CURRICULUM VITAE
of
Dipankar Kumar, PhD

PRESENT STATUS

Associate Professor
Department of Mathematics
Bangabandhu Sheikh Mujibur Rahman Science and Technology University
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CAREER OBJECTIVE

Seeking for a post-doctoral or a research position in the field of Coastal Remote Sensing, Solitons and Fractals, Bifurcations and Chaotic Analysis of the Chaotic System in any reputed University or Institution of the World. I aim to apply my skills, adaptability, and potential to innovate and contribute knowledge for the benefit of humanity.

RESEARCH INTERESTS

- Shoreline Detection using Remote Sensing Imagery
- Coastal Morphological Analysis
- Numerical Modeling of Coastal Environments
- Solitons and Fractals Theory of Nonlinear PDEs
- Propagation Behavior in Oceanic Waves
- Bifurcations and Chaotic Analysis of the Chaotic System

ACADEMIC QUALIFICATIONS

Doctor of Engineering (October 2015 to March 2019: 3 years and 6 months)

University	:	University of Tsukuba, Japan
Department	:	Engineering Mechanics and Energy
Graduate School	:	Systems and Information Engineering
Result	:	Awarded, March 2019
Thesis Title	:	**Study on shoreline position and intertidal foreshore slope detection using remote sensing imagery**
Supervisor	:	Professor Dr. Satoshi TAKEWAKA
Major Studied Courses	:	Wave and Beaches; Remote Sensing; Advanced Fluid Mechanics
Medium of Instruction	:	**English**

Master of Science (One Year M. Sc.): Thesis Group

University	:	University of Rajshahi, Bangladesh
Department	:	Mathematics
Passing Year	:	2008 (Examination held in 2009 due to session jam)
Result	:	1st Class 1st position in order of merit (79.1%), Published year: 2010
Thesis Title	:	**Sediment transportation by wind and associated topographic changes in coastal dune**
Supervisor	:	Professor Dr. Gour Chandra Paul and Professor Dr. Md. Ashabul Hoque
Medium of Instruction	:	**English**

Bachelor of Science (Four Years B. Sc. Honors)

University	:	University of Rajshahi, Bangladesh
Department	:	Mathematics
Passing Year	:	2007 (Examination held in 2008 due to session jam)
Result	:	1st Class 2nd position in order of merit (70.3%), Published year: 2008
Medium of Instruction	:	**English**

RESEARCH EXPERIENCES

- Completed a research project titled "**Novel Localized Waves and Interaction Solutions for a Distinct Dimension of Boussinesq Equations**" as the Principal Investigator (PI), funded by a grant from the University Grants Commission, Bangladesh, through the Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, under grant number **3632104** for the fiscal year 2019-2020.
- Completed a research project titled "**Theoretical Estimation of Observable Wave Propagation on Water Surface: Analytical Approach**" as the Principal Investigator (PI), funded by a grant from the University Grants Commission, Bangladesh, through the Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, under grant number **3631108** for the fiscal year 2020-2021.
- Completed a research project titled "**Analysis of Soliton Molecules in the Double-Chain DNA System in Bioscience: A Qualitative and Quantitative Approach**" as the Principal Investigator (PI), funded by a grant from the University Grants Commission, Bangladesh, through the Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj, under grant number **2022-2023** for the fiscal year 2022-2023.
- Completed three years six months research works titled with **"Study on shoreline position and intertidal foreshore slope detection using remote sensing imagery"** and submitted a dissertation in partial fulfillment of the requirements for Doctor of Engineering degree under the Department of Engineering Mechanics and Energy at University of Tsukuba, Japan.
- Completed one-year research works titled with **"Sediment transportation by wind and associated topographic changes in coastal dune"** and submitted a dissertation in partial fulfillment of the requirements for the degree of Master of Science under Department of Mathematics at University of Rajshahi, Bangladesh.

PROFESSIONAL EXPERIENCE

1 August 2011 to 30 August 2014	**:**	**Lecturer,** Department of Mathematics**,** Bangabandhu Sheikh Mujibur Rahman Science and Technology University (BSMRSTU), Gopalganj 8100, Bangladesh
31 August 2014 to 23 April 2021	**:**	**Assistant Professor,** Department of Mathematics, BSMRSTU, Gopalganj 8100, Bangladesh
24 April 2021 to till date	**:**	**Associate Professor,** Department of Mathematics, BSMRSTU, Gopalganj 8100, Bangladesh

ADMINISTRATIVE EXPERIENCE

April 2013-December 2014	**:**	**Assistant Provost,** Sadhinota Dibosh Hall, BSMRSTU, Gopalganj 8100
January 2015-20 September 2015	**:**	**Provost,** Sadhinota Dibosh Hall, BSMRSTU, Gopalganj 8100
19 May 2019 to 23 April 2021	**:**	**Chairman,** Department of Mathematics, BSMRSTU, Gopalganj 8100
24 April 2021 to 23 April 2024	**:**	**Chairman,** Department of Mathematics, BSMRSTU, Gopalganj 8100

MAIN DUTIES AND TEACHING RESPONSIBILITIES

- Responsible for teaching regular undergraduate Mathematics courses, as well as Applied Mathematics courses at the postgraduate level. Additionally, I have supervised and am currently supervising undergraduate, graduate, M.Phil., and PhD students.
- Teaching based on the outcome-based curriculum for Mathematics courses.
- Aiming to assess students' abilities to assist with their learning, answer questions, and work one-on-one with them during office hours.
- Planning, developing, and implementing a curriculum as approved by the Department of Mathematics.
- Analyzing and evaluating subject information to determine course requirements, as well as advising students regarding course and academic matters.

THESIS SUPERVISION

Level of Study	Name of Students	Thesis Title	Role	Status
M. Sc.	Md. Nuruzzaman	Dynamics of Lump Wave and Some of its Interaction Solutions to Some Integrable Boussinesq Equations Arising in Shallow Water	Supervisor	Completed
M. Sc.	Nishat Tammana	A Study on Closed-Form Wave Solutions to Some "Dual-Mode" Nonlinear Partial Differential Equations	Supervisor	Completed

M. Sc.	Mst. Sadia Islam	Investigation of Obliquely Propagating Wave Solutions to Some Conformable Boussinesq Equations arising in Shallow Water	Supervisor	Completed
M. Sc.	Jui Saha	Hall Aad Ion-Slip Effects on MHD Casson Fluid Flow Containing Gyrotactic Microorganisms with Thermal Radiation	Supervisor	Completed
M. Sc.	Md. Mehedi Hasan	Bifurcation and Chaotic Analysis of Some Non-linear Models in Biology and Ecology Associated with Their Analytic Solutions	Supervisor	Completed
M. Sc.	Md. Ali Akbar Rony	Study of Phase Characterization and Solitonic Wave Structures in Stochastic and Dual-Mode Nonlinear Diffusive Predator-Prey Systems in Ecology	Supervisor	Ongoing
M. Sc.	Sweety Khatun	Sensitivity Analysis on Natural Convective Trapezoidal Cavity Containing Hybrid Nanofluid with Magnetic Effect: Numerical and Statistical Approach	Supervisor	Ongoing
M. Phill	Shamima Akter	Bifurcation, Chaos, Chaos Control and Synchronization of Fractional Chaotic Systems	Co-Supervisor	Ongoing
M. Phill	Md. Irfan Raju	Exploring the Dynamics of Emerging Infectious Diseases: A Mathematical Modeling Approach Combining Ordinary and Fractional Differential Equations	Co-Supervisor	Ongoing
PhD	K. M. Abdul Woadud	Study of Obliquely Propagating Optical Wave Solutions and Chaotic Analysis of the Fractional Chiral Schrödinger Equation with Spatiotemporal Evolution in Distinct Dimensions	Co-Supervisor	Ongoing

REVIEWER RESPONSIBILITIES IN INTERNATIONAL JOURNALS

- Nonlinear Dynamics; Opt. and Quan. Electronics; SN Appl. Sciences; Advances in Difference Equations; Soft Computing; Int. Journal of Appl. and Comp. Mathematics; Qualitative Theory of Dynamical Systems. **Springer**
- Communications in Nonlinear Science and Numerical Simulation; Chinese Journal of Physics; Journal of King
- Saud University; Journal of Ocean Engineering and Science; Results in Physics; Heliyon; Applied Ocean Research; Mathematics and Computer Simulation; Alexandria Engineering Journal. **Elsevier**
- Arab Journal of Basic and Applied Sciences, **Taylor and Francis**
- Mathematical Methods in Applied Sciences**, Willy Online**
- Journal of Marine Science and Engineering, Remote Sensing, Mathematics, Symmetry, **MDPI;** AIMS in Mathematics. **American Mathematical Society**

COMPUTER SKILLS

- FORTRAN, C, MATLAB, Maple, ArcGIS, LaTeX and Surfer 8.0.

LANGUAGE SKILLS

- Bengali (as a First Language); English (Fair).

ACADEMIC SCHOLARSHIP AND OTHER AWARDS

2021 to 2024 (4 Times) : **Listed Top 2% Scientists.** Information is verified and sourced by Elsevier and Stanford University, USA.

October 2015 to March 2019 : **MEXT Scholarship** from the Japanese Government.

2011 : **A. F. Mujibur Rahman Foundation Gold Medal and Scholarship** for 1st class 1st position in M. Sc. Examination in Mathematics.

2008 : **Prime Minister Scholarship** for an outstanding result in B. Sc. (Hons.) Examination in Mathematics.

2008 : **Professor Aminul Islam Beg Talent Scholarship** for 1st class 2nd position in B. Sc. (Hons.) Examination in Mathematics.

January 2004 to December 2007 : **RU Merit Scholarship** during undergraduate studies.

PERSONAL DETAILS

Name	:	Dipankar Kumar
Father's Name	:	Nirmal Kumar
Mother's Name	:	Depali Rani
Permanent Address	:	Village: Roypur, Post Office: Roypur, Post Code: 7200 Police Station: Jibannagar, District: Chuadanga, Bangladesh.
Mailing Address	:	Associate Professor, Department of Mathematics Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj 8100, Bangladesh.
Date of Birth and Country	:	2nd April 1985, Bangladesh
Nationality	:	Bangladeshi
National ID Number	:	
Passport Number	:	
Marital Status	:	Married (Wife: Bedboti Mistry)
Sex	:	Male
Religion	:	Hinduism
Email	:	dks.bsmrstu@gmail.com; dipankar@bsmrstu.edu.bd
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WEB BASED RESEARCH AUTHOR ID

Google Scholar ID**:** https://scholar.google.com/citations?user=vqy0EIgAAAAJ&hl=en
ResearchGate ID**:** https://www.researchgate.net/profile/Dipankar_Kumar
Orcid Author ID**:** https://orcid.org/0000-0003-2949-166X
Scopus Author ID**:** 57199657577
Mendeley Profile**:** https://www.mendeley.com/profiles/dipankar-kumar/

PUBLIHSED RESEARCH PAPERS IN SOME INTERNATIONAL JOURNALS

As an Associate Professor (24 April 2021 – Present)

62. Al Woadud KA, Islam MJ, **Kumar D**, Khan AR. Analytical solutions to the (2+1)-dimensional cubic Klein–Gordon equation in the presence of fractional derivatives: A comparative study. Partial Differential Equations in Applied Mathematics. **2024** Nov 19:101001. Elsevier

61. **Kumar D**. Bifurcations of phase portraits and chaotic behaviors of the (2+1)-dimensional double-chain DNA system with beta derivative: A qualitative approach. Heliyon. 2024 Jul 10; 10(14): e34421. Elsevier

60. Paul GC, Nuruzzaman M, Hossain MZ, Barman MC, **Kumar D**. Unveiling protoplanetary structure equations: semi-analytical solutions via the homotopy analysis method. Heliyon 2024 Aug 15; 10 (**2024**) e34831. Elsevier

59. **Kumar D**, Saiful Islam AT, Paul GC, Nuruzzaman M. Exploring dynamic behaviors of diverse electrical soliton pulses in lossy nonlinear electrical transmission lines: Insights from analytical method and linear stability analysis technique. The European Physical Journal Plus. **2024** May 20;139(5):428. Springer

58. **Kumar D**, Joardar AK, Inc M, Rahman M, Fakir O, Hassan MT. A comparative study of fractional derivatives to interpret wave structures for the higher order fractional Ramani equation. Optical and Quantum Electronics. **2024** Apr 8;56(5):891. Springer

57. Al Woadud KA, **Kumar D**, Khan AR. Obliquely propagating optical wave patterns to the (2+1)-dimensional chiral nonlinear Schrödinger equation in the absence and presence of Atangana derivative. Results in Physics. **2023** Nov 1; 54:107113. Elsevier

56. Paul GC, **Kumar D**, Nuruzzaman M. Exploring dynamic behaviors of soliton-like pulses in the lossy electrical transmission line model with fractional derivatives: A comparative study. Results in Physics. **2023** Nov 1; 54:107039. Elsevier

55. Nuruzzaman M, **Kumar D**, Inc M, Uddin MA, Alqahtani RT. Localized waves and their novel interaction solutions for a dimensionally reduced (2+ 1)-dimensional Kudryashov Sinelshchikov equation. Results in Physics. **2023** Sep 1;52:106786. Elsevier

54. Yao SW, Nuruzzaman M, **Kumar D**, Tamanna N, Inc M. Lump solutions to an integrable (3+1)-dimensional Boussinesq equation and its dimensionally reduced equations in shallow water. Results in Physics. **2023** Feb 1;45:106226. Elsevier

53. **Kumar D**, Hasan MM, Paul GC, Debnath D, Mondal N, Faruk O. Revisiting the spatiotemporal dynamics of a diffusive predator-prey system: An analytical approach. Results in Physics. **2023** Jan 1; 44:106122. Elsevier

52. **Kumar D**, Yildirim A, Kaabar MK, Rezazadeh H, Samei ME. Exploration of some novel solutions to a coupled Schrödinger–KdV equations in the interactions of capillary-gravity waves. Mathematical Sciences. **2022** Dec 16:1-13. Springer
51. **Kumar D**, Paul GC, Seadawy AR, Darvishi MT. A variety of novel closed-form soliton solutions to the family of Boussinesq-like equations with different types. Journal of Ocean Engineering and Science. **2022** Dec 1; 7(6):543-54. Elsevier
50. Islam SR, **Kumar D**, Fendzi-Donfack E. Impacts of nonlinearity and wave dispersion parameters on soliton pulses of the (2+1)-dimensional Kundu–Mukherjee–Naskar equation. Revista Mexicana de Física. **2022** Nov 1; 68(6):061301-1. The Institutions of Mexico and Latin America
49. Alam MM, Paul GC, Raju I, Eti FZ, Banu MS, **Kumar D**, Ali ME. Discretization of Complex Geometric Domain Through Computer-Based Stair-Step Representation Method for Estimating Water Levels Associated with A Storm. China Ocean Engineering. **2022** Oct; 36(5):791-801. Springer
48. Paul GC, Tauhida, **Kumar D**. Revisiting Fisher-KPP model to interpret the spatial spreading of invasive cell population in biology. Heliyon. **2022** Oct 1; 8(10):e10773. Cell Press, Elsevier
47. **Kumar D**, Hosseini K, Kaabar MK, Kaplan M, Salahshour S. On some novel solution solutions to the generalized Schrödinger-Boussinesq equations for the interaction between complex short wave and real long wave envelope. Journal of Ocean Engineering and Science. **2022** Aug 1;7(4):353-62. **Elsevier**
46. Nuruzzaman M, **Kumar D**. Lumps with their some interactions and breathers to an integrable (2+1)-dimensional Boussinesq equation in shallow water. Results in Physics. **2022** Jul 1; 38:105642. Elsevier
45. Mathanaranjan T, **Kumar D**, Rezazadeh H, Akinyemi L. Optical solitons in metamaterials with third and fourth order dispersions. Optical and Quantum Electronics. **2022** May; 54(5):271. Springer
44. Akbulut A, **Kumar D**. Conservation laws and optical solutions of the complex modified Korteweg-de Vries equation. Journal of Ocean Engineering and Science. **2022** Apr 29. (In Press). Elsevier
43. **Kumar D**, Raju I, Paul GC, Ali ME, Haque MD. Characteristics of lump-kink and their fission-fusion interactions, rogue, and breather wave solutions for a (3+1)-dimensional generalized shallow water equation. International Journal of Computer Mathematics. **2022** Apr 3; 99(4):714-736. Taylor & Francis Online
42. **Kumar D**, Nuruzzaman M, Paul GC, Hoque A. Novel localized waves and interaction solutions for a dimensionally reduced (2+1)-dimensional Boussinesq equation from N-soliton solutions. Nonlinear Dynamics. **2022** Feb; 107(3):2717-2743. Springer
41. Kuo CK, **Kumar D**, Juan CJ. A study of resonance Y-type multi-soliton solutions and soliton molecules for new (2+1)-dimensional nonlinear wave equations. AIMS Mathematics. **2022**; 7(12):20740-51. American Institute of Mathematical Society (AIMS) Press
40. Fendzi-Donfack E, **Kumar D**, Tala-Tebue E, Nana L, Nguenang JP, Kenfack-Jiotsa A. Construction of exotical soliton-like for a fractional nonlinear electrical circuit equation using differential-difference Jacobi elliptic functions sub-equation method. Results in Physics. **2022** Jan 1; 32:105086. Elsevier
39. Bashar MH, Islam SR, **Kumar D**. Construction of traveling wave solutions of the (2+1)-dimensional Heisenberg ferromagnetic spin chain equation. Partial Differential Equations in Applied Mathematics. **2021** Dec 1; 4:100040. Elsevier
38. Kaplan M, Butt AR, Thabet H, Akbulut A, Raza N, **Kumar D**. An effective computational approach and sensitivity analysis to pseudo-parabolic-type equations. Waves in Random and Complex Media. **2021** Oct 21:1-15. Taylor & Francis Online
37. Paul GC, Khatun S, Nuruzzaman M, **Kumar D**, Ali ME, Bilkis F, Barman MC. Solving protoplanetary structure equations using Adomian decomposition method. Heliyon. 2021 Oct 1; 7(10):e08213. Cell Press, Elsevier
36. Ali ME, Bilkis F, Paul GC, **Kumar D**, Naher H. Lump, lump-stripe, and breather wave solutions to the (2+1)-dimensional Sawada-Kotera equation in fluid mechanics. Heliyon. 2021 Sep 1; 7(9):e07966, Elsevier
35. **Kumar D**, Kuo CK, Paul GC, Saha J, Jahan I. Wave propagation of resonance multi-stripes, complexitons, and lump and its variety interaction solutions to the (2+1)-dimensional pKP equation. Communications in Nonlinear Science and Numerical Simulation. **2021** Sep 1; 100:105853. Elsevier
34. Akbulut A, Kaplan M, **Kumar D**, Taşcan F. The analysis of conservation laws, symmetries and solitary wave solutions of Burgers–Fisher equation. International Journal of Modern Physics B. **2021** Sep 10; 35(22):2150224. World Scientific
33. Nuruzzaman M, **Kumar D**, Paul GC. Fractional low-pass electrical transmission line model: Dynamic behaviors of exact solutions with the impact of fractionality and free parameters. Results in Physics. **2021** Aug 1; 27:104457. Elsevier

As an Assistant Professor (31 August 2014 – 23 April 2021)

32. **Kumar D**, Paul GC. Solitary and periodic wave solutions to the family of nonlinear conformable fractional Boussinesq-like equations. Mathematical Methods in the Applied Sciences. **2021** Mar 15; 44(4):3138-3158. Wiley Online
31. **Kumar D**, Paul GC, Biswas T, Seadawy AR, Baowali R, Kamal M, Rezazadeh H. Optical solutions to the Kundu-Mukherjee-Naskar equation: mathematical and graphical analysis with oblique wave propagation. Physica Scripta. **2020** Dec 18; 96(2):025218. IOP Science Ltd

30. Paul GC, Eti FZ, **Kumar D**. Dynamical analysis of lump, lump-triangular periodic, predictable rogue and breather wave solutions to the (3+1)-dimensional gKP–Boussinesq equation. Results in Physics. **2020** Dec 1; 19:103525. Elsevier
29. **Kumar D**, Paul GC, Mondal J, Islam AS. On the propagation of alphabetic-shaped solitons to the (2+1)-dimensional fractional electrical transmission line model with wave obliqueness. Results in Physics. 2020 Dec 1; 19:103641. Elsevier
28. **Kumar D**, Park C, Tamanna N, Paul GC, Osman MS. Dynamics of two-mode Sawada-Kotera equation: Mathematical and graphical analysis of its dual-wave solutions. Results in Physics. **2020** Dec 1; 19:103581. Elsevier
27. Rezazadeh H, **Kumar D**, Neirameh A, Eslami M, Mirzazadeh M. Applications of three methods for obtaining optical soliton solutions for the Lakshmanan–Porsezian–Daniel model with Kerr law nonlinearity. Pramana. **2020** Dec; 94:1-11. Springer
26. **Kumar D**, Kaplan M, Haque MR, Osman MS, Baleanu D. A variety of novel exact solutions for different models with the conformable derivative in shallow water. Frontiers in Physics. **2020** Jun 16; 8:177. Frontiers
25. Hoque A, **Kumar D**, Paul AK, Rahman M, Paul GC, Aoki SI. Sedimentation in Dune Forests, Mangrove Forests and CC Block System and Associated Topographic Changes. Journal of Bangladesh Academy of Sciences. **2019** Jul 16; 43(1):67-78. Bangladesh Academy of Science
24. **Kumar D**, Joardar AK, Hoque A, Paul GC. Investigation of dynamics of nematicons in liquid crystals by extended sinh-Gordon equation expansion method. Optical and Quantum Electronics. **2019** Jul; 51:1-36. Springer
23. Rezazadeh H, **Kumar D**, Sulaiman TA, Bulut H. New complex hyperbolic and trigonometric solutions for the generalized conformable fractional Gardner equation. Modern Physics Letters B. **2019** Jun 20; 33(17):1950196. World Scientific
22. Al Woadud KA, **Kumar D**, Islam MJ, Kayes MI, Kundu AK. Extraction of solitary wave features to the Heisenberg ferromagnetic spin chain and the complex Klein–Gordon equations. International Journal of Applied and Computational Mathematics. 2019 Jun; 5:1-11. Springer
21. **Kumar D**, Takewaka S. Automatic shoreline position and intertidal foreshore slope detection from X-Band radar images using modified Temporal Waterline Method with corrected wave run-up. Journal of Marine Science and Engineering. **2019** Feb 12; 7(2):45. MPDI
20. **Kumar D**, Takewaka S. Estimation of Shoreline Positions by Combining X-band Radar and SAR Observations. Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering). **2018**; 74(2): I_979-I_984. Japan Society of Civil Engineers
19. Zhou Q, **Kumar D**, Mirzazadeh M, Eslami M, Rezazadeh H. Optical soliton in nonlocal nonlinear medium with cubic-quintic nonlinearities and spatio-temporal dispersion. Acta Phys. Pol. A. **2018** Dec 1; 134:1204-1210. Polish Academy of Science
18. **Kumar D**, Kaplan M. New analytical solutions of (2+1)-dimensional conformable time fractional Zoomeron equation via two distinct techniques. Chinese Journal of Physics. **2018** Oct 1; 56(5):2173-2185. Elsevier
17. **Kumar D**, Seadawy AR, Haque MR. Multiple soliton solutions of the nonlinear partial differential equations describing the wave propagation in nonlinear low–pass electrical transmission lines. Chaos, Solitons & Fractals. **2018** Oct 1; 115:62-76. Elsevier
16. Foroutan M, **Kumar D**, Manafian J, Hoque A. New explicit soliton and other solutions for the conformable fractional Biswas–Milovic equation with Kerr and parabolic nonlinearity through an integration scheme. Optik. **2018** Oct 1; 170:190-202. Elsevier
15. **Kumar D**, Kaplan M. Application of the modified Kudryashov method to the generalized Schrödinger–Boussinesq equations. Optical and Quantum Electronics. **2018** Sep; 50:1-14. Springer
14. Seadawy AR, **Kumar D**, Hosseini K, Samadani F. The system of equations for the ion sound and Langmuir waves and its new exact solutions. Results in Physics. **2018** Jun 1; 9:1631-1634. Elsevier
13. Seadawy AR, **Kumar D**, Chakrabarty AK. Dispersive optical soliton solutions for the hyperbolic and cubic-quintic nonlinear Schrödinger equations via the extended sinh-Gordon equation expansion method. The European Physical Journal Plus. **2018** May 1; 133(5):182. Springer
12. **Kumar D**, Manafian J, Hawlader F, Ranjbaran A. New closed form soliton and other solutions of the Kundu–Eckhaus equation via the extended sinh-Gordon equation expansion method. Optik. **2018** May 1; 160:159-167. Elsevier
11. **Kumar D**, Darvishi MT, Joardar AK. Modified Kudryashov method and its application to the fractional version of the variety of Boussinesq-like equations in shallow water. Optical and Quantum Electronics. **2018** Mar; 50:1-17. Springer
10. Hosseini K, Samadani F, **Kumar D**, Faridi M. New optical solitons of cubic-quartic nonlinear Schrödinger equation. Optik. **2018** Mar 1; 157:1101-1105. Elsevier
9. **Kumar D**, Seadawy AR, Chowdhury R. On new complex soliton structures of the nonlinear partial differential equation describing the pulse narrowing nonlinear transmission lines. Optical and Quantum Electronics. **2018** Feb; 50:1-14. Springer

8. Hosseini K, Mayeli P, **Kumar D**. New exact solutions of the coupled sine-Gordon equations in nonlinear optics using the modified Kudryashov method. Journal of Modern Optics. **2018** Feb 6; 65(3):361-364. Taylor & Francis Online
7. **Kumar D**, Seadawy AR, Joardar AK. Modified Kudryashov method via new exact solutions for some conformable fractional differential equations arising in mathematical biology. Chinese Journal of Physics. **2018** Feb 1; 56(1):75-85. Elsevier
6. Khater MM, **Kumar D**. Implementation of three reliable methods for finding the exact solutions of (2+1)-dimensional generalized fractional evolution equations. Optical and Quantum Electronics. **2018** Nov; 50:1-16. Springer
5. Hosseini K, **Kumar D**, Kaplan M, Bejarbaneh EY. New exact traveling wave solutions of the unstable nonlinear Schrödinger equations. Communications in Theoretical Physics. **2017** Dec 1; 68(6):761. Chinese Physical Society and IOP Science Ltd
4. **Kumar D**, Hosseini K, Samadani F. The sine-Gordon expansion method to look for the traveling wave solutions of the Tzitzéica type equations in nonlinear optics. Optik. **2017** Nov 1;149: 439-446. Elsevier
3. Khater MM, **Kumar D**. New exact solutions for the time fractional coupled Boussinesq–Burger equation and approximate long water wave equation in shallow water. Journal of Ocean Engineering and Science. **2017** Sep 1; 2(3):223-228. Elsevier

As a Lecturer (1 August 2011 – 30 August 2014)

2. **Kumar D**, Paul GC, Hoque A. A numerical technique of initial and boundary value problems by Galerkin's weighted method and comparison of the other approximate numerical methods, International Journal of Engineering Research & Technology. **2014** Feb; 3(2): 334-340.
1. Paul GC, Rahman MM, **Kumar D**, Barman MC. The radius spectrum of solid grains settling in gaseous giant protoplanets. Earth Science Informatics. **2013** Sep; 6:137-144. Springer

CONFERENCE PAPERS

3. **Kumar D** and Hasan M M, **2024**. Phase Portrait Visualization, Sensitivity and Chaotic Analysis of the Fisher-Kolmogorov-Pertovski-Piskounov Model with External Perturbation. *23rd International Mathematics Conference, Bangladesh Mathematical Society, Department of Mathematics, University of Rajshahi, Bangladesh*.
2. **Kumar D** and Takewaka S, **2018**. Estimation of Shoreline Positions by Combining X-band Radar and SAR Observations. *Journal of Japan Society of Civil Engineers, Ser. B2 (Coastal Engineering)*, 74(2), 779 – 784.
1. Hoque A, **Kumar D** and Paul GC, **2012.** Sedimentation Due to Dune Forests and CC Blocks During Floods. Proceedings of *International Conference on Statistical Data Mining for Bioinformatics Health Agriculture and Environment, University of Rajshahi, Bangladesh.*

REFERENCES

Prof. Dr. Satoshi TAKEWAKA
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Prof. Dr. Gour Chandra Paul
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SIGNATURE

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(Dipankar Kumar, PhD)