

Prof. Mukesh Kumar

List of Publications

	All	Since 2020
Citations	1084	709
h-index	23	16
i10-index	36	28

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- Shristi Srivastava and **Mukesh Kumar**, “Nonclassical symmetries, optimal classification, and dynamical behavior of similarity solutions of $(3+1)$ -dimensional Burgers equation” Chinese Journal of Physics, Elsevier, 89, 404-416 (2024), Impact factor: 4.6.
 - Dig Vijay Tanwar and **Mukesh Kumar**, “On Lie symmetries and invariant solutions of Broer–Kaup–Kupershmidt equation in shallow water of uniform depth,” Journal of Ocean Engineering and Science, Elsevier, 9(3), 199-206 (2024), Impact factor: 11.8.
 - **Mukesh Kumar**, Sushmita Anand and Dig Vijay Tanwar, “Lie symmetries, solitary wave solutions, and conservation laws of coupled KdV-mKdV equation for internal gravity waves” *Mathematical Methods in Applied Sciences*, John Wiley & Sons Ltd, 47(8), 6909-6927 (2024), Impact factor: 1.8.
 - **Mukesh Kumar** and Shristi Srivastava and Dig Vijay Tanwar “Lie symmetries, soliton dynamics, conservation laws and stability analysis of Bogoyavlensky-Konoplechenko system” Optical and Quantum Electronics, Springer, 56(7):1087, 1-25,(2024), Impact factor:4.0
 - **Mukesh Kumar** and Shristi Srivastava, “Dynamics of the breather and solitary waves in plasma using the generalized variable coefficient Gardner equation” International Journal of Computer Mathematics, Taylor & Francis, 101(4), 465-482 (2024). Impact factor: 1.3.
 - **Mukesh Kumar** and Sushmita Anand, “Lie symmetries, exact wave solutions and conservation laws of nonlinear Bogovalenskii Breaking-Soliton equation for Nerve pulse propagation” International Journal of Applied and Computational Mathematics, Springer, 10(1):35, 1-18 (2024).
 - Shitesh Shukla, **Mukesh Kumar**, Raj Kumar, “A study on analytical solutions and conservation laws of the cgKP occurring in straits”, Physica Scripta, IOP Publishing, 98(12): 125238, 1-15, (2023), Impact factor: 3.081.
 - Kumari Manju and **Mukesh Kumar**, “Soliton solutions of the $(2+1)$ -dimensional Nizhnik-Novikov-Veselov equation via the Lie symmetry method and its stability analysis by using bifurcation theory”, Physica Scripta, IOP Publishing, 97(12): 125204, 1-17, (2022), Impact factor: 3.081.
 - Shitesh Shukla and **Mukesh Kumar**, “Numerical Simulation of Time and Space Fractional Partial Differential Equation via 3-Scale Haar Wavelet”, International Journal of Applied and Computational Mathematics, Springer, 8(4):160, 1-19 (2022).
 - Dig Vijay Tanwar, **Mukesh Kumar** and Atul Kumar Tiwari, “Lie symmetries, invariant solutions and phenomena dynamics of Boiti–Leon–Pempinelli system”, Physica Scripta (IOP Publishing), 97(7): 075209, 1-14 (2022), Impact factor: 3.081.
 - **Mukesh Kumar** and Umesh, “Recent Development of Adomian Decomposition Method for Ordinary and Partial Differential Equations”, International Journal of Applied and Computational Mathematics, Springer, 8(2):81, 1-25 (2022).

- **Mukesh Kumar** and Kumari Manju, "Symmetry analysis, optimal classification and dynamical structure of exact soliton solutions of (2+1)-dimensional modified Bogoyavlenskii-Schiff equation", *Physica Scripta*, IOP Publishing, 97(4): 045206, 1-16, (2022), Impact factor: 3.081.
- **Mukesh Kumar** and Kumari Manju, "Lie symmetry transformation, conservation laws and nonlinear self-adjointness of (2+1)-dimensional Date–Jimbo–Kashiwara–Miwa equation", *The European Physical Journal Plus*, Springer, 137(1): 96, 1-16 (2022), Impact factor: 3.758.
- Dig Vijay Tanwar and **Mukesh Kumar**, "Lie symmetries, exact solutions and conservation laws of the Date–Jimbo–Kashiwara–Miwa equation", *Nonlinear Dynamics*, Springer, 106(4), 3453-3468 (2021), Impact factor: 5.741.
- Raj Kumar, **Mukesh Kumar** and Atul Kumar Tiwari, "Dynamics of some more invariant solutions of (3+1)-Burgers system", *International Journal for Computational Methods in Engineering Science and Mechanics*, Taylor & Francis, 22(3), 225-234 (2021).
- **Mukesh Kumar** and Kumari Manju, "Solitary wave solutions of mKdV–Calogero–Bogoyavlenskii–Schiff equation by using Lie symmetry analysis", *International Journal of Geometric Methods in Modern Physics*, World Scientific Publishing Company, 18(2), 21500028 (2021), Impact factor: 1.873.
- **Mukesh Kumar**, Raj Kumar and Anshu Kumar, "Some more invariant solutions of (2+ 1)-water waves", *International Journal of Applied and Computational Mathematics*, Springer, 7(1):18, 1-17 (2021).
- **Mukesh Kumar** and Dig Vijay Tanwar, "Lie symmetries and invariant solutions of (2+1)-dimensional breaking soliton equation", *Pramana*, Springer, 94(1):23, 1-10 (2020), Impact factor: 2.699.
- Sachin Kumar, **Mukesh Kumar** and Dharmendra Kumar, "Computational soliton solutions to (2+1)-dimensional Pavlov equation using Lie symmetry approach", *Pramana*, Springer, 94(1):28, 1-11 (2020), Impact factor: 2.699.
- **Mukesh Kumar** and Kumari Manju, "Closed form invariant solutions of (2+1)-dimensional extended shallow water wave equation via Lie approach", *The European Physical Journal Plus*, Springer, 135(10): 803, 1-14 (2020), Impact factor: 3.758.
- **Mukesh Kumar** and Dig Vijay Tanwar, "Lie symmetry reductions and dynamics of solitary wave solutions of breaking soliton equation", *International Journal of Geometric Methods in Modern Physics*, World Scientific Publishing Company, 16(7), 1950110 (2019), Impact factor: 1.873.
- **Mukesh Kumar** and Dig Vijay Tanwar, "On Lie symmetries and invariant solutions of (2+1)-dimensional Gardner equation", *Communications in Nonlinear Science and Numerical Simulation*, Elsevier, 69, 45-57 (2019), Impact factor: 4.186.
- **Mukesh Kumar** and Dig Vijay Tanwar, "On some invariant solutions of (2+1)-dimensional Korteweg–de Vries equations", *Computers & Mathematics with Applications*, Elsevier, 76, 2535-2548 (2018), Impact factor: 3.218.
- **Mukesh Kumar**, Dig Vijay Tanwar and Raj Kumar, "On Lie symmetries and soliton solutions of (2+1)-dimensional Bogoyavlenskii equations", *Nonlinear Dynamics*, Springer, 94 (4), 2547-2561 (2018), Impact factor: 5.741.

- **Mukesh Kumar** and Atul Kumar Tiwari “On group-invariant solutions of Konopelchenko-Dubrovsky equation by using Lie symmetry approach”, *Nonlinear Dynamics*, Springer, 94(1), 475-487 (2018), Impact factor: 5.741.
- **Mukesh Kumar**, Atul Kumar Tiwari and Raj Kumar, “More solutions of coupled Whitham-Broer-Kaup equations”, *Proceedings of the National Academy of Sciences, India Section A: Physical Science*, Springer, 89(4), 747-755 (2019), Impact factor: 1.291.
- **Mukesh Kumar** and Atul Kumar Tiwari, “Some group invariant solutions of potential Kadomtsev-Petviashvili equation by using Lie symmetry approach”, *Nonlinear Dynamics*, Springer, 92(2), 781-792 (2018), Impact factor: 5.741.
- **Mukesh Kumar** and Atul Kumar Tiwari “Soliton solutions of BLMP equation by Lie symmetry approach”, *Computers & Mathematics with Applications*, Elsevier, 75(4), 1434-1442 (2018), Impact factor: 3.218.
- **Mukesh Kumar**, Dig Vijay Tanwar and Raj Kumar, “On closed form solutions of (2+1)-breaking solitons system by using similarity transformations method”, *Computers & Mathematics with Applications*, Elsevier, 75(1), 218-234 (2018), Impact factor: 3.218.
- **Mukesh Kumar**, Atul Kumar Tiwari and Raj Kumar “Some more solutions of Kadomtsev-Petviashvili equation,” *Computers & Mathematics with Applications*, Elsevier, 74(10), 2599-2607 (2017), Impact factor: 3.218.
- **Mukesh Kumar** and Raj Kumar, “Soliton solutions of KD system using similarity transformations method”, *Computers & Mathematics with Applications*, Elsevier, 73(4), 701-712 (2017), Impact factor: 3.218.
- **Mukesh Kumar**, Raj Kumar and Anshu Kumar, “Similarity solutions of the Konopelchenko-Dubrovsky system using Lie-group theory”, *Computers & Mathematics with Applications*, Elsevier, 71(10), 2051-2059 (2016), Impact factor: 3.218.
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- **Mukesh Kumar** and Raj Kumar, "On some new exact solutions of incompressible steady state Navier-Stokes equations", *Meccanica-An International Journal of Theoretical and Applied Mechanics AIMETA*, Springer, 49(2), 335-345, (2014), Impact factor: 2.538.
- Amit Mishra and **Mukesh Kumar**, "Chaotic convection in a couple stress liquid saturated in porous cavity", *International Journal of Energy & Technology*, American Society of Science and Engineering, 6(6), 1-7, (2014).
- **Mukesh Kumar** and Raj Kumar, "Some more solutions of Burger's equation", *International Conference on Mathematical Modelling in Physical Science*, IOP Publishing Ltd, The IC-MSQUARE Secretariat Madrid (Spain), Aug 28-31, (2014). (doi:10.1088/1742-6596/574/1/ 012038).
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- **Mukesh Kumar** and Y. K. Gupta, "Some invariant solutions for non conformal perfect fluid plates in 5-flat form in general relativity", *Pramana- Journal of Physics*, Springer, 74(6), 883-893, (2010), Impact factor: 2.699.
- **Mukesh Kumar** and Y. K. Gupta, "Some type D accelerating fluid distributions of embedding class one", *International Journal of Applied Mathematics and Mechanics*, (IJAMM), 6(12), 42-67, (2010).
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