DR. SOBIA SULTANA

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FIELD OF EXPERTISE:

More than 5 years of research and teaching experience in Mathematics (algebra) during PhD and later work in prestigious institutes i.e., Abdus Salam School of Mathematical Sciences GC University Lahore and FAST University Peshawar, COMSATS Institute of Information Technology and currently in Imam Mohammad Ibn Saud Islamic University with a strong back ground of course work during my PhD taught by the renowned mathematicians and my experience of working with great mathematicians. Has a complete grasp over professional communication in English i.e., presentation, interviewing, persuasive presentations, impromptu speaking, Email etiquettes and English grammar which was developed during professional course taught by American professionals; Prof. Dr. Phil Backlund and Prof. Judy Backlund..

ACADEMIC QUALIFICATION:

Ph.D. Mathematics

Abdus Salam School of Mathematical Sciences, GCU, Lahore.

Title of the Thesis, *"Algebraic elements and their arithmetic in Banach algebras of continuous functions on Galois groups ".*

MSc. Mathematics

Department of Mathematics, University of the Punjab, Lahore, Pakistan.

B.Sc. (Statistics, Mathematics A & B)

University of the Punjab, Lahore, Pakistan.

HSSC (2nd Div, Pre Engineering)

Lahore College for Women, Lahore, (BISE, Lahore).

SSC

Govt. Higher Secondary School, Phool Nagar, District Kasure, Pakistan

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COURSE STUDIED

- Linear Algebra
- Abstract Algebra
- Field Extension
- Valuation Theory
- Number Theory
- Algebraic Number Theory
- Algebraic Geometry
- General Topology
- Algebraic Topology
- Algebraic Curves
- Real Analysis
- Functional Analysis
- Graph Theory
- Ordinary Differential Equations
- Partial Differential Equations
- Mathematical Statistics
- Calculation of Variations

SUMMARY OF RESEARCH INTEREST AND SKILLS:

My area of research is Algebra. I have worked in Field extensions & Galois Theory which covers many other areas like valuation Theory, Topology, Functional Analysis, Algebraic Number Theory and Group Theory. Currently, I am working in the field of integral inequalities and fractional calculus.

WORK/POST GRADUATE EXPERIENCE:

2014-To date	**Assistant Professor**
	Department of Mathematics & Statistics, Imam Mohammad Ibn Saud Islamic University, Riyadh, KSA
	A research and teaching assignment at undergraduate and graduate level (BS., MS).
2010-To 2013	**Assistant Professor**
	Department of Mathematics, CIIT, Islamabad, Pakistan
	A teaching assignment at undergraduate level.
2009-2010	**Assistant Professor**
	Department of Science and Humanities, FAST University, Peshawar, Pakistan
	A research and teaching assignment at graduate level (M.Sc., M.Phil).

COURSE TAUGHT

- Field Extension and Valuation Theory
- Linear Algebra
- Advance Linear Algebra
- Advanced Algebra
- Number Theory
- Elementary Differential Geometry
- Functional Analysis
- Introduction to Hilbert Spaces
- Calculation of Variations
- Differential Equations
- Calculus I, II,III
- Abstract Algebra
- Set Theory and Logics
- Cryptography
- Introduction to Coding Theory
- Statistics

VOLUNTEER EXPERIENCE:

Helping to organize and run the World Mathematics Conferences at Abdus Salam School of Mathematical Sciences GC University Lahore as well as conducting mathematical contests for school and college level students organized by Abdus Salam School of Mathematical Sciences GC University Lahore.

PROFESSIONAL TRAINING:

2003 2 Months Training on **Spoken English course;** Sheikh Zyed Islamic Centre, University of the Punjab, Lahore, Pakistan.

PROFESSIONAL DEVELOPMENT:

- Attended "CIMPA-UNESCO-MICINN-VIETNAM Research Schoo"l on Braids in Algebra, Geometry and Topology, 17-28 January 2011, Hanoi, Vietnam.

- Attended "The world Conferences on Mathematics", Abdus Salam School of Mathematical Sciences GCU Lahore, 2003-2008.

- Attended various mathematical workshops at Abdus Salam School of Mathematical Sciences GCU Lahore and one workshop regarding "How to teach mathematics at university level".

- "PhD5000 Indigenous Fellowship Program", is awarded to me by Higher Education Commission of Pakistan.

MEMBERSHIPS

NMSP, Lahore, Pakistan: (Ex)Treasurer
DoST, Khyber Pakhtoonkhwa, Pakistan: Member.

PUBLICATIONS:

1:   Victor Alexandru, Angel Popescu, Elena Liliana Popescu and **Sobia Sultana** (2008)**.** v-Adic maximal extensions, spectral norms and absolute Galois groups *Monatshefte für Mathematik* . Vol. 158, No.3, November, 2009, page. 223-233. Electronic version: DOI 10.1007/s00605-008-0069-8. (Published)

2:     Angel Popescu and **Sobia Sultana**. Relative Spectral Norm on Algebraic

Numbers. *Rendiconti del seminario Mathematico della Universita di Padova,* Vol. 122, 2009, page. 1-11. (Published)

3:     Saima Rashid, Aasma Khalid, Sobia Sultana, Zakia Hammouch, Rasool Shah, Abdullah M Alsharif (2021). A Novel Analytical View of Time-Fractional Korteweg-De Vries Equations via a New Integral Transform. *Symmetry* 2021, Vol. *13*(7). Electronic version: DOI 10.3390/sym13071254. (Published).

4:     Saima Rashid, Sobia Sultana, Zakia Hammouch, Fahd Jarad, YS Hamed. Novel

aspects of discrete dynamical type inequalities within fractional operators having

generalized $\hbar$-discrete Mittag-Leffler kernels and application. *Chaos, Solitons &*

Fractals, Vol. 151, July, 2021. (Published).

5:     Saima Rashid, Sobia Sultana, Yeliz Karaca, Aasma Khalid, Yu-Ming Chu. Some further extensions considering discrete proportional fractional operators. *Fractals.* DOI 10.1142/S0218348X22400266. September, 2021. (Published).

6:     Hu Ge-JiLe, Saima Rashid, Fozia Bashir Farooq, Sobia Sultana. Some inequalities for a new class of convex functions with applications via local fractional integral. *Journal of Function Spaces.* DOI 10.1155/2021/6663971. April, 2021. (Published).

7:     Saima Rashid, EI Abouelmagd, **Sobia Sultana**, YM Chu (2021). New Developments in Weighted n-Fold Type Inequalities via Discrete Generalized $\hbar$-Proportional Fractional Operators. *Fractals.* DOI 10.1142/S0218348X22400564. (Accepted).

8:      Maysaa Al Qurashi, Saima Rashid, Sobia Sultana, Hijaz Ahmad, Khaled A
        Gepreel. New formulation for discrete dynamical type inequalities via -discrete
        fractional operator pertaining to nonsingular kernel. *Mathematical Biosciences
        and Engineering.* Vol. 18(2), February, 2021. Page. 1794-1812. DOI
        10.3934/mbe.2021093/6663971. April, 2021. (Published).

PERSONAL ABILITIES

- ❖ Team Oriented

- ❖ Capacity to work under pressure

- ❖ Interpersonal Skills.

COMPUTER SKILLS

- ❖ Microsoft Word ; Power Point; Excel; Internet Explorer
- ❖ Latex; Singular; Scientific Work Place

Personal Interests:

- • Art and literature.
- • Tourism.