



Dr Vijay Kumar Vyas

Assistant Professor of
Mathematics

The ICFAI University Jaipur
vkvyas@iujaipur.edu.in

Ph.D. in Mathematics • Fractional Calculus • q-Calculus • Applied Mathematics

Mobile: +91-9252517847

Email: vmathsvyas@gmail.com | vkvyas@iujaipur.edu.in

Profile

Dr. Vijay Kumar Vyas is a mathematician with a Ph.D. in Mathematics and more than 15 years of post-doctoral teaching and research experience in higher education. He has extensive experience teaching mathematics for engineering, computing, and business programmes in Indian and international academic environments. His research interests include fractional calculus, q-calculus, integral transforms, special functions, numerical analysis, and applied mathematics. He has authored research publications in Scopus- and Web of Science-indexed journals and actively participates in international mathematical conferences.

Academic & Professional Roles

The ICFAI University Jaipur Assistant Professor of Mathematics (August 2023–Present); Program Coordinator (PhD)-IcfaiTech; Coordinator, Placement Support; Coordinator, Student Mentors; Head, Department of Basic Sciences.

Sur University College, Oman Assistant Professor of Mathematics (October 2017–July 2023); taught Business Mathematics, Statistics, and Engineering Mathematics and developed undergraduate mathematics curriculum.

The ICFAI University Jaipur Assistant Professor of Mathematics (August 2013–March 2017).

Education

Ph.D. in Mathematics: J. N. Vyas University, Jodhpur (Raj.), India, 2011. Thesis: Theory and application of certain operators of q-fractional calculus, q-transform analysis, and special functions.

M.Phil. in Mathematics: Algappa University, Karaikudi, India, 2008.

M.Sc. in Mathematics: J. N. Vyas University, Jodhpur (Raj.), India, 2004.

Research Profile

His research focuses on fractional and quantum calculus, special functions, integral transforms, and mathematical analysis, with applications in analytical and numerical methods. His recent work includes q-fractional operators, q-transform methods, incomplete I-functions, Mittag–Leffler functions, and fractional differential equations.

Selected Research Publications

- Vyas, V. K. (2026). Homotopy analysis transform method for solving time-fractional nonlinear Schrödinger equations using Atangana–Baleanu derivative. *Advances in Mathematical Sciences and Applications*, 35(1), 349–368. (Scopus).
- Vyas, V. K. (2026). Generalized q -fractional Saigo operator associated with the four-parameter Mittag–Leffler function. *Boletim da Sociedade Paranaense de Matemática*, 44, 1–10. (Scopus).
- Vyas, V. K. (2026). Composition formula for Saigo fractional q -calculus operator for the q -analogue of the H -function. *International Journal of Mathematics and Mathematical Sciences*, 2026, Article 9544026. (Scopus).
- Vyas, V. K. (2024). Certain expansion formulae involving incomplete I -functions. *TWMS Journal of Applied and Engineering Mathematics*, 14(1), 402–409. (Scopus).
- Vyas, V. K. (2023). A class of the extended multi-index Bessel-Maitland functions and It's Properties. In *Mathematical and Computational Intelligence to Socio-scientific Analytics and Applications*, pp. 93–106. Springer Nature Singapore. (Scopus).
- Vyas, V. K. (2021). Fractional q -integral operators for the product of a q -polynomial and q -analogue of the I -functions and their applications. *Mathematical Problems in Engineering*, 2021, Article 6648812. (Scopus).
- Vyas, V. K. (2020). The Marichev–Saigo–Maeda fractional operators on generalized function. *Mathematics in Engineering, Science and Aerospace*, 11(3), 639–648. (Scopus).
- Vyas, V. K. (2020). q -Laplace transforms for product of general class of q -polynomials with basic analogue of generalized hypergeometric function. *Journal of Inequalities and Special Functions*, 11(2), 82–96. (Scopus).
- Vyas, V. K. (2019). q -Sumudu transform of product of generalized basic hypergeometric function and application. *Applications and Applied Mathematics: An International Journal*, 14(1), 568–582. (WoS).

Academic Leadership, Supervision & Outreach

- Program Coordinator (PhD)-IcfaiTech; Coordinator, Placement Support; Coordinator of Student Mentors; Head, Department of Basic Sciences, The ICFAI University Jaipur.
- Supervised undergraduate graduation projects in differential equations, numerical methods for PDEs, fractal geometry, and graph theory.
- Organizing Secretary, 24th FAI International Conference (2021); General Chair, International Conference on Intelligent Vision and Computing; Convener, ICFAiSE-2025.
- Selected for full funding under the ICIAM 2023 Tokyo Financial Support Program to attend and present research work.
- Developed mathematics curricula for UG programmes and policy documents for guiding student projects at Sur University College, Oman.
- Editor/Book role: *Proceedings of the International Conference on Intelligent Vision and Computing (ICIVC 2021)*, Springer, March 2022, ISBN 978-3-030-97198-4.

International Conferences & Professional Memberships

Conference participation includes the National Meet of Research Scholars in Mathematical Sciences (IIT Roorkee, 2009), International Conference on Mathematical Sciences (CMS Pala, 2011), International Conference on Special Functions and their Applications (J. N. V. University, 2011), ICIAM 2015 (Beijing), India–Greater Mekong Sub-Region International Conference (Goa, 2018), ICCCT 2019 (Jaipur), and ICIAM 2023 (Tokyo).

Professional memberships include Life Member, Society of Special Functions and Applications; Life Member, FATER Academy of India; Senior Member, Hong Kong Chemical, Biological & Environmental Engineering Society (HKCBEEs); and Life Member, Institute of Global Professionals.