CURRICULUM VITAE

Ramzan Ali, Ph.D.

Associate Professor - Mathematics	Email: ramzan.ali@udst.edu.qa
College of General Education,	Email: alian.qau@gmail.com
University of Doha for	Skype: ramzan.ali45
Science and Technology, Qatar	Nationality: German

(a) Postdoctoral Training

University of Oxford	United Kingdom	Mathematical Biology	Postdoc Fellow, 2019-2020
Technical University Dortmund	Germany	Applied Mathematics	Postdoc Fellow, 2016-2017

(b) Formal Education

Technical University Dortmund	Germany	Applied Mathematics	Ph.D. 2016
Quaid-i-Azam University	Islamabad	Mathematics	M.Phil. 2012
Quaid-i-Azam University	Islamabad	Mathematics	M.Sc. 2010
University of Punjab	Lahore	Mathematics and CS	B.Sc. 2007

(c) Professional Education

Stanford University (Online)	Stanford, USA	Constructive Classroom	Certification, 2018-2019
Allama Iqbal Open University	Islamabad	Mathematics and Physics	B.Ed. 2010

(d) Research & Professional Experience

01.2023 – present	Associate Professor, University of Doha for Science and Technology, Qatar
05.2021 – 12.2022	Associate Professor at Department of Mathematics and Natural Science, UCA
09.2019 – 08.2020	Post-Doctorate, Wolfson Centre of Mathematical Biology, University of Oxford
07.2017 – 04.2021	Assistant Professor of Mathematics, University of Central Asia
07.2016 – 06.2017	Post-Doctorate at Department of Mathematics, TU-Dortmund
10.2012 – 06.2016	Research Fellow and Teaching Assistant at TU-Dortmund
02.2010 – 07.2012	Researcher and Teaching Assistant at Quaid-i-Azam University

(e) Administrative Experience

2020 – 2022	Chair, Department of Mathematics and Natural Science, University of Central Asia
2018 – 2019	Academic Lead, Naryn Campus, University of Central Asia

(f) Committee Membership

2023 – present	Research Committee, UDST
2023 – present	Hiring Committee, UDST
2021 – 2022	Chair, Teaching and Learning Committee, UCA
2020 – 2022	Campus Management Team, UCA
2020 – 2022	Graduation Audit, UCA
2018 – 2019	Academic Council, UCA
2018 – 2019	Campus Management Team, UCA
2018 – 2019	The Student Progression, UCA
2018 – 2019	Appeal Committee, UCA
2018 – 2019	Research Committee, UCA

(g) Teaching Experience

Multi-variable Calculus	College of Engineering and Technology, UDST
Calculus-II	College of General Education, UDST
Calculus-I	College of General Education, UDST
Linear Algebra	College of General Education, UDST
Calculus-II	Department of Mathematics and Natural Science, SAS, UCA
Calculus-I	Department of Mathematics and Natural Science, SAS, UCA
Discrete Mathematics	Department of Mathematics and Natural Science, SAS, UCA
Linear Algebra	Department of Mathematics and Natural Science, SAS, UCA
Pre-Calculus	Department of Mathematics and Natural Science, SAS, UCA
Statistics with R-Programming	DMNS, School of Arts and Sciences, UCA
Prep-Mathematics	Department of Mathematics and Natural Science, SAS, UCA
MATLAB for Numerics-I	Department of Mathematics TU-Dortmund
MATLAB for Numerics-II	Department of Mathematics TU-Dortmund
Mathematical Methods with Matlab	Department of Mathematics TU-Dortmund
Computational Fluid Dynamics	Department of Mathematics TU-Dortmund
Mathematical Biology	Department of Mathematics TU-Dortmund (TA)
Numerical Methods for ODE	Department of Mathematics TU-Dortmund (TA)
Surface PDEs	Department of Mathematics TU-Dortmund (TA)

(h)   Curriculum Development

Multi-variable Calculus	College of Engineering and Technology, UDST
Calculus-II	School of Arts and Sciences, UCA
Calculus-I	School of Arts and Sciences, UCA
Discrete Mathematics	School of Arts and Sciences, UCA
Linear Algebra	School of Arts and Sciences, UCA
Pre-Calculus	School of Arts and Sciences, UCA
Statistics	School of Arts and Sciences, UCA
Prep-Mathematics-II	School of Arts and Sciences, UCA
Computational Biology (Bio-informatics)	School of Arts and Sciences, UCA
Geo-Dynamics	School of Arts and Sciences, UCA
Statistics with R Programming	School of Arts and Sciences, UCA

(i)   Awards

2023-2024	UREP30-065-1-011, Assessing the Spatio-temporal Patterns of Desertification and Self-vegetation of Qatari Flora Using Mathematical Modeling and Remote Sensing Data ($ 30,000)
2023-2024	HSREP05-1023-230054, Visualization and understanding of blood flow and blockage using software ($ 5000)
2019-2020	Postdoctoral fellowship and CAFDP fellow at University of Oxford (£ 52,000)
2017-2018	UCA research grant to work at University of Applied Science, Duesseldorf (€7000)
2016-2017	Postdoctoral position at TU-Dortmund
2015	Best Research Paper at BIOMATH-2015 annual meeting, Bulgaria
2012-2015	DAAD/UCA PhD Research Award at TU-Dortmund (€ 60,000)
2010-2012	QAU Merit Scholarship for Master of Philosophy
2008-2010	QAU Merit Scholarship for Master
2010-2012	Fouji Foundation award for M.Sc and M.Phil
2007	Honor Roll in B.Sc from University of Punjab, Lahore

(j)   Simulation, Software and LMS Skills

Post processing DeViSoR Grid3
Simulation Development of Bio-maths application, FEM package
Visualization: Paraview, GMV
Programming in MATLAB
Programming in Python
Operating systems Linux/UNIX
Editors GNU (emacs), Kate, Coral Draw
COMSOL Multiphysics
LMS: ILIAS, MOODLE, D2L

(k)   Research Interests

- Numerical Methods for Partial Differential Equations on Surfaces
- Mathematical Biology, Patterns Formations

- Computational Fluid Dynamics and Hemodynamics
- Finite Element Method

(l) Publication Impact

1. Google Scholar Citations
   Citation   1003
   h-index   17
   i-10 index   19

(m) Publications List

Peer Reviewed Journal Publications

1. R Ali, A Farooq, A Shahzad, AC Benim, A Iqbal, M Razzaq, Computational approach on three-dimensional flow of couple-stress fluid with convective boundary conditions, Physica A: Statistical Mechanics and its Applications, 124056 (Impact Factor 2.924).
2. A. Sokolov, R. Ali, S. Turek, An AFC-stabilized implicit finite element method for partial differential equations on evolving-in-time surfaces, accepted in: Journal of Computational and Applied Mathematics, 2015, 289, 101 115. (Impact Factor 2.037).
3. R. Ali, A. Shahzad, M. Khan, A. Ayub, Analytic and numerical solutions for axisymmetric flow with partial slip, Engineering with Computers, 2016, 32(1), 149 154. (Impact Factor 3.938).
4. T. Aziz, F.M. Mahomed, A. Shahzad, R. Ali, travelling wave solutions for the unsteady flow of a third-grade fluid induced due to impulsive motion of flat porous plate embedded in a porous medium, Journal of Mechanics, Cambridge University Press, 2014, 30(05), 527 535. (Impact Factor 1.293)
5. A. Shahzad, R. Ali, M. Khan, On the exact solution for axisymmetric flow and heat transfer over a nonlinear radially stretching sheet, Chinese Physics Letters, 2012, 29(8), 084705. (Impact Factor 1.066).
6. A. Shahzad, R. Ali, M. Hussain, M. Kamran, Unsteady Axisymmetric flow and heat transfer over time-dependent radially stretching sheet, Alexandria Engineering Journal, 2016. (Impact Factor 2.46).
7. A. Shehzad, R. Ali, Approximate analysis solution for magneto-hydrodynamics flow of a non-Newtonian fluid over a vertical stretching sheet, Canadian Journal of Applied Sciences, 2012, 2, 202 215. (Impact Factor 0.00).
8. KU Rehman, QM Al-Mdallal, R Mahmood, MY Malik, R Ali, On inclined heated square obstacle in a liquid stream carried by partially heated channel: finite element analysis, Case Studies in Thermal Engineering 15, 100532 (Impact Factor 4.01).
9. A Shahzad, R Ali, M Kamran, SUD Khan, SUD Khan, A Farooq , Axisymmetric flow with heat transfer over exponentially stretching sheet: A computational approach, Physica A: Statistical Mechanics and its Applications 554, 124242 (Impact Factor 2.924).
10. A. Farooq, R. Ali, A.C. Benim, Soret and Dufour effects on three dimensional Oldroyd-B fluid, Accepted in Statistical Mechanics and its Applications. (Impact Factor 2.924).
11. A. Shahzad, R Ali, MHD flow of a non-Newtonian Power law fluid over a vertical stretching sheet with the convective boundary condition, Walailak Journal of Science and Technology (WJST), 2012, 10 (1), 43-56. (Impact Factor 0.80).

12. A Shahzad, U Gulistan, R Ali, et al., Mathematical , Numerical Study of Axisymmetric Flow and Heat Transfer in a Liquid Film over an Unsteady Radially Stretching Surface, Mathematical Problems in Engineering 2020(1):1-9 (Impact Factor 1.009).

13. J. Ahmed, A. Shahzad, M. Khan, R. Ali, A note on convective heat transfer of an MHD Jeffrey fluid over a stretching sheet, AIP Advances, 2015, 5 (11), 117117. (Impact Factor 1.620).

14. J. Ahmed, T. Mahmood, Z. Iqbal, A. Shahzad, R. Ali, Axisymmetric flow and heat transfer over an unsteady stretching sheet in power law fluid, Journal of Molecular Liquids, 2016, 221, 386 393. (Impact Factor 5.065).

15. T Mahmood, J Ahmed, A Shahzad, R Ali, Z Iqbal, Convective heat transfer of viscous fluid over a stretching sheet embedded in a thermally stratified medium, BULGARIAN CHEMICAL COMMUNICATIONS, 2016 48 (3), 506-513. (Impact Factor 0.640).

16. J. Ahmed, A. Begum, A. Shahzad, R. Ali, MHD axisymmetric flow of power-law fluid over an unsteady stretching sheet with convective boundary conditions Results in Physics, 2016, 6, 973981. (Impact Factor 4.019).

17. M. Khan, R. Ali, A. Shahzad, MHD Falkner-Skan flow with mixed convection and convective boundary conditions, Walialik Journal of Sci and Tech, 10(5), 517-529. (Impact Factor 0.08).

18. J Ahmed, A Shahzad, A Begum, R Ali, N Siddiqui, Effects of inclined Lorentz forces on boundary layer flow of Sisko fluid over a radially stretching sheet with radiative heat transfer, Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2017, 1-12. (Impact Factor 1.755).

19. M Abduzhabbarov, R Ali, A Asanov, On numerical solution of the second-order linear Fredholm–Stieltjes integral equation, AIP Advances 11 (7), 075120 2021 (Impact Factor 1.579).

20. U. Hayat, R Ali, S. Shaiq, and A Shahzad, Numerical study on thin film flow and heat transfer enhancement for copper nanoparticles dispersed in ethylene glycol. Reveiw on Adv Mat Sci. (2023) 62:20220320 (Impact Factor 5.01).

21. R Ali, A Shahzad, Kaif us Saher, Z Elahi, T Abbas, The thin film flow of Al2O3 nanofluid particle over an unsteady stretching surface, Case Studies in Thermal Engineering 29, 101695 (Impact Factor 4.01).

Manuscript Under Review

1. R Ali, M shakeel, M Umer A Shahzad, M Razzaq,A Numerical Study on Thin Film Flow and Heat Transfer Enhancement for Copper Nanoparticles Dispersed in Ethylene Glycol, RAMS-D-23-00045 (final revision after minor changes for publication in Reviews on Advanced Materials Science) (Impact Factor 5.028).

2. R. Ali, A. Ahmed, A. Cholponkulov, Simulation and Implementation and comparison of Biological Patterns Formation.

3. R. Ali, S.M. Marcelo, P.K. Maini, A. Dawes, Simulating biological patterns on complex surfaces: a review of current techniques.

4. S.M. Marcelo, R.Ali, E. Gaffney and P.K. Maini, A modified Turing-Bard model presents new dynamics, deviating from self-similarity.

5. R. Ali and A. Shahzad and A.C. Benim Heat Transfer Enhancement due to Variation in Nanoparticles Shape factor in Nanofluid Over a Porous Stretching Surface

Preprints

1. A. Sokolov, R. Ali, S. Turek, An AFC-stabilized implicit finite element method for partial differential equations on evolving-in-time surfaces, Ergebnisberichte des Instituts für Angewandte Mathematik, Nummer 502, Fakultät für Mathematik, TU Dortmund, 2015.
2. A. Sokolov, R. Strehl, R. Ali, S. Turek, Numerical Framework for pattern-forming models on evolving-in-time surfaces, Ergebnisberichte des Instituts für Angewandte Mathematik, Nummer 503, Fakultät für Mathematik, TU Dortmund, 2015.

(n) Invited Talks

- R. ALI, Numerical Simulation of surface defined PDEs, application in computational biology, Keynote Speaker at iCoMET-2018, March,3-4, IBA University Sukkur, Pakistan.
- R. ALI, Application of FEM in Material Science, December 2017, University of Engineering and Technology, Pakistan.
- R. ALI, Pattern forming model on evolving-in-time surface, June 14-19, 2015, Blagoevgrad, Bulgaria.
- R. ALI, A. SOKOLOV, R. STREHL and S. TUREK, Finite Element Method for PDEs on surface: application in chemotaxis, November 12-13, 2012, Freie Universität Berlin.
- R. ALI, Falkner-Skan viscous flow with mixed convection and convective boundary conditions, November 17-19, 2011, National University of Sciences and Technology, Islamabad, Pakistan.
- R. ALI, Heat transfer of MHD flow in Power law fluid over a stretching sheet with the convective boundary condition, July 21-22, 2011, All Pakistan Mathematical Conference, Islamabad, Pakistan.
- R. ALI, Approximate solution of a non-Newtonian fluid over a vertical stretching sheet, May 07-08, 2012, COMSATS Institute of Information Technology, Abbottabad, Pakistan.

(o) PhD Thesis Supervision

- Ainura Mitalipova , 2021-present, Mathematical Modeling and Simulation of Flow problems, in collaboration with Osh-Sate University, Kyrgyzstan.
- ZUlqarnain Haider, Simulation of nano-particle in Non-Newtonain fluid, UET, Taxila

(p) Bachelor Student's Thesis Supervision at UCA Naryn Campus

- Attique Ahmed, 2022, Simulation of Biological Patterns using Gray-Scot Model.
- Atai Cholponkulov, 2022, Gierer-Meinhardt model: Implementaion and understanding of Turing Patterns.

(q) Bachelor Student's Project Supervision at TU Dortmund

- Needham Alexander, 2013, Finite Difference Method 2D.
- Shobiga Jeyadevan, 2014, Newton Interpolation with Extremely High Degrees (by Leja Ordering and Fast Leja Points).
- Nadine, 2014, Finite Element Method in 2-D.
- Decker Sabine, 2014, Finite Element Method in 1-D.
- Barut Muhammed, 2015 Application of Delaunay triangulation.
- Yesim Demir, 2015, ILUT: a dual threshold incomplete LU factorization.
- Mercel Neuss, 2015, Hermite-Gauss Quadrature and Chebyschev-Gauss Quadrature.

- Leonie Reicherz, 2015, Hexahedron Elements.
- Patrick Voelker, 2015, A dual threshold incomplete LU factorization.
- Mine Tok, 2015, An efficient, exact, and generic quadratic programming solver for geometric optimization.
- Chen Hao, 2016, Stability of Runge-Kutta Methods.
- Kevin Schaeper, 2016, Mathematical behavior of partial differential equations - Influence on numerical flow mechanics-I.
- Tim Seidinger, 2016, Mathematical behavior of partial differential equations - Influence on numerical flow mechanics-II.

(r) Workshops and Seminar

Workshops and Seminar

- Introduction to Scientific Programming, University of Applied Science, Düsseldorf, Germany, Jan. 2018.
- Introduction to Numerical General-Purpose GPU Computing with NVIDIA CUDA, October 2016.
- Scientific Writing Skills, TU-Dortmund, April 2015.
- FORTRAN for Scientific Computing, Stuttgart, March 2014.
- International Workshop on Recent Development in CFD at Comstech, Islamabad, February 2012.
- Scientific Spring at Abdus Salam Center of Physics, Islamabad, March, 2011.
- On growth and pattern formation, A celebration of Philip Maini's 60th birthday, workshop September 18-19 2019.