

## ARIFA MIRZA

### EDUCATION AND TRAINING

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#### *PhD Physics (In progress)*

2014 Sep to 2019 Aug                      *University of the Punjab Lahore, Pakistan*

- Field of study: Mathematical Physics
- Course work completed with CGPA 3.95

#### *MPhil Physics*

2011 Sep to 2013 Aug                      *University of the Punjab Lahore, Pakistan*

- Field of study: Mathematical Physics
- Graduated with **distinction**
- CGPA 3.97

#### *B.Sc. (Hons.) Physics*

2004 Jan to 2008 March                      *University of the Punjab Lahore, Pakistan*

- CGPA 3.77
- Non- Credit Course, Particle Physics (12 Credit Hours)

### TEACHING AND RESEARCH EXPERIENCE

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2018 – Present

**Lecture (BPS) PUCIT** (Punjab University College of Information Technology)

- BS courses taught: Electricity and magnetism, Basic electronics.
- Duties included Problem solving, Office hours for students, Homework grading.

2014 – 2017

**Lecture (on contract) PUCIT** (Punjab University College of Information Technology)

- BS courses taught: Electricity and magnetism, Basic electronics.

- Duties included Problem solving, Office hours for students, Homework grading.

2008 – 2013

**Visiting Faculty Member in PUCIT** (Punjab University College of Information Technology)

- BS courses taught: Mechanics and wave motion, Electricity and magnetism, Basic electronics.
- Duties included Problem solving, Office hours for students, Homework grading.

July 2012 – June 2013

**Research Assistant**

**Department of Physics, University of the Punjab.**

Duties included

Research and study for scholarly literature relevant to the research project.

**Paper Setter And Head Examiner**

**University of the Punjab**

- BS (Computer Science) Examination 2008 – Present
- BS (IT) Examination 2010, 2011
- Practical Examination 2011

## RESEARCH PUBLICATIONS

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- Arifa Mirza and Bushra Haider, “Rational Solution of Supersymmetric KdV Equation”, International Science and Mathematics Academics Research Talks, (2016)  
AIP Conference Proceedings 1862, 030008 (2017); doi: 10.1063/1.4991112
- Arifa Mirza and Mehmood ul Hassan, “Bilinearization and soliton solutions of  $N=1$  supersymmetric coupled dispersionless integrable system”, Journal of nonlinear mathematical physics, Vol. 24, 107-115 (2017)
- Arifa Mirza and Mehmood ul Hassan, “Integrability properties of coupled dispersionless integrable system”, Theoretical and mathematical physics, Vol. 195, 826-834 (2018)

## RESEARCH THESES

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- Aspects of supersymmetry and integrability in field theories (In progress)
- Hirota Method and Integrability. (MPhil)

- Fabrication and Structural Analysis of magnesium ferrite ( $\text{MgFe}_2\text{O}_4$ ) and manganese iron oxide ( $\text{Mn}_{0.37}\text{Fe}_{0.63}\text{O}_3$ ) and Study of their XRD Resistivity and SEM. (BSc Honors)

## SCHOLARSHIPS AND HONOURS

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- Punjab University Merit RA Scholarship throughout MPhil.
- Punjab University Merit Scholarship throughout B.Sc. Hons.
- Punjab University travel grant for paper presentation in Depok, Indonesia 2016.
- HEC travel grant for paper presentation in New York, USA 2018.
- Ten year's Best Student Baz-e-Shaheen Iqbal 2000-2001.

## WORKSHOPS, CONFERENCES AND SAMINARS/TALKS

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- International Conference on Science, Technology and Management (ICSTM) 2018, New York, USA (Paper Presenter)
- The 2nd ISCPMS International Symposium on Current Progress in Mathematics and Sciences 2016, Depok, Indonesia (Paper Presenter)
- Conference on Gravitation and Cosmology 2016, University of the Punjab, Lahore.
- 1<sup>st</sup> International meeting on Science and Society 2017, National centre for physics, Islamabad and Centre for high energy physics, Lahore.
- International Symposium on Muslim Civilization and Science, 4th November 2007
- Symposium on Relativity University of the Punjab, Lahore, Fall 2005

## MEETINGS AND LECTURES

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- Discovery of Super fluidity in  $^3\text{He}$  by Douglas Osheroff Physics Nobel Laureate, University of the Punjab, Spring, 2006 Lahore
- The Elegant Universe, video lecture series by Brian Greene, Department of Physics, University of the Punjab
- Lecture delivered by Dr. Salman Hameed (USA) Khwarizmi Science Society
- Lecture delivered by Umair Asim Khwarizmi Science Society Fifth Falakyati Mela in Shahdara (District Lahore) 28 September, 2009

## CERTIFICATES AND POSITIONS

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### **Academic:**

- 1<sup>st</sup> position in MPhil 2013
- 4<sup>th</sup> position in BSc (Hons) 2008
- Merit Certificates from grade 1 to 8
- The Best Student Baz-e-Shaheen Iqbal 2000-2001
- Among top 10 faculty members throughout (Teacher's evaluation by students)

### **Faculty sports:**

- Various sports certificates including winner 100m Race (Faculty) 2015, 2016, Winner eating competition (Faculty) 2015, Runner up Spoon Race (Faculty) 2015, Winner Table Tennis (Faculty) 2014, Runner up Badminton (Faculty) 2014, Winner Carrum (Single) 2006, Winner Table Tennis 2006 etc
- Chief Organizer of Sports, Physics Department, University of the Punjab 2004-2008
- Junior Sports Championship Lahore  
Winner Gymnastic 1997

## COMPUTER SKILLS

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- Math Packages: Mathematica, Matlab.
- OS: Windows, Mac OS.
- Typography: Scientific Workplace, Scientific Word, Latex

## OTHERS

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- Member Khwarzimic Science Society.
- Worked as a volunteer in events organized by the Khwarzimic Science Society.
- Member Bazm-e-Shaheen Iqbal, Awan-e-Iqbal, Lahore.