Dr. Muhammad Omar

PhD Mathematics

Cell# +92-332-0300032

E-mail: m.omar@cuisahiwal.edu.pk

DoB: October 15, 1987

Qualifications:

Ph.D. Mathematics.

Thesis: Some Numerical Techniques for Scientific and Engineering Applications.
November 06, 2020.
University of Sargodha, Sargodha, Pakistan.

www.uos.edu.pk

M.Phil. Mathematics.

Thesis: Estimating Error Bounds for Ternary Subdivision Schemes Using Second Forward Differences.

CGPA: 3.03/4.00

June 03, 2014.

University of Sargodha, Sargodha, Pakistan .

www.uos.edu.pk

M.Sc Mathematics.

Applied Mathematics

Session: 2009-2011

CGPA: 3.34/4.00

June 03, 2014.

University of Sargodha, Sargodha, Pakistan .

www.uos.edu.pk

Professional Experience:

Current Employer:

COMSATS University Islamabad

A Public Sector institution ranked no. 1 in all universities of Pakistan, according to Times higher education ranking 2016.
Assistant Professor, Mathematics. April 14, 2022 to present
Lecturer, Mathematics. February 15, 2017 to April 14, 2022

Previous Employers:

1. University of Sargodha

Lecturer - Contract

02-2012 to 08-2012

2. The University of Lahore

Lecturer - Contract

08-2012 to 04-2014

Major Courses Taught

- Calculus and Analytic Geometry
- Multivariable Calculus
- Numerical Computation
- Probability and Statistics
- Discrete Mathematics
- Subdivision Schemes

Research Articles:

1- F. Khan, G. Mustafa, **M. Omar** and H. Komal. Numerical approach based on Bernstein polynomials for solving mixed Volterra-Fredholm integral equations, AIP Advances, (2017), Vol. 7, 125123, 1-15.

2- F. Khan, **M. Omar** and Z. Ullah. Discretization method for the numerical solution of 2D Volterra integral equation based on two-dimensional Bernstein polynomial, AIP Advances, (2018), Vol. 8(12), 125209, 1-9.

3- M. Omar and F. Khan. Generalized Subdivision Surface Scheme Based on 2D Lagrange Interpolating Polynomial and its Error Estimation, Communications in Mathematics and Applications, (2018), Vol. 9(3).

4- F. Khan and **M. Omar**. Generalized family of approximating schemes based on Newton interpolating polynomials and its error analysis, Punjab University Journal of Mathematics, (2019), Vol. 51(6), 81-95.

5- S.A. Shehzad, F. Mabood, A. Rauf and **M. Omar**. Forced convective micropolar fluid flow through stretchable disk with thermophoresis, Journal of Thermal Analysis and Calorimetry, (2021), Vol. 147, 3889-3900.

6- A. Rauf, M. Irfan, **M. Omar**, T. Mushtaq, S.A. Shehzad and M.N. Bashir. Numerical study of micropolar nanofluid between two parallel permeable disks with thermophysical property and Arrhenius activation energy, International Communications in Heat and Mass Transfer, (2022), Vol. 137, 106272.

7- J.K. Madhukesh, G.K. Ramesh, S.A. Shehzad, A. Rauf and **M. Omar**. A microstructural slip analysis of radiative thermophoretic flow of ternary nanofluid flowing through porous medium, Physica Scripta, (2023), Vol. 98, 065213, 1-16.

8- M. Omar, G. Ramesh, U. Abbas, M.N. Bashir and S.A. Shehzad. Darcy-Forchheimer two-types viscoelastic nanofluid flows with Newtonian conditions, Journal of Nanomaterials, Nanoengineering and Nanosystems, (2024). **Accepted**

Book Chapter

1- S.A. Shehzad, A. Rauf and **M. Omar**. Radiative Non-Newtonian Nanofluid Flow through Stretchable Disks: An Application to Solar Thermal Systems, (Nanotechnology Applications for Solar Energy Systems) Edited by Mohsen Sheikholeslami, Wiley Online Library, March 2023, ISBN: 978-1-119-79118-8.

Trainings and Workshops

- Completed 6 Weeks Professional Development Workshop for Young Faculty by Faculty Development Academy, COMSATS Institute of Information Technology, Islamabad.
- Completed ISO 9000:2008 training conducted by COMSATS Institute of Information Technology, Islamabad.
- Completed ISO 9000:2015 training conducted by COMSATS Institute of Information Technology, Islamabad.
- Completed firefighting training conducted by COMSATS Institute of Information Technology, Islamabad.

Skills

- Microsoft Office
- Latex
- Maple
- Matlab
- Mathematica

Additional Duties

- Student Batch Advisor.
- Member Undergraduate Program (BS) Advisory Committee.
- Member Web Management Committee.
- Member Sports Committee.
- Member Admission Campaign.
- Timetable Coordinator.
- Convener COMSATS Adventure and Rovering Club.

References:

1- Prof. Dr. Saleem Farooq Shaukat
Director, COMSATS University Islamabad, Vehari Campus, Pakistan
director@cuivehari.edu.pk

2- Prof. Dr. M. Faheem Khan
Professor, Department of Mathematics, The Islamia University of Bahawalpur, Bahawalpur, Pakistan
fahimscholar@gmail.com

3- Dr. Sabir Ali Shehzad
Associate Professor, Department of Mathematics, COMSATS University Islamabad, Sahiwal Campus, Pakistan
sabirali@cuisahiwal.edu.pk

Personal Details:

Father's Name: Muhammad Ali
Spouse: Dr. Sarah Ambreen (Ph.D Botany)
Nationality: Pakistani