
• Bridget Bertoni (USA): Dipolar Spinor Fermi Gases; DAAD-RISE-Program (2009)
• Jerome Simons (USA): Frustation of Bosons in Triangular Optical Lattice; DAAD-RISE-Program (2009)
• Artem Gryshchuk (Ukraine): Bose-Gas in Random Potential; DAAD-IAESTE
• Eduardo Paulo Jorge da Costa Alves (Portugal): Two Weakly Coupled Bose-Gases; DAAD-IAESTE-Program (2009)

Other Teaching Duties
Courses on Quantum Field Theory and Many-Body Physics