Curriculum Vitae

Name: Amjad Khan

Education:

- 2015–2020 PhD candidate in Applied Mathematics, Western University, London, ON, Canada
- 2013–2015 MSc in Mathematics, McMaster University, Hamilton, ON, Canada
- 2006–2009 MPhil in Mathematics, NUST, Islamabad, Pakistan
- 2000–2004 BSc in Mathematics & Computer Sciences, University of Peshawar, Pakistan

Research Interests:

- Differential Equations
- Mathematical Biology
- Dynamical Systems & Bifurcation Analysis

Publications:

- Khan A., Wahl L. M., Burmeister A. R. The genetic repertoire of prophages. (submitted for publication in PLOS Computational Biology)
- Khan A., Wahl L. M. Quantifying the Forces that Maintain Prophages in Bacterial Genomes. (accepted Theoretical Population Biology)
- Khan A., Wahl L.M., Yu P. (2018) Phage Therapy and Antibiotics for Biofilm Eradication: A Predictive Model. In: Kilgour D., Kunze H., Makarov R., Melnik R., Wang X. (eds) Recent Advances in Mathematical and Statistical Methods. AMMCS 2017. Springer Proceedings in Mathematics & Statistics, vol 259. Springer.
- Khan A., Pelinovsky D., Long-time stability of small FPU solitary waves. Discrete Continuous Dynamical Systems Series A, April 2017, 37(4): 2065-2075. doi: 10.3934/dcds.2017088

Conferences and Poster Presentations

- Systems Modeling in the Pharmaceutical Industry - Problem Solving Workshop. August 12 - 16, 2019, The Fields Institute, Toronto, ON, Canada
- Khan A., Wahl L. M., The Evolutionary Forces Acting on Prophages: A Mathematical Study. Annual Meeting and Conference of the Society for Mathematical Biology (SMB 2019), July 21-26, SMB 2019 Annual Meeting at Montral, Qubec, Canada
- Wahl L. M., Khan A., Blurring the Lines between Predator and Prey: The Evolution of Temperate Viruses. Pokhara, Nepal June 28, 2019
- Khan A., Wahl L. M., Mathematical Model of the Prophage Size Distribution in Bacterial Genomes. "Canadian Society of Applied

and Industrial Mathematics (CAIMS 2018)" June 4 to 7, 2018 at Ryerson University in Toronto, ON

- Khan A., Wahl L. M., Population dynamics of phages and biofilm bacteria. "The IV AMMCS International Conference" Waterloo, Ontario, Canada, August 20-25, 2017
- Khan A., Pelinovsky D., Approximations of the lattice dynamics. April 21, 2015, Department of Mathematics and Statistics, McMaster University, Hamilton, ON.

Teaching

- Teaching Assistant, *Differential Equations, Probability for Life Sciences*, Department of Applied Mathematics, Western University, London, ON, Canada– 2019
- Teaching Assistant, *Calculus with Analysis for Statistics*, Department of Applied Mathematics, Western University, London, ON, Canada – 2018
- Instructor, *Calculus 2*, School of Applied Science and Technology, Fanshawe College, London, ON, Canada – 2018
- Instructor, *Business Mathematics*, Lawrence Kinlin School of Business, Fanshawe College, London, ON, Canada – 2017
- Teaching Assistant, *Applied Mathematics for Engineers*, Department of Applied Mathematics, Western University, London, ON, Canada – 2015, 2016 & 2017
- Teaching Assistant, *Introduction to Differential Equations*, Department of Mathematics & Statistics, McMaster University, Hamilton, On, Canada – 2015
- Teaching Assistant, *Engineering Mathematics*, Department of Mathematics & Statistics, McMaster University, Hamilton, On, Canada – 2014
- Teaching Assistant, *Linear Algebra*, Department of Mathematics & Statistics, McMaster University, Hamilton, On, Canada – 2014
- Teaching Assistant, *Linear Algebra*, Department of Mathematics & Statistics, McMaster University, Hamilton, On, Canada – 2013
- Instructor, *Differential Equations & Transforms*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2013
- Instructor, *Numerical Methods*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2012
- Instructor, *Calculus and Analytical Geometry*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2012
- Instructor, *Probability & Statistics*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2011
- Instructor, *Calculus and Analytical Geometry*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2011
- Instructor, *Calculus and Analytical Geometry*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2010
- Instructor, *Numerical Methods*, NUST Institute of Civil Engineering, NUST, Islamabad, Pakistan – 2009

Awards and Scholarships

- Student paper prize, AMMCS International Conference, Waterloo, Ontario, Canada -August 20-25, 2017.
- Graduate Research Scholarship (2015-2019), Western University, London, Ontario, Canada
- Graduate Research Scholarship (2013- 2015), McMaster University, Hamilton, Ontario, Canada
- Scholarship for M.Phil. studies (2007- 2009), Higher Education Commission (HEC), Islamabad, Pakistan

Technical Skills

Experience with computers and programming languages on Linux and windows operating systems:

- C++
- MATLAB
- TEX (LATEX)
- Maple