

BIO-DATA

1. **Name** : Diwakar Pandey
2. **Date of Birth** : May 21, 1949
3. **Father's Name** : (Late) Sri Ravi Prakash Pandey
4. **Present Designation** : Professor ,
Department of Mathematics
C. C. S.. University, Meerut
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6. Academic Qualifications :

Examination	Division	Board/University
High School(Science)	First	U.P. Board
Intermediate(Science)	First	U.P. Board
B.Sc.	First	Allahabad University
M.Sc. (Mathematics)	First*	Allahabad University
Ph.D. (Mathematics)**	-----	Meerut University

* Fourth position in M.A. & M.Sc. examinations of the university.

** Thesis Title: Absolute Summability of Ultraspherical Series.

7. **Teaching Experience** : About 38 years in C.C.S. University, Meerut.

8. **Classes Taught** : M.A./M.Sc., M.Phil., M.C.A. M.Sc. (Computer Science).

9. Courses Taught :

- i) Operations Research
- ii) Queueing, Information & Reliability Theories.
- iii) Differential Equations.
- iv) Numerical Analysis.
- v) Complex Analysis
- vi) Computer fundamentals, BASIC & FORTRAN
- vii) C language and Data Structures.

- viii) File Organization and Database Management System.
- ix) Artificial Intelligence and Neural Networks.
- x) Computer Organization & Architecture

10. Research Specialization: Mathematical Analysis (Summability Theory)
 Operations Research (Reliability Theory)
 Fuzzy Sets, Operating Systems (Computer Science)

11 . Membership of Academic Bodies :

1. Life Member, Indian Science Congress Association.
2. Life Member, Indian Mathematical Society.
3. Life Member, Allahabad Mathematical Society.
4. Secretary & Life Member, International Academy of Physical Sciences, Allahabad
5. Member Board of Studies & Research Degree Committee in Mathematics and Computer Science: B.R.Ambedkar University, Agra , Banasthali Vidyapith Jaipur, M.J.P.Rohilkhand University,Bareilly, University of Allahabad, Allahabad, Rajasthan University, Jaipur, Gurukul Kangri University,Hardwar.

12. Visits Abroad

Visited U.S.A. during . 1998 in connection with participation in the Seattle session of INFORMS and presented a research paper in the conference.

Visited Malaysia and Singapur during 2002 and interacted with fellow workers there.

- 13. Administrative Experience :**
- a. Worked as Dean Students Welfare in C.C.S. University, Meerut.
 - b. Worked as Dean Faculty of Science in C.C.S. University, Meerut.
 - c. Worked as Dean Faculty of Engineering & Technology in C.C.S. University, Meerut.
 - d. Worked as Head, Department of Mathematics,C.C.S. University, Meerut from July 2003 to July 200
 - e. Worked as Controller of Result Cell in C.C.S. University, Meerut.

14. Research Experience & Publications.

(a) Ph.D. Theses Supervised

1. Mr. Mendus Jacob : Reliability Analysis of some multi-unit complex systems under Human Error and Common cause failure. (1993)
2. Mr. Rajiv Atri : Analytical Study of some Reliability Problems in Operations Research. (1993)
3. Mr. Sushil K. Tyagi : A Study of Reliability Characteristics of Computer Networking System. (1994)
4. Ms. Shephali Tyagi : Reliability estimation of some complex systems under different operating conditions. (1997)
5. Ms. Kshma Goel : Analytical Study of the Reliability characteristics of some complex systems under different failure modes. (1997)
6. Ms. Rachna Kumari : Mathematical Study of Reliability of some complex standby systems. (1998)
7. Ms. Jyotsna Yadav : A study of reliability of some multi-unit, multi-component systems under various failure modes. (1998)
8. Ms. Hemlata Sharma : A study of optimization techniques to multi-criteria Decision Problems. (1999)

9. Mr. Bheem Sain Kalra : A study of stochastic behaviour of complex standby systems under different operating conditions. (2001)
10. Ms. Shikha Sharma : Object Oriented Modeling of Real Time Systems (Comp. Science) (2005)
11. Mr.Sanjay Kumar Tyagi: A Study of Fuzzy and Classical Set Theoretic Approach to System Reliability. (2006)
12. Mr.Mukesh Kumar Sharma : A Study of Fuzzy Aspect of System Reliability (2007)
13. Mr.Rajesh Dangwal : A Study of Fuzzy Set Theory in Healthcare Administration (2008).

Ph.D. work in Progress

14. Ms Vandana
15. Mr. Kamesh Kumar
16. Mr. Sandeep Kumar
17. Mr. Vinesh Kaushik

(b). M.Phil Projects Supervised

Projects on Operations Research

1. Two approaches of handling the uncertainty in game problems(2007)
2. A study of Inventory models using different approaches (2007)
3. Various methods of Reliability Estimation (2005)
4. Different types of reliability estimation. (2005)
5. Applications of Game theory in market strategies. (2005)
6. Fuzzy Sets and its applications in multi-objective transportation problems (2003)
7. Stochastic behaviour of some two unit complex systems.(2000).
8. Reliability analysis of two-unit cold standby system subject to different constraints(2000).
9. Some Reliability problems in operations research (1999).

10. Fault tolerant computing and its reliability (1999).
11. Reliability characteristics of some two- unit systems under different operating conditions (1998).
12. Reliability analysis of two – unit systems under different situations. (1997)
13. A study of some reliability problems.(1997)
14. A study of complex systems under several factors affecting system reliability(1997).
15. Fuzzy concepts in system reliability problems(1996)
16. A study of reliability characteristics of warm/cold standby systems with multiple critical errors(1996).
17. Some aspect of fuzzy reliability (1996).
18. Reliability analysis of two-unit systems under different circumstances (1996).
19. Fuzziness and its applications to reliability problems (1996).
20. M/G/I Queues with machine repair problem and reliability considerations (1996).
21. A study of complex systems under several factors affecting system reliability (1995).
22. Some aspect of reliability under common cause failure and human error(1994).
23. Stochastic behaviour of standby systems under different failure modes(1994).
24. Effects of the Physical conditions of the operator on the reliability of Man-machine system (1994).
25. A study of stochastic behavior of complex standby systems under different operating conditions(1994).
26. A study of common cause failure of some parallel system under different operating conditions(1994).
27. A study of some aspects of queuing systems (1994).
28. Some aspects of Reliability Analysis by boolean function Technique(1993).
29. Some aspects of stochastic modelling of complex systems(1993).
30. A study of reliability characteristics of two unit systems under different operating conditions by regenerative point technique (1993).

Projects on Numerical Analysis

31. Some aspects of accuracy and error bounds of eigenvalues and egevectors(1993).
32. Finite difference method for Boundary value problems in ordinary differential equations (1992).

33. On block Runge-Kutta methods for ordinary differential equations (1992).
34. Some aspects of Runge-Kutta methods for ordinary differential equations (1992).
35. Some aspects of Stability of Predictor corrector methods for ordinary differential equations (1992).
36. On some eigenvalue problems 1992).
37. Predictor corrector methods for ordinary differential equations (1991).
38. Some aspects of Runge-Kutta Nystrom methods for ordinary differential equations (1991).
39. On algebraic stability and B-convergence for Runge-Kutta method (1991).
40. Predictor-corrector methods for ordinary differential equations (1991).
41. On multi- step methods for ordinary differential equations (1991).
42. Some aspects of differential eigenvalue problems (1990).
43. Implicit Runge-Kutta methods for differential algebraic system of ordinary differential equations (1990).
44. On family of imbedded Runge-Kutta pair (1990).
45. P-stable linear multi-step methods for second order ordinary differential equations (1989).
46. Some aspects of implicit Runge-Kutta methods for ordinary differential equations (1988).
47. Some Runge-Kutta algorithms for numerical solution of ordinary differential equations (1987).
48. Stability and efficient implementation of Runge-Kutta methods (1986).
49. Numerical solution of stiff initial value problems (1985).
50. Runge-Kutta and related methods for numerical solution of ordinary differential equations (1985).
51. Stability of Runge-Kutta methods (1984).
52. On algebraic eigenvalue problems (1983).
53. A study of optimum Runge-Kutta methods for initial value problems. (2008)

Projects on Computers

54. Some applications of MATLAB in Neural Networks. (2007)
55. C Package of Numerical Techniques (2002).

56. Development of software packages for some initial value , Boundary value and Eigen value problems (1993).
57. Some aspects of computer graphics and its applications (1990).
58. Data interpolation techniques in computer aided geometric design (1990).
59. Development of Computer Assisted Instruction packages (1990).
60. Ray Techniques for Image Synthesis in computer graphics (1990).
61. Some computer assisted instruction packages for school children
62. Development of computer programmes for different numerical methods (1985).

Projects on Generalized Inverse of Matrices

63. Some aspects of generalized inverses of matrices.(2002).
64. Generalized inverse of matrices and their applications (1981).
65. Some applications of Generalized Inverse of matrices (1981).
66. On Moore-Penrose Inverse of matrices (1980).

Projects on Fuzzy Set Theory

67. Some aspects of fuzzy matrices (2007)
68. A study of some aspects of fuzzy programming. (2006)
69. A study of Fuzzy Arithmetic and order of Fuzzy graph (2005)
70. Fault tree analysis using fuzzy set theory. (2005)
71. Non-mathematical applications of fuzzy set theory. (2005)
72. A fuzzy set theoretic approach to reliability evaluation and growth. (2004)
73. Fuzzy sets and fault tolerant systems. (2003)
74. Some Results on Fuzzy software and hardware reliabilities(2002)
75. Fuzzy Set Theoretic Approach to System Reliability (2002)
76. A study of vague sets and its applications to medical diagnosis. (2008)
77. Fuzzy goal programming and its applications. (2008)

Projects on other Areas

78. On existence and uniqueness of solutions of ordinary differential equations (1991).
79. Mathematical models in every day life (1987).

80. Almost convergence and its generalizations (1985).
81. Difference equations and their applications (1980).

RESEARCH PAPERS & OTHER PUBLICATIONS

Papers published / presented /accepted for publication:

1. CPU Scheduling: FCFS with Shorter Processes First, **International Journal of Engineering and Technology, Vol1(2), pp 11-17 (2008)**
2. Profust and Posfust Reliability of a Network System, **J. Mountain Res. Vol2 pp 97-112 (2007)**
3. Profust Reliability of a gracefully degradable system, **Fuzzy Sets and Systems, 158,pp794-803 (2007)**
4. Reliability Analysis of a Duplex Computer System, **Journal of Mathematics and System Sciences, Vol 2, pp10-19,(2006)**
5. Numerical solution of a three unit standby system, **Journal of Decision and Mathematical Sciences, Vol. 11, No.1-3, (2006)**
6. Fuzzy Reliability and Availability of a Three Unit Degradable System, **Proceeding of the National Seminar on Mathematics and Computer Science,pp179-188 (2005)**
7. System with deteriorated performance and degraded failures under circumstantial and common- cause failures. **International Journal of Management Sciences ,Vol. 19, No.2 (2003).**
8. Warm standby systems with imperfect switching under mechanical and critical human errors. **Acta Cinecia Indica,Vol.XXIX, No.1, pp71-80,(2003).**
9. Two unit system with two types of failures and repairs under the effect of CF and CCF, **Journal of International Academy of Physical Sciences, Vol.7,pp 61-69(2003).**
10. Warm standby systems with imperfect switching under mechanical and critical human errors. **Acta Cinecia Indica,Vol.XXIX, No.1, pp71-80,(2003).**
11. Availability of a two unit fault- tolerant system under circumstantial and common cause failures,” **Proceedings of Third Conference of International Academy of Physical Science pp 215-224(1999).**

12. "Valayakar local area network Pranali Ka Uplabhdhta Vishleshan" Vigyan Garima "Computer Vigyan Vishenshank" **Ministry of Human Resource Development Magazine Vol 28 , 271-279(1999).**
13. "Some current trends in reliability " **Proceedings of International Academy of Physical Sciences pp 68-72(1999).**
14. Reliability characteristics of Wide Area Networking System through satellite (jointly with S.K. Tyagi), **Proceedings of Computer Society of India, 323-334(1998).**
15. Reliability characteristics of Ring type local Networking System (jointly with S.K. Tyagi), **Journal of International Academy of Physical Sciences vol 2 ,19-28 (1998).**
16. Reliability analysis of a multiserver queueing system (**INFORMS, Seattle Session U.S.A. 25-28 oct (1998).**
17. Two unit system with degradation and degraded failure (jointly with Shephali tyagi and Rachna Kumari). **Journal of International Academy of Physical Science Vol. I No. 3-4., (1997).**
18. Reliability characteristics of a pair of 2 unit systems connected in series (Jointly with Shephali Tyagi) **Acta Cinecia Indica Vol XXIII No. 1 ,47-52 (1997)..**
19. Reliability characteristics of Star type Local Area Networking System (jointly with S.K. Tyagi and Shefali Tyagi), **Microelectron and Reliability 37, No. 6 pp 955-960 (1997).**
20. Stochastic modeling of Power loom plant with common cause failure, human error and overloading effect **International Journal of System Science vol 27 No 3,309 -313 (1996).**
21. Reliability Analysis of a power loom plant with cold standby for its strategic unit **Microelectronic and Reliability 36(I),115-119(1996).**
22. Profit evaluation of two non-identical unit system with internal and external repairs, inspection and post repair. **Microelectronic and Reliability 35(2),259-264(1996).**
23. Cost analysis ,availability and MTTF of a three state standby complex system under common cause and human failure,**Microelectron and Reliability 35(2), 259-264(1995).**
24. A generalization of absolute almost convergence **Indian Journal of Mathematics Vol 28 pp. 19-24 1986.**
25. On the absolute convergence and absolute summability of ultra spherical series, **Indian Journal of Mathematics Vol 21, No.3 (1979)**

26. On the absolute convergence and absolute summability of ultraspherical series. **Indian Journal of Mathematics Vol.19,pp 63-72) ,(1977).**
27. On L_k summability of ultraspherical series. **Indian Journal of Mathematics, Vol.17,pp139-146,(1975).**
28. On the absolute matrix summability of ultraspherical series **Acta-Cinencia Indica vol X(1),37-43(1974).**
29. On the absolute Riesz Summability of ultraspherical series **to be published in Math Students.**
30. On the absolute Riesz Summability of Laplace series :**Paper read and summary published in Mathematics section of the proceedings of the annual conference of the Indian Science Congress Association held at Bhuwneshwar in 1977.**

Research papers communicated:

32. Object oriented modeling of a WLL application using real-time system (jointly with Prof. G.K.Sharma, IIIT Gwalior and Shikha)
33. A diagnostic decision model based on vague sets.(Jointly with Mr. Kamesh Kumar)
34. Improved Round Robin Scheduling- A Mathematical Approach (Jointly with Ms. Vandana)

Invited / Plenary Lectures/ Key note addresses delivered (In recent past)

1. **Artificial Intelligence & Robotics**, National Seminar on ‘ Emerging Trends in I.T. & e-Business’ IIMT Management College Meerut (**Invited Talk**)
2. **Role of Computers in the field of Education**, CONIAPS VI, D.D.U. University ,Gorakhpur (**Invited Talk**)
3. **Current trends in Information Technology :Soft Computing**, National Conference on computing technology, CITM, Faridabad,Haryana. (**Invited Talk**)
4. **General flavour of Information Technology**, National Conference on Advances in Information Technology, B.R.Ambedkar University Agra.(**Key- note Address**)
5. **Power and Beauty of Mathematics**, National Seminar in Mathematics and Computer Science, S.D. College Muzaffarnagar. .(**Key- note Address**)
- 6.**Application areas of I.T.**, B.I.T. , Meerut. (**Invited Talk**)

7. **Neural Networks—A brain like approach**, National Science Day 2008, Shobhit University, Meerut (**Invited Talk**)

8. **Hard and Soft Computing: An Applicational Approach**, National Conference on ‘Optimization Techniques and Applications to Real World’ Hindustan College of Management and Computer Science, Mathura, Nov. 7-8, 2008.

Books Published

1. A Book on Differential calculus in Mathematics, Pragati Prakashan ,Meerut
2. One Question Booklet on 3-D Coordinate Geometry under **University Leadership Project Scheme of U.G.C.**

Highlights of other Major Contributions:

1. Have worked as Coordinator of M.Sc. (Comp. Science) and M.C.A. programs of the University for several years.
2. Organized International Conference on **“Interdisciplinary approach in Physical Science”** during Dec 29-31,2005 as **Organising Chairman**.
3. Organised **UGC sponsored Refresher Course in Mathematics** in Nov-Dec 2003 as Coordinator of the course.