

## **DR. PRAKASH KUMAR DAS**

Assistant Professor

M. Sc. (Mathematics), Ph.D.

Email: [prakashdas@tdbcollege.ac.in](mailto:prakashdas@tdbcollege.ac.in)

### » **Overview:**

Dr. Prakash Kr. Das received his B.Sc. (Hons) and M.Sc. degrees from the University of Burdwan in 2006 and 2008, respectively. He completed his Ph.D. degree on the topic “On analytical and numerical solutions of some nonlinear differential equations” from Visva-Bharati (a central University) in 2019. Thereafter he is actively involved in advanced level research work. His field of research interests are solutions of the constant and variable coefficient of nonlinear differential equations with integer and fractional order derivative. Since Feb 2015, Dr. Das has been serving in this institution as a faculty member in the Mathematics Department.

### » **Date of appointment to the present job:**

02.05.2015

### » **Other Academic/ Administrative post:**

- Convenor, Career Counselling Cell

### » **Academic background:**

- Madhyamik (2000) Raj Pur Nandi High School
- H.S. (2002) T.D.B.College, Raniganj
- B.Sc. Math (H) (2006) T.D.B.College, Raniganj
- M.Sc. Math (2008) The University of Burdwan
- Ph.D. Math (2019) The Visva-Bharati, Santiniketan (a central University)

### » **Information about Ph.D./ M.Phil.:**

#### » **Ph.D.:**

- **Date of Award:** 01.10.2019
- **Title of Thesis:** *On analytical and Numerical solutions of some nonlinear differential equations.*

### » **Professional Qualifications:**

- **NET:** Joint CSIR-UGC, July 2010

### » **Publications in Journals:**

1. Sabi'u, Jamilu, Das, Prakash, Pashrashid, Arash & Rezazadeh, Hadi. (2022). Exact solitary optical wave solutions and modulational instability of the truncated  $\Omega$ -fractional Lakshamanan–Porsezian–Daniel model with Kerr, parabolic, and anti-cubic nonlinear laws. *Optical and Quantum Electronics*. 54(5) 269.

DOI:10.1007/s11082-022-03648-1.

2. Mandal, Supriya & Das, Prakash & Singh, Debabrata & Panja, M.M.. (2021). Traveling nonsmooth solution and conserved quantities of long nonlinear internal waves. Indian Journal of Pure and Applied Mathematics. <https://doi.org/10.1007/s13226-021-00194-6>
3. Das, Prakash. (2021). The genesis of two-hump, W-shaped and M-shaped soliton propagations of the coupled Schrödinger–Boussinesq equations with conformable derivative. Optical and Quantum Electronics. 53. DOI:10.1007/s11082-021-02956-2
4. Das, Prakash & Panja, M.M.. (2021). A rapidly convergent approximation scheme for nonlinear autonomous and non-autonomous wave-like equations. Filomat. 35. 3501-3520. DOI:10.2298/FIL2110501D.
5. Das, Prakash. (2020). New multi-hump exact solitons of a coupled Korteweg-de-Vries system with conformable derivative describing shallow water waves via RCAM. Physica Scripta. 95. 105212. DOI:10.1088/1402-4896/abb738
6. Das, Prakash. (2020). Chirped and chirp-free optical exact solutions of the Biswas-Arshed equation with full nonlinearity by the rapidly convergent approximation method. Optik. 223. 165293. DOI:10.1016/j.ijleo.2020.165293.
7. PK Das, (2019). The rapidly convergent approximation method to solve system of equations and its application to the Biswas-Arshed equation, Optik 195, 163134 <https://www.sciencedirect.com/science/article/abs/pii/S0030402619310253>
8. PK Das, D Singh, MM Panja, (2019). Some modifications on RCAM for getting accurate closed-form approximate solutions of Duffing-and Lienard-type equations, Journal of Advances in Mathematics 16, 8213-8225 <https://rajpub.com/index.php/jam/article/view/8017>
9. PK Das, (2018). Rapidly Convergent Approximation Method to Chiral Nonlinear Schrodinger's Equation in (1+2)-dimensions, Sohag Journal of Mathematics 5 (1), 29-33 <http://www.naturalspublishing.com/download.asp?ArtCID=12727>
10. PK Das, S Mandal, MM Panja, (2018). Piecewise smooth localized solutions of Liénard-type equations with application to NLSE, Mathematical Methods in the Applied Sciences 41 (17), 7869-7887 <https://onlinelibrary.wiley.com/doi/abs/10.1002/mma.5249>
11. PK Das, D Singh, MM Panja, (2018). Solutions and conserved quantities of Biswas–Milovic equation by using the rapidly convergent approximation method, Optik 174, 433-446. <https://www.sciencedirect.com/science/article/abs/pii/S0030402618311756>
12. PK Das, MM Panja, (2017). A Splitting Technique for Superposition Type Solutions of Cubic Nonlinear Ordinary Differential Equations, Applied Mathematical Sciences 11 (14), 665-675 <http://www.mhikari.com/ams/ams-2017/ams-13-16-2017/7140.html>
13. PK Das, MM Panja, (2016). A Rapidly Convergent Approximation Method for Nonlinear Ordinary Differential Equations, IJSEAS 2 (8), 334-348

<http://ijseas.com/index.php/issue-archive-2/volume2/issue-8/>

» **Books and Chapters:**

N. A.

» **Seminars, Conferences, Webinars and workshops attended:**

- Seminars: 03

» **Life Membership:**

N. A.

» **Awards/ Academic Achievements:**

N. A.

» **Professional Courses:**

- **Orientation Programme/FIP/FDP: 01**
- **Refresher Course: 01**
- **Short Term Course: 00**

» **Others/ Miscellaneous:**

N. A.