V. Kanwar

Asscociate Professor (Mathematics)

UIET, Panjab University, Chandigarh

1. **Qualification**: M.Sc., M.Phil. (Gold-medalist), Ph.D.-Mathematics
2. **Teaching experience**: 16 Years.
3. **R & D experience (DRDO):** 3.5 years
4. **Research Interests**: Numerical Analysis, Fluid Dynamics
5. **Ph.D. Students Guided:**

Number of Ph.D. students guided (completed): 02

(Dr. Sanjeev Kumar, Assistant Professor, Thapar University, Patiala), (Jointly with Prof. Sukhjit Singh).

(Ramandeep Behl, Department of Mathematics, P.U. Chandigarh), (jointly with Dr. Kapil K. Sharma).

6. **Ongoing**= 03.
7. **Number of publications**: 34.
8. **Number of publications in MathSciNet**: 26 (American Mathematical Society).
9. **Number of publications in Scopus**: 29.
10. **Research work finding place in National/International textbooks**:

Some of our research work has found place in the following international books:

(i) Multipoint Methods for Solving Nonlinear Equations by Miodrag S. Petkovic, Beny Neta, Ljiljana D. Petkovic and Jovana Dzunic, **Academic Press (Elsevier).**

(ii) Numerical Methods for Roots of Polynomials by J.M. McNamee Part I. **Elsevier, Amsterdam.**

(iii) Numerical Methods for Roots of Polynomials by J.M. McNamee and V.Y. Pan, Part II, **Elsevier, Amsterdam.**

PUBLICATIONS

1. Ramandeep Behl, **V. Kanwar** and Kapil K. Sharma (2014): New modified optimal families of King's and Traub-Ostrowski's method, 7(1), pp. 26-35, **Numerical**

Analysis and Applications (Springer).

2. **V. Kanwar,** Sanjeev Kumar and Ramandeep Behl (2013): New families of Jarratt's method for solving nonlinear systems, Vol. 8(2), pp. 701-716, **Applications and Applied Mathematics**, An international Journal (AAM), Prairie View A&M University, Texas, USA.

3. Gurjinder Singh, **V. Kanwar** and Saurabh Bhatia (2013): Exponentially fitted variants of two-step Adams-Bashforth method for the numerical integration of initial value problems, Vol. 8(2), pp. 741-755, **Applications and Applied Mathematics**, An international Journal (AAM), Prairie View A&M University, Texas, USA.

4. **V. Kanwar**, Saurabh Bhatia and Munish Kansal (2013): New optimal class of higher-order methods for multiple roots, permitting $f'(x_n) = 0$, **Applied Mathematics and Computation** (Elsevier), vol. 222, pp. 564-574.

5. Ramandeep Behl and **V. Kanwar** (2013): "Variants of Chebyshev's method with optimal order of convergence" vol. 29(1), pp.-39-53, **Tamsui Oxford Journal of Information and Mathematical Sciences,** Aletheia University, Tamsui, Taipei 251, Taiwan.

6. Ramandeep Behl, **V. Kanwar** and Kapil K. Sharma (2013): "Modified optimal families of fourth-order Jarratt's method", **International Journal of Pure and Applied Mathematics, vol.** 84(4), pp. 331-343, (Academic Publications, Ltd.).

7. Ramandeep Behl, **V. Kanwar** and Kapil K. Sharma (2013): "Optimal equi-scaled families of Jarratt's method", **International Journal of Computer Mathematics**, 90(2), pp.408-422, (Taylor & Francis), (Indexed by American Mathematical Society).

8. Ramandeep Behl, **V. Kanwar** and Kapil K. Sharma (2012): "Another simple way of deriving several iterative functions to solve nonlinear equations", **Journal of Applied Mathematics**, Art. No. 294086, 22 pages, (Hindawi Publishing Corporation (USA)), (**Reviewed by American Mathematical Society**).

9. **V. Kanwar**, S.K. Tomar, Sukhjit Singh and S. Kumar (2012): Note on super-Halley method and its variants, **Tamsui Oxford Journal of Information and Mathematical Sciences,** 28(2) pp. 191-216, Aletheia University,

Tamsui, Taipei 251, Taiwan, (**Reviewed by American Mathematical Society**).

10. Sanjeev Kumar**, V. Kanwar**, and Sukhjit Singh (2012): "On some modified families of multipoint iterative methods for multiple roots of nonlinear equations" **Applied Mathematics and Computation,** 218(14), pp. 7382-7394, (Indexed by American Mathematical Society) (Elsevier).
11. **V. Kanwar**, Ramandeep Behl and Kapil K. Sharma (2011): "Simply constructed family of a Ostrowski's method with optimal order of convergence" Computer and Mathematics with Applications, 62(11), pp. 4021-4027, (Elsevier), (**Reviewed by American Mathematical Society**).
12. Sanjeev Kumar, **V. Kanwar**, S.K. Tomar, Sukhjit Singh (2011): "Geometrically constructed families of Newton's method for unconstrained optimization and nonlinear equations" **International Journal of Mathematics and Mathematical Sciences**, Volume 2011, Article ID 972537, 9 pages, Doi:10.1155/2011/972537 (Hindawi Publishing Corporation (USA)), (**Reviewed by American Mathematical Society**).
13. Sanjeev Kumar, **V. Kanwar** and Sukhjit Singh (2010): "Modified efficient families of two and three-step predictor-corrector root-finding methods", **Applied Mathematics**, Vol. 1 (2010), pp. 153-158 (Scientific Research, USA).
14. **V. Kanwar,** Kapil K. Sharma and Ramandeep Behl (2010):"A new family of Schröder's method and its variants based on power means for multiple roots of nonlinear equations", **International Journal of Mathematical Education in Science and Technology**, 41, pp. 558-565, (Taylor & Francis), (**Reviewed by American Mathematical Society**).
15. **V. Kanwar,** Kapil K. Sharma and Ramandeep Behl (2010): "New variants of Newton's method for nonlinear unconstrained optimization problems" **Intelligent Information Management**, 2, pp. 40-45 (Scientific Research, USA).
16. **V. Kanwar** and S.K. Tomar (2009): "Exponentially fitted variants of Newton's method with quadratic and cubic convergence", **International Journal of Computer Mathematics** (Taylor & Francis), 86, pp.1603-1611, (Indexed by American Mathematical Society).

17. K.C. Gupta, **V. Kanwar** and Sanjeev Kumar (2009): "A family of ellipse methods for solving nonlinear equations" **International Journal of Mathematical Education in Science and Technology**, pp. 40(4), pp. 571-575, (Taylor & Francis) (**Reviewed by American Mathematical Society**).
18. **V. Kanwar** and S.K. Tomar (2008): "Exponentially fitted variants of Euler's method for ODEs", **International Journal of Mathematical Education in Science and Technology**, 39(8), pp. 112-1116, (Taylor & Francis), (**Reviewed by American Mathematical Society**).
19. **V. Kanwar**, Sukhjit Singh and S. Bakshi (2008): "Simple geometric constructions of quadratically and cubically convergent iterative functions to solve nonlinear equations, **Numerical Algorithms**, 47, pp. 95-107, (Springer), (**Reviewed by American Mathematical Society**).
20. **V. Kanwar** and S.K. Tomar (2007): "Modified families of multi-point iterative methods for solving nonlinear equations", **Numerical Algorithms**, 44, pp. 381-389, (Springer), (**Reviewed by American Mathematical Society**).
21. **V. Kanwar** and S.K. Tomar (2007): "Modified families of Newton, Halley and Chebyshev methods", **Applied Mathematics and Computation**, 192(1), pp. 20-26, (Elsevier), (**Reviewed by American Mathematical Society**).
22. K.C. Gupta and **Vinay Kanwar** (2006): "Multipoint iterative method with cubic convergence" **Applied Mathematics and Computation**, Vol. 179, Issue 2, pp. 606-611, (Elsevier).
23. **V. Kanwar** (2005): "A family of third-order multipoint methods for solving nonlinear equations" **Applied Mathematics and Computation**, Vol. 176, Issue 2, pp. 409-413, (Elsevier).
24. **V. Kanwar,** Sukhjit Singh, R.K.Guha and Mamta (2006): "On method of osculating circle for solving nonlinear equations" **Applied Mathematics and Computation**, Vol.-176, Issue 1, pp. 379-382, (Elsevier).
25. **V. Kanwar,** J. R. Sharma and Mamta (2005): "A new family of Secant-like method with super-Linear convergence**" Applied Mathematics and Computation**, Vol.-171, issue 1, pp. 104-107, (Elsevier).

26. Mamta, **V. Kanwar**, V. K. Kukreja and Sukhjit Singh (2005): “On some third-order iterative methods for solving nonlinear equations” **Applied Mathematics and Computation**, Vol.-171, issue 1, pp. 272-280, (Elsevier).

27. Mamta, **V. Kanwar**, V. K. Kukreja and Sukhjit Singh (2005):“On a class of quadratically convergent iteration formulae” **Applied Mathematics and Computation**, Vol.-166, pp. 633-637, (Elsevier).

28. **Vinay Kanwar**, Sukhjeet Singh, J.R.Sharma and Mamta (2003): "New numerical techniques for solving nonlinear equations**'' Indian Journal of Pure and Applied Mathematics**, 34(9), 1339-1349, (**Reviewed by American Mathematical Society**).

29. **Vinay Kanwar**, Karanvir Singh and Mamta (2003): “An Upper bound on the Growth Rate of a Linear Instability in an Inviscid Compressible Subsonic Parallel Shear Flow", **Indian Journal of Pure and Applied Mathematics**, 34(11), 1533-1538.

30. **Vinay Kanwar** and A.K.Shina (1999):"A new upper bound on the growth rate of Baroclinic Zonal Flows in a Two-Layer Model on a Beta-Plane" **Physics of Fluids**, American Institute of Physics, Vol. 11(10), 2925-2927, (**Reviewed by American Mathematical Society**).

31. M. B. Banerjee, R.G, Shandil, J.Prakash, B. S. Bandral and **Vinay Kanwar** (1997): “On Howard's Conjecture in Heterogeneous Shear Flow’s Instability of Modified S-waves’’. **Indian J. Pure and Applied Math**ematics, 28 (6), 825-834, (**Reviewed by American Mathematical Society**).

32. M.B. Banerjee, R.G. Shandil, Prem Lal and **Vinay Kanwar** (1995): “A Mathematical Theorem in Rotatory Thermohaline Convection’’ **J. Mathematical Analysis and Applications**, 189, pp. 351-361, (**Reviewed by American Mathematical Society**).

33. M. B. Banerjee, R. G. Shandil and **Vinay Kanwar** (1994): “A Proof of Howard's Conjecture in Homogeneous Parallel Shear Flow’s’’ **Procd. (Math. Sc.), I.A.Sc**.104, 593-596, (**Reviewed by American Mathematical Society**).

34. M. B. Banerjee, R. G. Shandil and **Vinay Kanwar** (1994): “A Proof of Howard's Conjecture in Homogeneous Parallel Shear Flows-II; Limitations of *Fjørtoft's*

Necessary Instability Criterion" **Proc. (Math. Sc.) I.A.Sc**.105, 251-257, (**Reviewed by American Mathematical Society**).

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