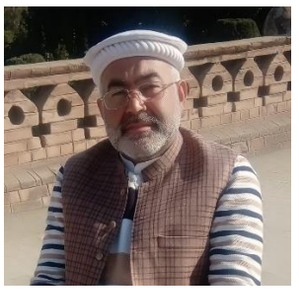
Dr. Muhammad Idrees

Ph.D. in (Applied Mathematics)



Name:	Muhammad Idrees
Date of Birth:	March 1, 1970
Nationality:	Pakistani
Office Address:	**Assistant Professor,** Department of Mathematics, Islamia College Peshawar (Public Sector University), Peshawar, Khyber Pakhtunkhwa, Pakistan.
Telephone:	Cell: 0092-332-9002556
E-mail:	idrees@icp.edu.pk

Major Field:	Applied Mathematics, Computational Mathematics, Engineering Mathematics
Research Interest:	Industrial Mathematics, Computational Fluid Dynamics, Computational Mathematics
2013-2016	Lecturer, Department of Mathematics, Islamia College Peshawar, Peshawar, Khyber Pakhtunkhwa, Pakistan.
2016-till date	Assistant Professor, Department of Mathematics, Islamia college Peshawar, Khyber Pakhtunkhwa, Pakistan.
Computer Skills:	MATHEMATICA, MAPLE, MATLAB, ANSYS
Distinctions:	HEC, Merit Scholarship, for PhD Studies, at GIKI (2004-2011)
Distinctions:	Throughout First Divisions (Matric to Ph. D)

DETAIL OF COURSES TAKEN AT M.PHIL AND PHD LEVEL

Course Name	Instructor Name
1. Computational Methods for Engineers	Prof. Dr. Syed Ikram A. Tirmizi
2. Differential equations for Engineers	Dr. Ghulam Shabbir
3. Mathematical Modelling of Electrical discharge phenomenon	Prof. Dr. S. N. Kharin
4. Numerical Functional Analysis	Prof. Dr. Safeer Hussain
5. Advance Experimental Techniques	Prof. Dr. M. N. Khan
6. Numerical Methods for partial Differential equations	Prof. Dr. Syed Ikram A. Tirmizi
7. Continuum Mechanics	Prof. Dr. M. Banikov
8. Computational Fluid Dynamics	Prof. Dr. M. P. Mughal
9. Stochastic Processes	Mr. Shahid Ahmed
10. Graph Theory	Prof. Dr. Alex A. Kavokin
11. Analytic Solution for Partial Differential Equations	Prof. Dr. Ghulam Shabbir
12. Computational Nuclear Physics	Prof. Dr. Jameel-Un Nabi
13. Numerical Methods for Ordinary Differential Equations	Prof. Dr. Syed Ikram A. Tirmizi
14. Finite Element Analysis (ANSYS)	Prof. Dr. Muhammad Abid
15. Asymptotic method for Differential Equations	Prof. Dr. Sirajul Haq
16. Advance Transform Techniques	Prof. Dr. Sherzod Mirahmedov

Workshops / Seminars:

- Workshop on “High Performance Computing” held at the GIK Institute, Pakistan (2006).” in Collaboration with University of Illinois, Chicago, USA.
- International Conference on “Mathematical Models and Methods in Fluid Mechanics” held at COMSATS Institute of Information Technology Islamabad, Pakistan (2006).
- International Conference on “PURE MATHEMATICS” held at Quaid-e-Azam University, Islamabad, Pakistan (2005).
- Workshop on “MATLAB and Simulink A tool for Engineering Applications” held at Ghulam Ishaq khan Institute of Engineering Sciences and Technology, Pakistan (2005).
- Advance short Course on “Non-linear finite element methods” held at GIK Institute of Engineering Science and Technology, Pakistan (2007).
- Symposium on “Computational Complexities Innovations and Solutions” held at COMSATS Institute of Information Technology Abbottabad, Pakistan (2007).
- Workshop on “Third Vice Chancellor’s Nominees Conference for National Aptitude Test” held at National Testing Services Islamabad on 2011.
- Workshop attended on Computational Methods organized by COMSTEC, Islamabad, Pakistan (2012)
- Two days’ workshop on “Emerging Trends in Computational Sciences”, FCSE, GIK Institute, January 10-11, 2013.

Courses Taught at Graduate and Undergraduate Level

- Numerical Solutions of Partial Differential Equations
- Numerical Solutions of Ordinary Differential Equations
- Computational Fluid Dynamics (CFD)
- Numerical Solutions of Integral Equations
- Advanced Mathematical Methods
- Integral Equations
- Analytic Solutions of Partial Differential Equations
- Analytic Solutions of Ordinary Differential Equations
- Numerical Analysis
- Linear Algebra
- Computational Methods
- Advance Fluid Dynamics

Graduate Students Supervised

- Mr. Sajid Rehman (Ph.D.)
- Mr. Tariq Abbas (Ph. D)
- Mr. Waris Khan (Ph.D.)
- Mr. Saeed ur Rehman (MS).
- Mr. Miraj Khan (MS).
- Mr. Dost Muhammad (MS).
- Mr. Ghayoor Ahmed (MS).
- Mr. M Hassan Zeb (MS).
- Mr. Faisal Elahi (MS).
- Mr. Abdullah (MS).
- Mr. Abbas Khan (MS).
- Mr. Muhammad Jalal (MS).
- Mr. Adnan Akbar (MS).
- Mr. Mukhtar Ullah (MS).
- Mr. Naseem Khan (MS).
- Mr. Muhammad Farooq (MS).
- Mr. Muhammad Asghar (BS)
- Mr. Bakht Sultan (BS)
- Mr. Abdu Rauf (BS).
- Mr. Shahbaz (BS).
- Mr. Muhammad Daud (BS).
- Mr. Fazal Manan (BS).
- Mr. Sadiq Hussain (BS).
- Mr. Faisal Amin (BS).
- Mr. Waqar Khan (BS).
- Mr. Muhammad Awais (BS).

Some of Publications:

S. No	Title of Paper	Journal	Year
1	Exact Solution of Goursat problems using differential transform method	Journal of Advanced Research in Scientific Computing	2010
2	Application to Optimal Homotopy Asymptotic Method to Fourth Order Boundary Value Problems	World Applied Sciences Journal	2010
3	Application of Optimal Homotopy Asymptotic Method to Special Sixth Order Boundary Value Problems	World Applied Sciences Journal	2010
4	Application of Optimal Homotopy Asymptotic Method to Eighth Order initial and Boundary Value Problems	International Journal of Applied Mathematics and Computation	2010
5	Application of Optimal Homotopy Asymptotic Method to squeezing Flow	Computers and Mathematics with Applications	2010
6	Some Solutions of Linear and nonlinear Klein-Gordon equations using the Optimal Homotopy Asymptotic Method	Applied Mathematics and Computations	2010
7	Approximate Solutions to MHD Squeezing Fluid Flow	Journal of Applied Mathematics and Informatics	2011
8	Application to the Optimal Homotopy Asymptotic Method for the Solution of the Korteweg-de Vries equation	Mathematical and Computer Modeling	2012
9	Application of Optimal Homotopy Asymptotic Method to Burger Equations	Journal of Applied Mathematics	2012
10	Exact Solutions for a Class of Stiff Systems by Differential Transform Method	Applied Mathematics	2013
11	Homotopy Perturbation Method and seventh-order boundary value problems	International Journal of Applied Mathematical Research	2013
12	Solution of Boundary Layer Problems with Heat transfer by Optimal Homotopy Asymptotic Method	Abstract and Applied Analysis	2013
13	Application of Optimal Homotopy Asymptotic Method to Doubly Wave Solutions of the Coupled Drinfel'd-Sokolov-Wilson Equations	Mathematical Problems in Engineering	2013
14	Application of Optimal Homotopy Asymptotic Method to Burger Equations	Journal of Applied Mathematics	2013
15	Optimal Homotopy Asymptotic Method to Non-Linear Damped Generalized Regularized Long-Wave Equation	Mathematical Problems in Engineering	2013
16	Solving Singular Boundary Value Problems by Optimal Homotopy Asymptotic Method	International Journal of Differential Equations	2013
18	Optimal Homotopy Asymptotic Method to Nonlinear Damped Generalized Regularized Long-Wave Equation,	Mathematical Problems in Engineering	2013
19	Influence of Slip Condition on MHD Thin Film Flow of a Third Grade Fluid over a Vertical Belt with Temperature Dependent Viscosity	Journal of Applied Environmental and Biological Sciences	2014
20	The Flows Past a Rotating Disk by Optimal Homotopy Asymptotic Method	World Applied Sciences Journal	2014
21	Solution of the Differential-Difference Equations by Optimal Homotopy Asymptotic Method	Abstract and Applied Analysis	2014
22	Application of Optimal Homotopy Asymptotic Method to Benjamin-Bona-Mahony and Sawada-Kotera Equations	World Applied Sciences Journal	2014

23	The Flow Past a Rotating Disc by Optimal Homotopy Asymptotic Method	World Applied Sciences Journal	2014
24	Solving Singular Boundary Value Problems by Optimal Homotopy Asymptotic Method	International Journal of Differential Equations	2014
25	Application of Optimal Homotopy Asymptotic Method to Heat Transfer Problems	Science International Lahore	2014
26	Application to Optimal Homotopy Asymptotic Method to Benjamin-Bona-Mahony and Sawada-Kotera Equations	World Applied Sciences Journal	2014
27	Solution of Differential-Difference Equations by Optimal Homotopy Asymptotic Method	Abstract and Applied Analysis	2014
28	An Extension of the Optimal Homotopy Asymptotic Method to the Coupled to Schrodinger-KdV Equations	International Journal of Differential Equations	2014
29	The Three Dimensional Flow Past a Stretching Sheet By Extended Optimal Homotopy Asymptotic Method	Science International (Lahore)	2014
30	Thin Film Williamson Nano fluid Flow with Varying Viscosity and Thermal Conductivity on a Time-Dependent Stretching Sheet	Applied Sciences	2015
31	Gravity Driven Flow of an Unsteady Second Order Fluid Between two Parallel and Vertical Oscillating Plates	Journal of Applied Environmental and Biological Sciences	2015
32	The optimal homotopy asymptotic method with application to modified Kawahara equation	Journal of the Association of Arab Universities for Basic and Applied Sciences	2015
33	Thin Film Williamson Nanofluid Flow with Varying Viscosity and Thermal Conductivity on a Time-Dependent Stretching Sheet	Applied Sciences	2016
34	Similarity Analysis of MHD flow field and heat transfer of a second grade convection flow over an unsteady stretching sheet	Boundary Value Problems	2017
35	Theoritical Investigation of MHD Convection Navier-Stokes Flow over an unsteady stretching sheet	International Journal of Fluid Mechanics	2017
36	Magneto-hydrodynamic convection of an unsteady surface stretching with pressure dependent on transverse velocity and surface tension linearly varies with temperature	Heat Transfer Research	2017
37	MHD Carreau fluid slip flow over a porous stretching sheet with viscous dissipation and variable thermal conductivity	Boundary Value Problems	2017
38	Dufour and Soret Effect with Thermal Radiation on the Nano Film Flow of Williamson Fluid Past Over an Unsteady Stretching Sheet	Journal of Nano fluids	2017
39	Impact of Thermal Radiation and Heat Source/Sink on Eyring–Powell Fluid Flow over an Unsteady Oscillatory Porous Stretching Surface	Mathematical and Computational	2018
40	A similarity solution of time dependent MHD liquid film flow over stretching sheet with variable physical properties	Results in Physics	2018

References: Associate Prof. Dr. Rehan Ali Shah , UET, Peshawar

1. Prof. Dr. A. M. Siddiqi, Pennsylvania State University, USA

Dr. M. Idrees Utman Khel