# **CURRICULUM VITAE**

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**Fax:** 051-90642240 Off.

Name: **Prof. Dr.** **Arshad Majid Mirza (*Sitara-I-Imtiaz*)**

Father's Name: Abdul Ghafur Mirza (late)

### Present Employment: **Tenured Professor**,

### Chairman, Physics Department,

### Head Theoretical Plasma Physics Group,

## Department of Physics, Quaid-i-Azam

University Islamabad, Pakistan

Major Area of Interest: Plasma Physics

Other Areas of Interest: Astrophysical, Dusty Plasma, e-p-i Plasma, Pinch Plasma, Tokamak Plasma and Quantum Plasma

**TEACHING EXPERIENCE**

1. **Assistant Professor** at Quaid-i-Azam University March (1993) - Jan. (2000)

Islamabad, Pakistan.

2. **Associate Professor** at Quaid-i-Azam University Jan. (2000) - Aug. (2005)

Islamabad, Pakistan.

3. **Tenured Professor** at Quaid-i-Azam University August (2005)-to date

Islamabad, 45320, Pakistan.

**SCIENTIFIC PUBLICATIONS**

**One hundred thirty nine (139**) research publications in the journals of International repute and in the National/International Conference Proceedings.

###### INTERNATIONAL/NATIONAL HONOURS AND AWARDS

1. The Best University Teacher was awarded by HEC, Islamabad in (2008).
2. Appointed ***Regular Associate*** of the Abdus Salam International Centre for Theoretical Physics (**ICTP**, ***Italy***) in (2002) for a period of five years.
3. The ***President of Pakistan*** has Awarded ***Sitara-I-Imtiaz*** on 23 March (2002) in recognition of valuable contribution in the field of Theoretical Plasma Physics.
4. Awarded the ***Third World Academy of Sciences* (TWAS) *Prize Italy,*** in (1999) for doing outstanding research work in the field of Plasma Physics.
5. Awarded the ***Abdus Salam Prize of ICTP Italy,*** in (1998) for conducting research work in the field of Plasma Physics and Controlled Fusion.
6. Awarded the ***Alexander-von-Humboldt-Stiftung*** in (1997), Germany.
7. Awarded ***Professor M. Raziuddin Siddiqi*** ***Gold Medal*** (1996) in the filed of Physics by the Pakistan Academy of Sciences, Pakistan.
8. Stood ***FIRST*** in M. Phil. (1986) and was awarded ***Roll of Honor***.
9. Won one year ***World Laboratory Post-Doc Fellowship***.
10. Won three years ***World Laboratory Predoctoral Fellowship***.
11. Won two-year ***QAU Scholarship*** for M. Phil. (Physics) in (1985).
12. Won two-year ***QAU Scholarship*** for M. Sc. (Physics) and stood

***SECOND*** in the Department.

1. Stood ***FIRST*** in Government College Rawalpindi (in B. Sc.) and won

***Pride of Performance*** as well as ***Roll of Honor*** of the college.

**BOOKS/JOURNAL PUBLISHED**

***Editor*** ***Islamabad Journal of Science* (IJOS)**, Quaid-I-Azam University, since November (2002) to-date and published ***Volume 13, No. 1*** (2002-2003), ***Volume 14, No. 1*** (2004) and ***Volume 15, No. 1*** (2005-2006), ISSN number 0304-5218.

**RESEARCH GUIDANCE**

1. **Supervised One Post-Doc. Dr. Anisa Qamar, funded by NCP at Quaid-i-Azam University, Islamabad in (2007).**
2. **Supervised the following Ph.D. theses:**

**Name of Researcher Title of Thesis Year**

1) M. H. Nasim Energy Loss of Charged Projectiles in a 2000

(co-supervised) Dusty Plasma

2) Anisa Qamar Order and Chaos in Temperature-Gradient 2004

(co-supervised) Driven Drift-Waves in a Sheared Flow Plasma

3) Zahoor Ahmad Study of Staged Pinch Dynamics to Achieve 2005

(co-supervised) Thermonuclear Fusion Conditions

4) M. Azeem Self-Organized and Chaotic States in Electron- 2006

(supervised) Positron-Ion Magnetoplasma with Equilibrium Flows

5) M. A. Sarwar Debye Shielding and Energy Loss of NxM 2008

(supervised) Projectiles in a Dust-Contaminated Plasma

6) M. Y. Khan Nonlinear Dynamics of ITG-modes 2011

(co-supervised) in a Dust-contaminated Magnetoplasma

7) Nusrat Jehan Planar and Nonplanar Solitary and shock 2012

Waves in Electron-Positron-ion Plasma

1. **Supervised the following M. Phil. Dissertations:**

**Name of Researcher Title of Thesis Year**

1) Tahir Farid Theoretical Study of Dense Z-Pinches 1995

2) M. Khizar Study of Thermomagnetic Instability in a 1995

Dissipative Magnetic Plasma

3) M. Zahoor Iqbal Study of Z-theta Pinch Dynamics 1999

4) Fazli Manan Generation and Characterization of Argon 1999

Cold Plasma

5) H. Abid Hussain Study of MEDV Mode in Magnetized 1999

Resistive Plasma

6) M. Shafiq Electrostatic Potential of a Test Particle in 2000

Multi-component Plasma

7) M. Ajmal Khan Nonlinear Dynamics and Chaos in 2001

Nonuniform Magnetoplasma

8) M. Ansar Mahmood Numerical and Theoretical Study of 2001

Dusty Solitary Alfven Waves

9) Irfan Azeem Drift-Waves Stabilization with Parallel 2001

And Perpendicular Flow Curvature

10) M. Adnan Sarwar Study of Wake-Field Excitations in 2002

Dusty Plasmas

11) Hassan Nawaz Vortex Formation in Electron-Positron 2002

Plasma

12) Faisal Yaqoob Energy Loss of test Charges in a Dusty 2002

Plasma

13) M. Javid Iqbal Effect of Line Radiation’s on the Dynamics 2002

Of Staged Pinch Using FLY-Code

14) Nustar Rafiq Acoustic Modes in Dusty Plasma 2002

15) M. Ilyas Electromagnetic Waves in Multi-component 2002

Dusty Plasma

16) M. Jawad Younis Debye Screening of a Negatively Charged 2002

Test Projectile in Dusty Plasma

17) Hoor-e-Iram The Bohm Criterion and Plasma Sheath 2003

Formation

18) Sabooha Khan Bifurcation Characteristics of Lorenz-Like 2004

(from AIOU) Nonlinear Dynamic System

19) Asma Hasan A Study of Nonlinear Electron-Positron 2004

Dusty Plasma

20) M. Ismail Study of Gravitational Instability in a 2004

Self-Gravitating Dust-Contaminated

Magnetoplasma

21) Naveed Iqbal Electron Drift-Vortex Mode in Magnetized 2004

Plasma

22) Khurram Razzaq MHD Model to Simulate the Implosion 2004

Dynamics of Co-axial Double Z-Pinch

Plasma

23) Faisal Jamil Qureshi Zonal Winds and Vortices in Self-Gravitating 2005

Dusty Magnetoplasma

24) M. Kashif Ali Fluid Analysis of Ballooning Modes in 2005

Tokamak Plasmas

25) Majid Khan Shielding of a Test Charge in a Dusty 2006

Plasma with a Dust-Size-Distribution

26) Aisha Ijaz Nonlinear Dynamics of Self-Gravitating 2006

Dusty Magnetoplasma

27) Leila Azimi Waves and Coherent Structures in Ion- 2006

Temperature-Gradient Modes of

Tokamak Plasmas

28) Qasir Mukhtar Numerical Study of Pinch Dynamics with 2006

Current-Stepping Technique

29) M. Yasir Study of Debye Shielding of a Test Charge 2007

in a Magnetized Dusty Plasma

30) Maria Jabeen Numerical Study of staged Pinch Plasma 2007

31) Nazia Batool Ion-Temperature-Gradient Modes in 2007

Tokamak Plasma

32) Ismat Naeem Theory of Magnetic Field Generation 2007

with Ion Dynamics

33) Zahoor Ahmed New Modes in Dense Plasma 2008

34) Jehan Zeb Alam Numerical Study of Z-Pinch Plasma 2008

35) M. Shoaib Shielding of Test Charge Projectile in 2009

Plasma

36) Nadia Amina Waves in Dusty Plasma 2009

37) Shumaila Arjumand Magnetic Field Generation in Laser 2009

Produced Plasma

38) Rahat Batool Waves in Electron-Positron Plasma 2009

Plasma

39) Sabeen Tariq Drift-Waves in a Nonuniform Dense 2009

Magnetoplasma

40) Kashif Arshad Study of Waves in Pair-Ion Plasma 2010

41) Kaneez Amna Rayleigh-Taylor Instability in Plasma 2010

42) Hina Akhtar Some New Modes in Bi-Ion Magnetoplasma 2010

43) Rukhshanda Naheed Study of Linear and Nonlinear Waves in 2010

Quantum Plasma

44) Sidrah Saleem Waves in Dust-contaminated Magneto- 2011

plasma

45) Gul-e-Ali Linear and Nonlinear Study of Magnetic 2011

Electron Drift-Waves in a Nonuniform

Magnetoplasma

46) S. Farwa Bukhari Linear and Nonlinear Study of Dusty Plasma 2012

47) Raheel Ahmed Study of Drift Waves and Dust Lattice 2012

Waves in Dust Contaminated Plasma

48) Rizwan Javed Study of Waves in a Bounded Dusty Plasma 2012

49) Wajeeha Khalid Waves in Strongly Magnetized Electron 2013

-Positron-Ion Plasma

50) Kashif Jilani Formation of Nonlinear Coherent Structures 2013

in Plasma

51) Sughra Bibi Linear and Nonlinear Dynamics of Dense 2013

Fermi Plasma

52) Kashif Jilani Formation of Nonlinear Coherent Structures 2013

in Plasma

53) Qurat-Ul-Ain Jaffar Some Electrostatics and Electromagnetic 2013

modes in Dusty Plasma

54) M. Usman Malik Study of Bernstein Waves in a Magnetized 2013

Plasma

55) Noor ul Ain Study of Electrostatic Modes in Self-Gravitating 2013

Dusty Plasma

56) Sidra Ali Study of Soliton and Shock Formation in 2013

Dense Plasmas

57) Mahwish Zafar Study of Electrostatic Instability in 2013

Shear Flow Driven Pair-Ion Plasma

58) Kashifa Afzal Soliton Formation in Dusty Plasma 2013

59) Tahir Study of Streaming Instability in a 2014

Collisional Dusty Plasma

60) Tashfeen Rasheed Study of Gravitational Instability 2014

in Magnetized Plasma

61) Tahira Perveen Study of Drift Waves in Dusty Plasma 2014

62) Umer Rehman Drift Waves in Quantum Plasmas 2014

63) Zeba Noureen Ion Acoustic Waves In Collisional Plasma 2014

64) Mamoona Shahzadi Plasma Sheath Formation, A Theoritical Study 2015

65) Aamir Hayat Study of Dust Acoustic and Dust-Ion-Acoustic 2015

Shock Waves in Dusty Plasma

66) Zainab Hijab Electron-Temperature-Gradient-Driven-Drift 2015

Waves in Magnetized Plasma

67) Farah Hasan Magnetic Electron Drift Waves Instability 2015

in Magnetized Plasma

68) Saliha Karim Some Drift Modes in Dusty Plasma 2015

69) Wardah Naseer Whistler Modes in Classical 2015

Electron-Ion Plasmas

70) Meamoona Khatoon Study of Cylindrical and Spherical 2015

Dust-Acoustic solitary wave

71) Khurram Ishaque Solitary Waves i8n Dusty Plasma 2016

72) Javeria Razzaq Study of ITG Driven Modes with Nonthermal 2016

Electron Distribution and Dust Contaminated

Plasma

73) Ghazala Maqsood Solitary Structures in Multi Component Dusty 2016

Plasma

74) Also helped the following Ph.D. students registered with Prof. G. Murtaza

M. S. Qaisar (late) and N. A. D. Khattak.

**SUPERVISING THE FOLLOWING RESEARCH STUDENTS:**

* 1. **Ph.D. Students**

1. Nazia Batool
2. Rukhshanda Naheed
3. Gul-e-Ali
4. M. Irfan Khan
5. Muhammad Irfan
6. Rabia Jahangir
7. Muzzamal Iqbal Shaukat
8. Ismat Naeem
9. M. Usman Malik
10. Sunia Hasan

* 1. **M. Phil. Students**

1) Asim Ullah

**List of Publications of Prof. Dr. Arshad M. Mirza (*S.I.*)**

**International Journals:**

1. Heat Transport Formula in Strongly Inhomogeneous Plasmas

*Phys. Lett., A* **141**, 56 (1989)

(**Arshad M. Mirza**, G. Murtaza and M. S. Qaisar)

2. Delocalized Heat Flux for Low-Z Plasmas

*Phys. Lett., A* **144**, 164 (1990)

(G. Murtaza, Arshad M. Mirza and M. S. Qaisar)

3. An Improved Nonlocal Heat Transport Formula for Steep Temperature

Gradients

*Physica Scripta*, **41**, 262 (1990)

(**Arshad M. Mirza** and G. Murtaza)

4. Modified Nonlocal Heat Transport Formula For Steep Temperature

Gradients

*Phys. Rev., A* **41**, 4460 (1990)

(**Arshad M. Mirza** and G. Murtaza)

5. Nonlocal Electron Transport in Laser-Produced Plasmas

*Physica Scripta*, **42**, 85 (1990)

(**Arshad M. Mirza**, G. Murtaza and M. S. Qaisar)

6. Weak Ambipolar Field Effect on Nonlocal Heat Transport

*Physica Scripta*, **42**, 347 (1990)

(G. Murtaza, **Arshad M. Mirza** and M. S. Qaisar)

7. Electron Thermal Conduction for Steep Temperature Gradients

*Plasma Phys. & Cont. Fusion*, **33**, 215 (1991)

(G. Murtaza, **Arshad M. Mirza** and M. S. Qaisar)

8. Heat Flux for Low-Z Plasma in the Presence of Weak Ambipolar Field

*Physica Scripta*, **44**, 376 (1991)

(G. Murtaza, **Arshad M. Mirza** and M. S. Qaisar)

9. Effect of Weak Ambipolar Field on Nonlocal Heat Transport using the

Non-Diffusive Approximation

*J. Plasma Phys.,* **45**, 51(1991)

(G. Murtaza, **Arshad M. Mirza** and M. S. Qaisar)

10. Role of Electron Self-Interaction on Heat Transport in a Finite-Z Plasma

*Physica Scripta*, **46**, 155 (1992)

(G. Murtaza, M. S. Qaisar and **Arshad M. Mirza**)

11. Thermal Transport in the Presence of Steep Gradients and Strong

Ambipolar Field

*Physica Scripta*, **47**, 811 (1993)

(G. Murtaza, **Arshad M. Mirza** and M. S. Qaisar)

12. Theoretical Model for a Finite-Thickness Gas-Puff Z-theta Pinch

*Mod. Phys. Lett. B* **7**, 1655(1993)

(**Arshad M. Mirza**, M. Iqbal, N.A.D. Khattack and G. Murtaza)

13. Role of Inverse Bremsstrahlung Absorption and Electrostatic Potential

on Energy Transport Mechanism in Laser-Produced Plasmas

*Physica Scripta*, **50**, 403 (1994)

(G. Murtaza, **Arshad M. Mirza** and M. S. Qaisar)

14. Fusion Conditions in a Finite-Thickness Gas-Puff Staged Z-Pinch

*J. Plasma Physics*, **52**, 365 (1994)

(**Arshad M. Mirza**, N.A.D. Khattak, M. Iqbal and G. Murtaza)

15. Thermal Effects on the Dynamics of a Two-Gas Gas-Puff Z- theta Pinch

*J. Plasma Physics*, **53**, 135 (1995)

(M.H. Nasim, M. Salahuddin and **Arshad M. Mirza**)

16. Electromagnetic Instability in Nonuniform Resistive Electron

Magnetohydrodynamics

*Plasma Physics*, **3(3),** 731 (1996)

(**Arshad M. Mirza**, G. Murtaza and P.K. Shukla)

17. Thermonuclear Fusion with a Spinning Gas-Puff Staged Pinch

*Plasma Physics & Cont. Fusion*, **38**, 847 (1996)

(**Arshad M. Mirza**, N.A.D.Khattak, M. Salahuddin and G. Murtaza)

18. Magnetic Electron Drift Vortex in Magnetized Plasma

*Physica Scripta*, **55**, 599 (1997)

(M. Khizar, **Arshad M. Mirza**, M. Salahuddin and M.S. Qaisar)

19. Chaotic Behavior of Nonlinearly Coupled Electromagnetic

Modes in Nonuniform Magnetoplasmas

*Physics Lett. A*, **229**, 313 (1997)

(**Arshad M. Mirza** and P.K. Shukla)

20. Magnetic Electron Drift Vortex Modes with the Ion Dynamics

*Physics of Plasmas,* **4(6)**, 2302 (1997)

(**Arshad M. Mirza** and P.K. Shukla)

21. Drift-Ballooning Modes in the Presence of Charged Dust Impurities in a

Nonuniform Rotating Magnetoplasma

*Physics of Plasmas*, **5(1)**, 167 (1998)

(P.K. Shukla, **Arshad M. Mirza**, G. Murtaza and R.T. Faria Jr.,)

22. Vortex Formation in Sheared Flow Driven Fluctuations in

Nonuniform Magnetized Dusty Gases

*Phys. Rev. E*, **57**, 1047 (1998)

(**Arshad M. Mirza**, R.T. Faria Jr., P.K. Shukla and G. Murtaza)

23. Nonlinear Dynamics of Electromagnetic Turbulence in a

Nonuniform Magnetized Plasma

*Physics of Plasmas*, **5(3),** 616 (1998)

(P.K. Shukla, **Arshad M. Mirza** and R.T. Faria Jr.,)

24. Dynamics of High-Density theta-Pinch Driven by a Spinning Gas-Puff

Plasma Annulus

*Plasma Physics and Controlled Fusion*, **40**, 393 (1998)

(**Arshad M. Mirza**, Ming Y. Yu and I. Ahmad)

25. Parallel Ion Velocity Shear Driven Electromagnetic Fluctuations and

Associated Particle Transport in Partially Ionized Plasmas

*J. Geophys. Res*., **103**, 9417 (1998)

(P.K. Shukla, **Arshad M. Mirza** and R.T. Faria Jr.,)

26. Microturbulence in the Presence of Energetic Alpha Particles

in Fusion Plasmas

*Physica Scripta*, **57**, 261 (1998)

(G. Murtaza, **Arshad M. Mirza** and P.K. Shukla)

27. Order and Chaos in Magnetic Electron Drift Vortex Turbulence

*J. Plasma Physics,* **59**, 499 (1998)

(**Arshad M. Mirza**, P.K. Shukla, Ming Y. Yu and L. Stenflo)

28. Linear and Nonlinear Dispersive Alfve'n Waves in Two-Ion Plasmas

*Physics of Plasmas*, **5(8),** 2947 (1998)

(R.T. Faria, **Arshad M. Mirza**, P.K. Shukla & O.A.Pokhotelov)

29. Self-Organized and Chaotic States in Nonuniform Dusty

Magnetoplasmas with Sheared-Flows

*Physica Scripta*, **T 75**, 158 (1998)

(R.T. Faria Jr., **Arshad M. Mirza** and P.K. Shukla)

30. Energy Loss of Charged Projectiles in Dusty Plasmas

*Physics of Plasmas*, **5(10),** 3581 (1998)

(M.H. Nasim, **Arshad M. Mirza**, M.S. Qaisar, *et al.,* )

31. Energy Loss of a Test Particle in Dusty Plasmas: Collective and

Individual Particle Contributions

*Physica Scripta*, **59**, 379 (1999)

(M.H.Nasim, **Arshad M. Mirza**, G.Murtaza & P.K.Shukla)

32. Radiative Collapse in an Impurity Seeded Spinning Gas-Puff

Staged Pinch

*J. Plasma Physics*, **61**, 77 (1999)

(**Arshad M. Mirza**, Z. Ahmad, N.A.D. Khattak and G. Murtaza)

33. Chaos in the Parallel Sheared Plasma Flow Driven Electromagnetic

Turbulence in Nonuniform Magnetoplasma

*Physics of Plasmas*, **6**, 1107 (1999)

(**Arshad M. Mirza**,T. Rafiq, G.Murtaza, P.K.Shukla *et al*.,)

34. Plasma Vortices and Chaos in Velocity Gradient Driven Electromagnetic

Fluctuations

*Physica Scripta*, **T82**, 20 (1999)

(G. Murtaza, **Arshad M. Mirza**, T. Rafiq, & P. K. Shukla)

35. Anomalous Heat Transport and Vortex Formation due to Electron-

Temperature-Gradient Driven Drift Waves in a Sheared Flow Plasma

*Physica Scripta*, **60**, 261 (1999)

(**Arshad M. Mirza**, T.Rafiq, A.Qamar, G.Murtaza, et al.,)

36. Nonlinear Dynamics and Anomalous Energy Transport in an Electrostatic

ITG Drift-Dissipative Mode

*Physics of Plasmas*, **6,** 3571 (1999)

(T. Rafiq, **Arshad M. Mirza**, A. Qamar, G. Murtaza et al.,)

37. Order and Chaos in ETG-Driven Drift Dissipative Waves with Sheared Flows

*J. Plasma Physics*, **62(5),** 531 (1999)

(**Arshad M. Mirza**,T. Rafiq, A.Qamar, G.Murtaza, *et al*.,)

38. Formation of Vortex Streets due to Nonlinearly Interacting Ion-

Temperature Gradient Modes

**Physics of Plasmas**, **7(1),** 166 (2000)

(T. Farid, **Arshad M. Mirza**, and P. K. Shukla)

39. Energy Loss of a Test Charge in Partially Ionized Dusty Plasmas

*Physics of Plasmas*, **7(2),** 762 (2000)

(M.H. Nasim, **Arshad M. Mirza**, M.S.Qaisar, et al.,)

40. Energy Loss of a Test Charge in Collisional Dusty Plasmas

*Physica Scripta*, **61**, 628 (2000)

(M.H.Nasim, **Arshad M. Mirza**, G.Murtaza and P.K. Shukla)

41. Electromagnetic Ion-Temperature-Gradient Modes and Anomalous Transport in

a Nonuniform Magnetized Plasma with Equilibrium Flows

*Physics of Plasmas*, **7(4),** 1125 (2000)

(T. Rafiq, A. Qamar, **Arshad M. Mirza**, G. Murtaza *et al*.,)

42. Alfven Vortices and Chaos in Electron-Positron Dusty Magnetoplasma with

Equilibrium Flows

*Physics of Plasmas*, **7(9),** 3588 (2000)

(**Arshad M. Mirza**)

43. Study of Plasma Parameters in a Spinning Thick-Gas-Puff Staged Pinch

*Physica Scripta*, **62**, 399 (2000)

(N.A.D. Khattak, Z. Ahmad, **Arshad M. Mirza** and G.Murtaza)

44. Instability of a Broad-Band Langmuir Wave Spectrum in a Dusty Plasma

*Physics of Plasmas,* **7(11),** 4446 (2000)

(T. Farid, P. K. Shukla, **Arshad M. Mirza** and L. Stenflo)

45. Counter-rotating Coupled Drift-Acoustic Vortices in the Presence of Ion Flows

*Physica Scripta*, **62,** 409 (2000)

(**Arshad M. Mirza**, P. K. Shukla and T. Farid)

46. Chaotic Behavior of Ion-Temperature-Gradient Driven Drift-Dissipative Modes

*Physics of Plasmas*, **7(11),** 4499 (2000)

(T. Rafiq, A. Qamar, **Arshad M. Mirza** and G. Murtaza)

47. Formation of Vortices in the Presence of Sheared Electron Flows in the

Earth’s Ionosphere

*Planetary and Space Science*, **48**, 1505 (2000)

(T. Farid, P.K. Shukla, P.H. Sakanaka and **Arshad M. Mirza**)

48. Reply- Comments on “Parallel Ion Velocity Shear Driven Electromagnetic Fluctuations and Associated Particle Transport in Partially Ionized Plasmas”

*J. GeoPhysical Research-Space Physics*, **105**, 18597 (2000)

(P. K. Shukla, **Arshad M. Mirza** and R. T. Faria Jr.)

49. Electrostatic Ion-Temperature-Gradient Modes and Anomalous Transports in

a Collision-Dominated Plasma

*Physica Scripta*, **63**, 43 (2001)

(T. Farid, **Arshad M. Mirza**, P. K. Shukla and G. Murtaza)

50. Wake-field Excitations in a Multi-component Dusty Plasma

*Physica Scripta*, **T89**, 191 (2001)

(M.H. Nasim, **Arshad M. Mirza**, G. Murtaza and P.K. Shukla)

51. Tripolar Vortices Associated with Toroidal Ion-Temperature-Gradient Modes

in a Magnetoplasma with Sheared Flows

*Physics of Plasmas*, **8(3),** 846 (2001)

(T. Farid, **Arshad M. Mirza**, P. K. Shukla and A. Qamar)

52. Nonlinear Electrostatic Waves in a Magnetized Dust-Ion Plasma

*Physics of Plasmas*, **8(5),** 1529 (2001)

(T. Farid, A. A. Mamun, P. K. Shukla and **Arshad M. Mirza**)

53. High beta Relaxed States with Internal Conductor Plasma Configuration

*Physics of Plasmas*, **8(5),** 1559 (2001)

(M. Iqbal, **Arshad M. Mirza**, G. Murtaza and Z. Yoshida)

54. Fomation of a Tripolar Vortex in a Contaminated Magnetoplasma with

Sheared Flows

*IEEE Trans. Plasma Sci.,* **29, No. 2**, 298 (2001)

(**Arshad M. Mirza**, T. Farid, P. K. Shukla and L. Stenflo)

55. Thermonuclear Fusion in a Multicascade Liner Staged Pinch

*Laser and Particle Beams*, **19**, 657 (2001)

(Z.Ahmad, **Arshad M. Mirza**, N.A.D. Khattak and G. Murtaza)

56. Fully Nonlinear Dust Kinetic Alfven Waves

*Physics of Plasmas*, **9(9),** 3794 (2002)

(M.A.Mahmood, **Arshad M. Mirza**, P. H. Sakanaka *et al*.,)

57. Self-organized and Chaotic States in Dust-Contaminated Electron-Positron

Magnetoplasma with Equilibrium Flows

*Physica Scripta,* **66**, 376 (2002)

(**Arshad M. Mirza** and Khalid Khan)

58. Formation of Quadrapolar Vorices in Ion-Temperature-Gradient Driven Modes

*Physics of Plasmas*, **10 (7),** 2819 (2003)

A. Qamar, **Arshad M. Mirza**, G.Murtaza, J.Vranjes *et al*.,)

59. Effect of Charge Fluctuations on the Debye Shielding and Energy Loss of

N x M Projectiles in a Dusty Plasma

*Physica Scripta*, **68**, 285 (2003)

(M.A. Sarwar, **Arshad M. Mirza**, M.Salahuddin *et al.,*)

60. Electrostatic Instabilities and Nonlinear Structures of Low-Frequency Waves

in Nonuniform Electron-Positron-Ion Plasmas with Shear Flow

*Physics of Plasmas*, **10 (10),** 4675 (2003)

(**Arshad M. Mirza**, A. Hasan, M. Azeem and H. Saleem)

61. Effect of Grain-Size Distribution on the Energy Loss of a Pair of Charged Projectiles in a Dust-Contaminated Plasma

*Physics of Plasmas*, **10 (10),** 4253 (2003)

(**Arshad M. Mirza**, M. A. Sarwar and M. S. Qaisar)

62. Exact Nonlinear Dust Kinetic Alfven Waves in a Dust-Ion Plasma

*New Journal of Physics*, **5**, 116.1-116.11 (2003)

(**Arshad M. Mirza**, M. A. Mahmood and G. Murtaza)

63. Localized Nonlinear Dust Kinetic Alfven Waves in a Two-Ion-Temperature Dusty Plasma

*Physica Scripta*, **69,** 328 (2004)

(**Arshad M. Mirza** and M. A. Mahmood)

64. Sheared-Flow-Driven Ion-Acoustic Drift-Wave Instabilities and the Formation of

Quadrupolar Vortices in a Nonuniform Electron-Positron-Ion Magnetoplasma

*Physics of Plasmas*, **11 (9),** 4341(2004)

(**Arshad M. Mirza** and M. Azeem)

65. Thermonuclear Fusion Conditions in an Impurity-Seeded Multicascade Liner Staged Z-Pinch

*Physica Scripta*, **70(4),** 265 (2004)

(**Arshad M. Mirza** and F. Deeba)

66. Electrostatic Vortices Associated with Ion-Temperature-Gradient Driven Drift-Modes in Electron-Positron-Ion Plasmas

*Physics of Plasmas*, **11(10),** 4727 (2004)

(M. Azeem and **Arshad M. Mirza**)

67. Low-frequency Solitary Waves in Magnetized Electron-Positron-Ion Plasmas

*Chinese Phys. Lett.* **22(3),** 632 (2005)

(M.A.Mahmood, S.Mahmood, **Arshad M. Mirza** *et al*.,)

68. Effect of Ion-Temperature-Gradients on the Formation of Drift-Alfven Vortices

in Electron-Positron-Ion Magnetoplasma with Equilibrium Flows

*Physics of Plasmas*, **12**, 052306 (2005)

(M. Azeem and **Arshad M. Mirza**)

69. Effect of Charge Fluctuations and Collisions on the Energy Loss of NxM

Projectiles for a Generalized Lorentzian Dusty Plasma

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