List of Publications

Published/Communicated papers in International journals

1. Khirsariya, S. R., Rao, S. B., & Chauhan J. P. (2022). Semi-analytic solution of time-fractional korteweg-de vries equation using fractional residual power series method. *Results in Nonlinear Analysis*, 5(3), 222–234.
   doi: https://doi.org/10.53006/rna.1024308

2. Khirsariya, S. R., Rao, S. B., & Chauhan J. P. (2023). A novel hybrid technique to obtain the solution of generalized fractional-order differential equations. *Mathematics and Computers in Simulation*, 205, 272–290.
   doi: https://doi.org/10.1016/j.matcom.2022.10.013

3. Khirsariya, S. R., & Rao, S. B. (2023). On the semi-analytic technique to deal with nonlinear fractional differential equations. *Journal of Applied Mathematics and Computational Mechanics*, 22(1), 13–26.
   doi: https://doi.org/10.17512/jamcm.2023.1.02

4. Khirsariya, S. R., & Rao, S. B. (2023). Solution of Fractional Sawada-Kotera-Ito equation using Caputo and Atangana-Baleanu derivatives. *Mathematical Methods in the Applied Sciences*, 46(15), 1–14.
   doi: https://doi.org/10.1002/mma.9438

5. Khirsariya, S. R., & Rao, S. B. (2023). Investigation of fractional diabetes model involving glucose–insulin alliance scheme. *International Journal of Dynamics and Control*.
   doi: https://doi.org/10.1007/s40435-023-01293-4

6. Khirsariya, S. R., Rao, S. B., & Chauhan J. P. (2023). Solution of fractional modified Kawahara equation: A Semi-analytic approach. *Mathematics in Applied Sciences and Engineering*, 4(4), 264–284.
doi: https://doi.org/10.5206/mase/16369

7. Khirsariya, S. R., & Rao, S. B. (2023). A study on fractional COVID-19 model using homotopy perturbation Laplace transform method through Atangana-Baleanu fractional derivative. *International Journal of Applied and Computational Mathematics*. Springer. (Communicated)

Presented papers in National/ International Conferences

1. Khirsariya, S. R., Rao, S. B., & Chauhan J. P. (2021). New Hybrid Technique For Solving Fractional Differential Equations, International Conference of *Special Function and their Application* (ICSFA-2021), University of Kerala, India, during December 22–24, 2021.

2. Khirsariya, S. R., & Rao, S. B. (2022). Approximate solution of time-fractional differential equation via Homotopy Perturbation Shehu Transform Method using Atangana-Baleanu derivative operator, 2^{nd} International Conference on *Recent Advances in Computational Mathematics & Engineering* (RACME–22), B. K. Birla Institute of Engineering & Technology, Pilani, Rajasthan, India, during May 30–31, 2022.

3. Khirsariya, S. R., & Rao, S. B. (2022). A fractinal order SEIR model of COVID-19 using homotopy perturbation transform method through Atangana-Baleanu fractional derivative, International Conference on *Dynamical Systems, Control and their Applications* (ICDSCA–2022), IIT Roorkee, India, during July 01–03, 2022.

4. Khirsariya, S. R., & Rao, S. B. (2023). Investigation of fractional diabetes model involving glucose insulin alliance scheme, International Conference on *Fractional Calculus: Theory, Applications and Numerics* (ICFTAN–2023), NIT Puducherry, Karaikal, India, during January 27–29, 2023.

5. Khirsariya, S. R., & Rao, S. B. (2023). A robust computational analysis of Residual Power Series involving General Transform to a wide class of Fractional Differential Equations, National Conference on *Special Functions and Allied Areas*, Sardar Patel University, Vallabh Vidyanagar, Gujarat, India, during March 17–18, 2023.

6. Khirsariya, S. R., & Rao, S. B. (2023). Solution of Fractional Klein-Gordon equation using the modern Laplace Residual Power Series Method, International Con-

ference on *Recent Advances in Applied Science & Engineering* (RAISE–2023), The Maharaja Sayajirao University of Baroda, Vadodara, Gujarat, India, during April 12–13, 2023.

7. Khirsariya, S. R., & Rao, S. B. (2023). Fractional Childhood Disease SIR Model using a prosperous numerical technique, International Conference on *Modelling, Simulation and Optimization of Energy Systems* (MSOES–2023), Canadian University of Dubai, UAE, during June 17-–18, 2023.