## Dr. SAFIA MIRZA



W/o Zahid Iqbal Gender: Female

Nationality: Pakistani

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### **Research Statement**

My core interest is in the field of differential equations, dynamic systems and time scale theory. I see myself using my expertise in Mathematics to get interdisciplinary research outcomes as a researcher. I am also interested in setting a research venture for mathematical methods for science and engineering.

#### **Education**

2020	Bahauddin Zakariya University, Multan, Pakistan Doctor of Philosophy in Mathematics
2005	Bahauddin Zakariya University, Multan, Pakistan
	Master of Philosophy in Mathematics
	Secured 829/1000 [1 <sup>st</sup> Division, 2 <sup>nd</sup> position holder]
2000	Bahauddin Zakariya University, Multan
	<b>Master of Science in Applied Mathematics</b>
	Secured 894/1200 [1st Division, 3rd position holder]
1998	Govt. Degree College for Women, Multan
	B. Sc. (Mathematics A, Mathematics B, statistics)
	Secured 555/800 [1st Division]

#### **Employment**

Oct. 28, 2021-to date

### Bahauddin Zakariya University, Multan

### **Assistant Professor in Department of Mathematics**

- Teaching Mathematics Courses up to MSc. Level
- Post-Graduate Supervision
- Under-Graduate Supervision BS.\M.Sc. Mathematics Projects:58 (Completed), 13(in progress)
- M.Phil Research Student: 06(completed), 04 (In progress)

Jan. 21, 2008– Oct. 28, 2021

### Bahauddin Zakariya University, Multan **Lecturer in Department of Mathematics**

## Feb. 12, 2005 – Jan. 18, 2008 Federal Urdu University of Arts, Sciences and Technology, Karachi **Lecturer in Department of Mathematical Sciences**

#### **Professional Qualifications/Trainings**

- 1- National Women Guards (certificate of Service)
- 2- Civil Defence Basic General Training.

## **Distinctions**\Achievements

- Certificate of Merit by Bahauddin Zakariya University for 2<sup>nd</sup> position in M.phil.
- Certificate of Merit by Bahauddin Zakariya University for 3<sup>rd</sup> position in M.Sc.

#### **Research Interests**

- Differential Equations and their Applications
- Mathematical Methods for solving Differential and Integral Equations
- **Dynamic Systems**
- Time Scale Theory

### **Membership of Societies**

National Mathematical Society of Pakistan

#### **Administrative Assignments at Department & University**

Deputy Director Student's Advisor (Female) since 29-04-2019

Interim Body "CASPAM ALUMNI ASSOCIATION", (Joint Secretary) since 02-06-2023

Departmental Discipline Committee, (Member) since 12-09-2022

Talent Grooming Committee, (Member) since 07-09-2022

Member Technical Committee, 9<sup>th</sup> Mathematics Regional Student Olympiad, CASPAM, BZU. 2025

Member Technical Committee, 8<sup>th</sup> Mathematics Regional Student Olympiad ,CASPAM , BZU. 2024

Member Technical Committee, 7<sup>th</sup> Mathematics Regional Student Olympiad ,CASPAM , BZU. 2022

Member Technical Committee, 6<sup>th</sup> Mathematics Regional Student Olympiad, CASPAM, BZU. 2019

Member Technical Committee, 5th Mathematics Regional Student Olympiad, CASPAM, BZU. 2018

Member Technical Committee, 4<sup>th</sup> Mathematics Regional Student Olympiad, CASPAM, BZU. 2017

Member Technical Committee, 3<sup>rd</sup> Mathematics Regional Student Olympiad, CASPAM, BZU. 2016

 $\label{eq:member} \begin{tabular}{ll} Member Technical Committee, $2^{nd}$ & Mathematics Regional Student Olympiad ,CASPAM , BZU. 2015 \\ Member Technical Committee, $1^{st}$ & Mathematics Regional Student Olympiad ,CASPAM , BZU. 2014 \\ \end{tabular}$ 

## December 20,2024 CASPAM, Bahauddin Zakariya University, Multan, Pakistan

Seminar on Mathematical Trend and sustainable Development For IR 5.0.

## December 18-19, 2024 **Department of Mathematics, The Women University, Multan, Pakistan**

2<sup>nd</sup> International Conference on Mathematics for a sustainable future.

#### November 14, 2024 CASPAM, Bahauddin Zakariya University, Multan, Pakistan

Seminar on Developing Emotional and social Intelligence (Speaker)

#### October 10-12, 2024 CASPAM, Bahauddin Zakariya University, Multan, Pakistan

Online capacity building training on Outcome Based Education.

### December 12, 2022 Department of Mathematics, The Women University, Multan, Pakistan

Certificate of participation "Ist International Conference on

Mathematics for a Sustainable Future".

May 18, 2022 *IEEE* 

Certificate for participating in the training of "New Resources for your technical research".

### November 21, 2019 *Department of Mathematics, The Women University, Multan*

Certificate of participation in one day seminar on "Emerging Trends of Data Science and Cryptography".

#### December 19-20, 2018 CASPAM, Bahauddin Zakariya University, Multan

A two day Workshop on "Turbulence and modelling and simulation".

### March 28, 2018 *ORIC, Bahauddin Zakariya University, Multan*

Certificate for participating in the training of "Dynamic Teaching Skills".

March 13, 2018 *CASPAM*, *Baha* 

#### CASPAM, Bahauddin Zakariya University, Multan

A one day Symposium on Combinatorial Graph Theory and its

**Applications** 

Nov 6-7, 2017 *CASPAM, Bahauddin Zakariya University, Multan* 

CASPAM International Conference on Mathematics & Applications

#### August 28, 2017 CASPAM, Bahauddin Zakariya University, Multan

Workshop on Teaching Undergraduate Mathematics,.

Lahore University of Management Sciences, Lahore

**Oral Presentation** 

On Controllability and observability for the impulsive adjoint dynamic

March 9-12, 2008 <u>LUMS 2<sup>nd</sup> International Conference on Mathematics and its Applications in</u>

### Information Technology, Lahore

Oral Presentation

Limit Cycles & some properties of Quadratic Systems.

#### Research Project (PhD Scholar)

Date of Award	Title	Sponsoring Agency/Organization	Amount
09-06-2015	Controllability and observability	Directorate of Research	
to	of linear impulsive adjoint dynamic	Bahauddin Zakariya	
08-06-2016	system on time scale	University, Multan	

#### **Research Publications**

- 1. Safia Mirza, Awais Younus and Asif Mansoor, "Some New Results on Controllability and Observability for Impulsive Dynamic System", Jordon Journal of Mathematics & Statistics (JJMS) 14(1), 2021, pp 43-72.
- 2. Syeda Maria Ali Shah, Asif Mansoor, Talat Sharafat Rehmani, Safia Mirza, "Stochastic Impact Analysis of Covid-19 on Karachi Stock Exchange", International Journal of Economic and Management Engineering, Vol. 15, No. 2, 2021.
- 3. S. Mirza, A. Mansoor, T. S. Rehmani, S. Bhatti, "Constraint Cycle in Quadratic Framework with their Properties", SindhUniv, Res, Jour. (Sci, Ser.) Vol. 52(4) 375-380 (2020).
- 4. Nusrat Yasmin, Safia Mirza, Awais Younus and Asif Mansure "Controllability and Observability of Linear Impulsive Adjoint Dynamic System on Time scale", Tamkang Journal of Mathematics, Volume 51, No. 3, September 2020, 201-217.
- 5. Awais Younus, Donal O Regan, Nusrat Yasmin and Safia Mirza, "Stability Criteria for Nonlinear Volterra Integrodynamic Systems", Applied Mathematics & Information Sciences, 11, No. 5, 2017, 1-9.
- Nusrat Yasmin, Awais Younus, Usman Ali and Safia Mirza, "Stability Criteria for Volterra Integrodynamic System", Advances in Mathematical Physics, Volume 2015, Article ID 365328, 11 pages.
- 7. Safia Mirza, Donal O Regan, Nusrat Yasmin and Awais Younus, "Asymptotic Properties for Volterra Integro-dynamic Systems", Electronic Journal of Qualitative Theory of Differential Equations 2015, No. 7, 1-14.
- 8. Asif Mansoor and Safia Mirza, "Waste disposal and stream flow quantity and quality of Lyari river", Indus Journal of Management & Social Sciences, Vol. 1, No. 1 Spring 2007, 70-82.
  - 4 (in progress)

# **Work Experience**

Over 20 years.

### References

### Dr. Nusrat Yasmin (Doctoral Advisor)

Retired Associate Professor, CASPAM

Bahauddin Zakariya University, Multan.

Contact: 0092-3027388020 (Mobile)

Email: nusyasmin@yahoo.com

#### Dr. Asif Mansoor

Associate Professor,

Department of Engineering Sciences, NUST-PNEC, Karachi.

Contact: 0092-3012990882 (Mobile)

Email: <a href="mailto:drasifmansure@pnec.nust.edu.pk">drasifmansure@pnec.nust.edu.pk</a>

#### Dr. Mariam Sultana

Assistant Professor,

Department of Mathematical Sciences, FUUAST, Karachi.

Contact: 0092-3333046005(Mobile)

Email: mariam.sultana@fuuast.edu.pk.