




Gautam K. Luhana

-  Vancouver, BC, Canada
-  gkluhana.github.io
-  gkluhana@cs.ubc.ca

Research Interests

Scientific Computing, Numerical
Linear Algebra & Multiphysics
Problems

Skills

Applied Mathematics/Numerics



C++



MATLAB



LaTeX



Python



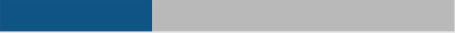
PETSc



CUDA



Java



(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Other Interests

STEM Education, Tennis, Table Tennis,
Swimming.

Work Experience and Projects

- Jan '22-Present

Ph.D. Candidate, Computer Science
Supervisor : Dr. Chen Greif, Department of Computer Science
Projects: (i) Preconditioners for Saddle-Point systems arising from multi-physics problems. (ii) Fast Integral Calculations for Slater-type Molecular Orbitals
University of British Columbia, Vancouver.
- Aug '19-Present

Lecturer (Currently on Study Leave)
Courses Taught: Introduction to Scientific Computing, Calculus-I, Calculus-II, Linear Algebra, Discrete Mathematics, Essential Software.
Department of Mathematical Sciences,
Institute of Business Administration, Karachi
- Nov '18-May '19

Graduate Research Project
Group Flapping Flight Simulation with Immersed Boundary Method
Supervisor: Dr. Charles S. Peskin (Ph.D, Mathematics)
New York University, New York, NY
- Oct'18-May '19

Research Assistant
Vernier Crowding in Visual Perception
Principal Investigator: Dr. Michael S. Landy (Ph.d, Computer and Communication Sciences)
Landy Lab
New York University, New York, NY
- Aug '16-July '17

High School Teacher
GCSE O level Additional Mathematics
Beaconhouse School System, Karachi, Pakistan
- Jan '14-Jun '17

Research Assistant
Philosophy of Mathematics and First Order Logic
Supervisor: Dr. Babar Ahmed (Ph.D, Philosophy)
Subh-e-Sadiq, Karachi, Pakistan

Education

- 2022-Present

Ph.D. Computer Science
Department of Computer Science, University of British Columbia, Vancouver
- 2017-2019

MS Scientific Computing
Courant Institute of Mathematical Sciences, New York University, New York
- 2012-2016

BS Economics and Mathematics
Institute of Business Administration, Karachi
- Fall 2015

Exchange Programme
University of Malaya, Kuala Lumpur

Talks

- May 2024

Conference Talk, Truncated Domain Preconditioner for Implicit Immersed Boundary Method, SIAM Conference on Applied Linear Algebra
- Jun 2023

Conference Talk, Implicit Immersed Boundary Method, Numerical Analysis Conference, Numerical Analysis Conference
- Aug 2023

Speaker, Immersed Boundary Method, IBA Research Colloquia
- Sep 2021

Interview, Fulbright Scholarships, Let's Talk, IBA Today
- Jan 2020

Speaker, MATLAB Workshop, Math. and Astronomy CLub, IBA
- Apr 2019

Speaker, Courant Splash 2019, NYU

Certifications and Awards

- 2017-19

Fulbright Grant
- 2017-19

NYU Tuition Scholarship for MS Scientific Computing