Dr Waseem Asghar Khan   **S/O**:   MUHAMMAD ASGHAR KHAN
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MAJOR SUBJECT: MATHEMATICS

EDUCATION:

⇨ **PhD Mathematics:** *Start Fall 2007 to onward from   COMSATS Institute of Information Technology, Islamabad, Pakistan .*

PhD Dissertation*:"Numerical Techniques for the solution of certain nonlinear equations"*

PhD Course work

Course No	Course Title	Credit
1	Advanced PDEs	03
2	Advanced Numerical Analysis	03
3	Advanced Mathematics Statistics	03
4	Group Theory	03
5	Differential Subordinations and Applications	03
6	Numerical Methods for Variational Inequalities	03
	Total Credit	18
	C.G.P.A	3.28

⇨ **MS Mathematics:** COMSATS Institute of Information Technology, Islamabad,
Pakistan.

MS Dissertation: *"On Iterative Methods For Solving Nonlinear Equations"*
Honors: Dissertation passed 'with Distinction'

MS (M Phil) Course work

Course No	Course Title	Credit
1	Convex Analysis	03
2	Numerical Solutions of PDEs	03
3	Theory of Viscous Fluids	03
4	Hilbert Space Methods	03
5	Variational Inequalities	03
6	Geometric Function Theory	03
7	Advanced Modern Algebra with Applications	03
8	Optimization	03
	Total Credit	24
	C.G.P.A	3.28

⇨ **M.Sc. Mathematics:** *GC University Lahore, Pakistan*

M.Sc Dissertation: *"Some Aspects of Queueing Theory"*

M. Sc Course work

Course No	Course Title	Credit
1	Real Analysis	04
2	Algebra	04
3	Complex Analysis and Differential Geometry	04
4	Mechanics	04
5	Topology and Functional Analysis	04
6	Computer Applications in Mathematics	04
7	Mathematical Physics	04
8	Numerical Analysis	04
9	Rings and Modules	04
10	Category Theory with Applications	04
11	Operations Research	04
	Total Credit	48

Totle marks
904/1200

⇨ **B. Sc** *Punjab University Lahore, Pakistan*

Mathematics A& B, Physics

AWARDS

- ➢ *MS: Scholarship, COMSATS Institute of Information Technology, Islamabad, Pakistan 2005-2007.*
- ➢ *PhD: Scholarship, COMSATS Institute of Information Technology, Islamabad, Pakistan 2007-2012.*

PUBLICATIONS

1) New iterative methods for solving nonlinear equation by using homotopy perturbation method, Appl. Math. Comput., **219** (2012) pp. 3565-3574

2) New Exact Solutions of Steady Plane Flows of an In Compressible Fluid of Variable Viscosity for Chosen Vorticity Function, Arc. Des Sci., Accepted 2012. Vol 65, Issue 9, 398-409. **(IF. 0.474).**

3) On sufficient condition for Sakaguchi type spiral-like functions of order β Arc. Des Sci, Accepted 2012. Vol 65, Issue 8, 568-571. **(IF. 0.474).**

4) Fourth-order iterative method free from second derivative for nonlinear equations, Applied Mathematical Sciences, Vol. 6, 2012, no. 93, 4617 - 4625 **(IF 0. 331, H-index 14)**

5) On the Existence of Solutions for Stochastic Differential Equations under G-Brownian Motion, Arc Des Sci, Accepted 2012, Vol 65, Issue 7, 621-634. **(IF. 0.474).**

6) Spectrophotometric Determination of Diazepam, Journal of the Chemical Society of Pakistan, Vol. 34, No. 3, (2012) 536-540**. (IF 1.377)**

7) Homotopy perturbation techniques for the solution of certain nonlinear equations, Applied Mathematical Sciences, Vol. 6, 2012, no. 130, 6487 - 6499 **(IF 0. 331, H-index 14)**

8) Higher-order iterative methods free from second derivative for solving nonlinear equations, Int. J. of Phy. Sci. Vol. 6 (8) (2011), 1887-1893. **(ISI Index IF 0.554)**.

9) Comment on He's frequency formulation for higher-order nonlinear oscillators, Int. J. Basic & Appl. Sciences, **Accepted, vol 11, issue 4, (2011) ISI Index**

10) Solving nonlinear vibrating oscillator by using Hamiltonian approach, Int. J. Basic & Appl. Sciences, **Accepted, vol 11, issue 6, (2011) ISI Index**

11) Using Hamiltonian approach for the motion of a ball-bearing oscillating and mathematical pendulum, Sci. Int. 23 (2) (2011), 71-73. **(HEC Recommended)**

12) New modified Halley method free from second derivative for solving nonlinear equation, Appl. Math. Comput., 189 (2007), 1268-1273. **(IF 1.56)**

8) On iterative methods for nonlinear equations, Appl. Math. Comput., 183 (2006), 128-133. **(IF 1.56)**

14) He's frequency formulation for higher-order nonlinear oscillators and nonlinear oscillator with discontinuous, Int. J. Research and Reviews in Appl. Sci., Accepted (2011).

15) Nonlinear oscillator with discontinuity by modified He's frequeancy-amplitude formulation, Int. J. Research and Reviews in Appl. Sci., Accepted (2011).

16) Global Error Minimization method for nonlinear oscillators with high nonlinearity Appl. Math. Inf. Sci. Vol. 6 No. 2 (2012). (Accepted) **(IF 0.642)**

17) Application of new variational method using Hamiltonian, for nonlinear oscillators with discontinuities **(Accepted) (2011)**

18) Modified Householder's method in Banach spaces, Applied Mathematics and Computation (Submitted) (2011) .

19) Modified homotopy analysis method for solving nonlinear equations, Nonlinear Analysis Series A: Theory, Methods & Applications (2011).

20) Some higher-order iterative method based on Modified homotopy perturbation method. Journal of Science International (2011).
   (**Acceped**).(**HEC Recommended**)
21) Application of new variational method for nonlinear oscillators using Hamiltonian, NLM-S-10-00160 (Submitted) (2010).
22) On iterative methods for nonlinear equations using homotopy perturbation technique, IJAMM **Second revise (2011) ISI Index**
23) Modified Homotopy perturbation techniques for the solution of certain nonlinear equations, **Submitted**
24) Fifth-order and fourth-order iterative methods base on two-parameter Homotopy analysis method Nonlinear Analysis Series B: Real World Applications (2011).

Paper Presented in International Conferences

   i)   INTERNATIONAL CONFERENCE IN MALAYSIA (as a Presenter**)**

International conference on Mathematics, held on November 28-30, 2007 in **Malaysia**, title "Some third-order iterative method for solving nonlinear equations"

   ii) INTERNATIONAL JOINT MATHEMATICS MEETING IN <u>USA</u>, 2009

   iii) Member of 1st Conference in Mathematics " Mathematical School Systems GC University Lahore Pakistan".

EXPERIENCE

   i)   Research Associate "COMSATS Institute of Information Technology, Islamabad, Pakistan" 'Mathematics' From 1st March to 1st August.
   ii) Lecturer in HITEC University Taxila Cantt. Oct 2009 to Oct 2011.
   iii) Assistant Professor, Institute of Business Management, Karachi, Pakistan. January 15, 2012 to August 13, 2012.
   iv) Assistant Professor, Institute of Business Administration, Sukkar, Pakistan. August 13, 2012 to Dated Now.

RESEARCH INTERESTS

Analytical and numerical solutions of initial and boundary value problems related to the applied/engineering sources using Numericals techniques (variational iteration, homotopy perturbation, variation of parameters, modified variation of parameters, variational iteration using He's polynomials, variational iteration using Adomain's polynomials, exp

function,   iterative,   decomposition   and   finite   difference   schemes).

EXTRA ACTIVITIES

1) Member of Chawalla Mathematics Society as **President** "GC University Lahore Pakistan".
2) Member of Center of Research for Public Health (CRPH).

LANGUAGE CERTIFICATE:

Six month Language certificate from "**National University of Modern Language**"

REVIEW OF INTERNATIONAL JOURNALS

1) COMPUTERS AND MATHEMATICS WITH APPLICATIONS
2) J. of SANDARA SCIENCE ACADMY, BANGLOWER , INDIA
3) Applied Math & Information Sciences.
4) Mathematics Information letter.
5) International Journal of Basic & Applied Sciences IJBAS / IJENS
6) J. of Science International.