Curriculum Vitae

Ahmad Farzaneh Kord
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Education

University: The University of Liverpool
Dates: April 2002 to Dec 2005
Course: PhD in Theoretical physics

This has been a research course supervised by Prof Ian Jack in the field of the supersymmetry. I have been working on the minimal supersymmetry standard model.

University: The University of Razi
Course: MSc in Particle Physics

University: The University of Ferdowsi
Course: BSc in Applied Physics

Research Interests

My principal research interest lies in the field of the theoretical physics, specifically supersymmetry, quantum field theory and Quark gluon plasma.

Professional Appointments

Associate Professor of Theatrical Physics

Hakim Sabzevari University, Since 2006
Taught several undergraduate and some postgraduate courses. Supervised 15 Master and 3 PhD theses. Head of physics department.

Dean of physics Department: 2015-2016

Vice Chancellor for Research and Technology at Hakim Sabzevari University: 2018-2021

Short term visitor: The University of Bonn **Sep 2017**

Long term visitor: The University of Canterbury **Jun 2016 to Sep 2016**

Short term visitor: IPM **July 2014**

Short term visitor: CERN **Jun 2013**

Short term visitor: IPM **July 2013**

Publications

1) A.Emamian, A.F.Kord, A.Ghaani, B.Azadegan, Transverse expansion of (1 + 2) dimensional magneto-hydrodynamics flows with longitudinal boost invariance, Phys. Lett. B835, 137522 (2022).

2)A. F. Kord, A. Ghaani, M. Haddadi Moghaddam, Analytical solution of magneto-hydrodynamics with acceleration effects of Bjorken expansion in heavy-ion collisions. *The European Physical Journal Plus* volume 137, Article number: 53 (2022)

3)M. Haddadi Moghaddam, W. M. Alberico, Duan She, A. F. Kord, and B. Azadegan, Accelerating longitudinal expansion of resistive relativistic magnetohydrodynamics in heavy ion collisions. PHYSICAL REVIEW D 102, 014017 (2020).

4)M. Haddadi Moghaddam, B. Azadegan , A. F. Kord , W. M. Alberico, Transverse expansion of hot magnetized Bjorken flow in heavy ion collisions. European Physical Journal C79, 619 (2019).

5) E. Koushki, A. Farzaneh, and J. Baedi, Plasma waves in limited size media. European Physical Journal D73, 140 (2019).

6) M. Haddadi Moghaddam, B. Azadegan , A. F. Kord , W. M. Alberico, Non-relativistic approximate numerical ideal-magneto hydrodynamics of (1+1) D transverse flow in Bjorken scenario European Physical Journal C78, 255 (2018).

7) E. Koushki, A. Farzaneh, Numerical simulation of optical dispersion, group velocity, and waveguide properties of gold and silver nanocolloids and hybrids. Colloid Polym Sci 95, 197 (2017).

8) A.F. Kord, M. Haddadi Moghaddam, N. Ghasempour, The role of field redefinition on renormalisability of a general N=12 supersymmetric gauge theories. Nuclear Physics B893, 391 (2015).

9) A.F. Kord, M. Haddadi Moghaddam, Comments on the role of field redefinition on renormalisation of N=1/2 supersymmetric pure gauge theory. Nuclear Physics B881, 539 (2014).

10) E. Koushki, A. Farzaneh, M.H. Majles Ara, Modeling absorption spectrum and saturation intensity of ZnO nano-colloid. Optik 125, 220 (2014).

11) E. Koushki, A. Farzaneh, Time dependence of thermo-optical effect for thin samples containing light-absorptive material. Optic Communication. 285, 1390 (2012).

12) A.F. Kord, A. Yazdanian, The Full Two-Loop R-parity Violating Renormalization Group Equations for All Minimal Supersymmetric Standard Model Couplings. JHEP 1103, 084 (2011).

13) A.F. Kord, M. Jalali, H. Shahfar, The effect of extra matter on unification of Yukawa couplings in MSSM. Acta Phys.Polon. B42, 2445 (2011).

14) A.F. Kord, Mass spectrum of sparticles in the framework of the lepton number violating scenario of the MSSM. Phys. Lett. B687, 388 (2010).

15) E. Koushki, A. Farzaneh, S.H. Mousavi, Closed aperture z-scan technique using the Fresnel–Kirchhoff diffraction theory for materials with high nonlinear refractions, Applied Physics B99, 565 (2010).

16) E Koushki and A. Farzaneh, Wavefront study in a Gaussian beam passed through a nonlinear optical medium. Optics Communications 282, 3201 (2009).

17) A.F. Kord, Two-loop beta-functions for the baryon number violating scenario of the MSSM. JHEP 0812:005 (2008).

18) M. Farzaneh-Gord, S. Hashemi and A. Farzaneh, Thermodynamics Analysis of Cascade Reserviors Filling Process of Natural Gas Vehicle Cylinders World Applied Sciences Journal 5, 143 (2008).

19) I. Jack, D.R.T. Jones, A.F. Kord, Two-loop beta-functions and their effects for the R-parity violating MSSM. Phys.Lett. B632, 703 (2006).

20) I. Jack, D.R.T. Jones, A. F. Kord, Snowmass benchmark points and three-loop running. Annals Phys.316, 213 (2005).

21) I. Jack, D.R.T. Jones, A.F. Kord, R parity violation and general soft supersymmetry breaking. Phys.Lett.B588, 127 (2004).

22) I. Jack, D.R.T. Jones, A.F. Kord, Three loop soft running, benchmark points and semiperturbative unification. Phys.Lett.B579, 180 (2004).

Conference Talks and Presentations

1) A.F. Kord, The electromagnetic respond of quark gluon plasma in asymmetry heavy ion collision, XIIIth Quark Confinement and the Hadron Spectrum (2018) (Maynooth University, Ireland, 31 July 2018 to 6 August 2018).

2) A.F. Kord, The impact of the error of the top quark mass on the sparticle masses. AIP Conf.Proc. 1343, 621 (2011).
(IX Conference on Quark Confinement and the Hadron Spectrum
30 Aug - 3 Sep 2010. Madrid, Spain)

3) I. Jack, D.R.T. Jones, A.F. Kord, Precision calculation of mass spectra in the MSSM, Prepared for 10th International Symposium on Particles, Strings and Cosmology, Boston, Massachusetts (2004).
(Published in *Boston 2004, Particles, strings and cosmology* 424-433)

4) I. Jack, D.R.T. Jones, A.F. Kord, Supersymmetric beta-functions, benchmark points and soft R-parity violation. Nucl.Phys.Proc.Suppl.135, (2004).
(Prepared for 7th DESY Workshop on Elementary Particle Theory: Loops and Legs in Quantum Field Theory, Zinnowitz, Germany, 25-30 Apr 2004. Also in *Zinnowitz 2004, Loops and legs in quantum field theory* 300-304)

5) M.A Gomshi Nobary, R. Sepahvand , A.Farzaneh, Fragmentation of Polarized Heavy Quarks. 13th International Symposim on High Energy Spin Physics Protvino, Russia (September 8-12 1998).