The Department of Mathematics at LUMS offers an excellent environment to study Mathematics and its applications. It was ranked number 1 in Pakistan by the QS World University Rankings 2016. Students joining our graduate community can expect to be immersed in a rigorous degree programme that will quickly move them to the frontiers of real world mathematical challenges. Our faculty has a diverse set of experiences and shall continue striving for excellence in core research areas which include differential equations, numerical analysis, optimisation, probability theory, mathematical biology and others.

I have been privileged to have spent nine years at SBASSE and be a part of world-class faculty which is dedicated to work across a broad-spectrum of both, Pure and Applied Mathematics. Moreover, LUMS has been a great learning experience, particularly teaching and mentoring the brilliant talent of the country. Hence, I strongly believe that if you are ready to work with a dynamic group of faculty and students, if you are motivated and ready for the challenges of mathematical study, then LUMS is a perfect place to explore a degree in Mathematics.

Dr. Imran Naeem
Associate Professor and Chair, Department of Mathematics
COLLABORATIONS WITH NATIONAL AND INTERNATIONAL EDUCATIONAL INSTITUTIONS

- Institute of Electronics and Telecommunication of Rennes (IETR) Research Laboratory, Rennes France
- Singapore University of Technology and Design (SUTD), Singapore
- Supelec, France
- Texas A&M University, Qatar
- CoNNekT Lab, NUST School of Electrical Engineering and Computer Science (SEECS)

INTERDISCIPLINARY PROGRAMMES

The rigorous curriculum of the Graduate Programmes at SBASSE provides a multidisciplinary learning environment. Students get the opportunity to work with knowledge drawn from all 6 disciplines as a part of the free elective requirement.

FINANCIAL SUPPORT

From scholarships, loans, work options and partial tuition fee waivers for MS students to full funding and research grants for PhDs, the School offers substantial support to promote the study of Science and Engineering disciplines.

TOP-QUALITY PUBLICATIONS

Research by graduate students has been published in top-quality journals.
HOW WILL YOU LAUNCH YOUR NEW WORLD?

Mathematics is the most fundamental of all the sciences and also the most applicable as it is the rigorous study of structure, relationships and pattern. The faculty at the Department of Mathematics works across a wide-spectrum of Mathematical fields. The Department is dedicated to conducting research work in Pure as well as Applied Mathematics. Some examples of interest within Pure Mathematics are Algebraic Geometry, Algebraic Topology, Combinatorial Commutative Algebra, Functional Analysis, Fixed Point Theory, Operator Theory and Symmetries of Differential Equations, while those in Applied Mathematics include Computational Statistical Mechanics, Numerical Methods, Mathematical and Computational Biology, Stochastic Processes, Epidemiology and Cancer Kinetics.

WHAT WILL YOUR NEW WORLD INVENT?

Students at the Department of Mathematics work closely with faculty who is involved in research across a broad-spectrum, from Analysis and Algebra to High Performance Computation and Mathematical Biology. Their research areas are as follows:

- **Algebraic Topology**
  - Dr. Haniya Azam
- **Spectral Theory and Quantum Graphs**
  - Dr. Muhammad Usman
- **Operator Theory**
  - Dr. Masood Hussain Shah
- **Evolution Equations**
  - Dr. Imran Naeem
  - Dr. Muhammad Ahsan
- **Scientific Computation**
  - Dr. Sultan Sial
  - Dr. Amer Rasheed
  - Dr. Mudassar Razzaq
- **Algebraic Geometry**
  - Dr. M. Imran Qureshi
  - Dr. Shaheen Nazir
- **Mathematical Biology, Mathematical Analysis**
  - Dr. Adnan Khan
  - Dr. Ali Ashher Zaidi
- **Financial Mathematics, Stochastic Portfolio**
  - Dr. Azmat Hussain
- **Fluid Structure Interaction Optimisation**
  - Dr. Mudassar Razzaq

Mohsin Ali | PhD Mathematics

“Graduate studies at LUMS enable you to explore different professional opportunities especially research. LUMS has vast resources, providing everything that you need for your graduate studies. Also, LUMS provides financial support which qualifies you to achieve success in your life. Being at this platform, you get chances to go abroad for higher studies and conferences. I would highly recommend graduate studies in Mathematics at LUMS.”
HOW LUMS SBASSE WILL HELP YOU REALISE YOUR AMBITION


- The High Performance Computing Centre provides computing facilities to faculty and students with specialised computational needs; engenders and facilitates Science and Engineering research efforts and provides research and development exposure to students

- The Centre for Advanced Studies in Mathematics (CASM) promotes the role of Mathematics in formulating and solving interdisciplinary problems among students, which is pivotal for scientific progress in every society. It organises conferences, workshops and seminars for a conducive research environment and strengthens international collaborations with the Mathematics community.

QUICK FACTS

For intensive computing and simulation purposes, the Department houses one of the most powerful computing resources in Pakistan: The High-Performance Cluster Computing Centre (HPCC).

Dr. Adnan Khan | Associate Professor, Department of Mathematics

“Here at LUMS, I have worked with colleagues and students in several areas of Applied Mathematics, including Epidemiology, Finance and Statistical Inference. The research interests of the faculty on the applied side include Computational Fluid Mechanics, Numerical Methods, Symmetry Analysis of Differential Equations, Mathematical Biology, Quantum Mechanics, Optimisation, and Quantitative Finance. On the pure side, faculty interests are in Algebraic Geometry, Topology and Operator Theory. These are all areas of current interest and research, internationally. Exciting foundational and advanced courses, an opportunity to participate in cutting edge research and a collegial atmosphere, along with substantial financial support makes this one of the best programmes for graduate work in Mathematics in Pakistan.”
1. SBASSE student, Faaiz Arbab has manufactured GOBEE, Pakistan’s first voice-operated smart wheelchair. GOBEE has received the best Consumer Product and Design Award (2018).

2. The Nuclear Magnetic Resonance (NMR) Lab, inaugurated in January 2018, aims to study the structural aspects of molecules.

3. Dr. Ihsan Ayyub Qazi and Dr. Zafar Ayyub Qazi, CS faculty, have won the Google Faculty Research Award.

4. SBASSE faculty, Dr. Rahman Shah Zaib Saleem and Dr. Amir Faisal have published their research in Bioorganic Medicinal Chemistry Letters.

5. Research by Dr. Ihsan Ayyub Qazi has been selected as one of the two best papers by the ACM SIGCOMM Computer Communications Review (CCR) Editorial Board and will be presented at ACM SIGCOMM 2018 in Budapest, Hungary later this year.

6. Dr. Salman Nosheer Arshad has taught at Middlesex University London under the support of the Erasmus International Credit Mobility (ICM) Grant.

7. National Center in Big Data and Cloud Computing, inaugurated in May 2018, established by the Higher Education Commission (HEC) of Pakistan, will promote the culture of Big Analytics and Cloud Computing. The PKR 1.5 Billion Center will be housed at LUMS and will comprise 12 ‘Affiliated’ Laboratories at 11 Universities across the country.
YOUR JOURNEY BEGINS HERE!

Admission Process

Admission is purely merit-based and rests solely on the following criteria:

- Academic record
- Admission Test performance*
- Interview performance

*For admission test details, please visit https://admission.lums.edu.pk/graduate-programmes

Financial Support

Several funding opportunities are available to deserving MS and PhD students. These include:

- LUMS Interest Free Loan
- Merit Scholarships for MS Programmes
- External Scholarships (if available)*
- 100% Scholarships for PhD students
- Partial tuition fee waivers for all MS students (Basic Sciences and Mathematics)
- HEC Research Grants
- Options to work as Research or Teaching Assistants

*Support and eligibility for these scholarships vary depending on the donor.

For details, please visit https://financial-aid.lums.edu.pk
CRITICAL DATES

Deadline to Apply
April 02, 2019

Deadline to take GRE
April 14, 2019

LUMS Graduate Admission Test and SBASSE Subject Test on
April 14, 2019

Admission Decisions
June - July 2019

Classes Commence
September 2019

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#KEEPGOINGPLACES  #MERIT MATTERS