Curriculum Vitae

Dr. RAMU DUBEY

Assistant Professor
Department of Mathematics
J. C. Bose University of Science & Technology,
YMCA, Faridabad-121 006, Haryana
E-mail:rdubeyjiya@gmail.com

Phone No.:+91 9140263238

Career Objectives

To excel in the area of responsibility by effective quantifying and implementing the strategies so as to add value to Institute's endeavor where my proficiency can be best availed to produce a high-degree of operational efficiency.

Strength

Always ready to learn, Dynamic in
nature,
Dedicated towards hard and competitive work, Having
Strong Interpersonal Skills.

Academic Background

- ➢ Assistant Professor at JC Bose University of Science and Technology, YMCA, Faridabad (Haryana) from 2018 to till dates.
- ➢ Assistant Professor at Central University of Haryana from 2017 to 2018.
- ➢ Assistant Professor at N.C.U. University, Gurgram, Haryana from 2016 to 2017.
- ➢ Taught B. Tech. and M. Sc. classes at IIT Roorkee, Roorkee, India as part of Ph.D. programme UGC-JRF/MHRD teaching workload from 2012 to 2015.
- ➢ Served as a lecturer at NIET Engineering College, Greater Noida. India from 2007 to 2011.
- ➢ **Research Area:** OPTIMALITY CONDITIONS AND DUALITY RELATIONS FOR SOME NONLINEAR PROGRAMMING PROBLEMS (Doctor of Philosphy (Ph. D.), Department of Mathematics, IIT Roorkee, Roorkee, India).

- Master of Science, M.Sc. (Mathematics) from BHU in 2007 with 90% of marks.
- Bachelor of Science, B.Sc. from C.S.J.M. University Kanpur with 72% of marks.
- Intermediate (Science) from U. P. Board with 72% of marks.
- High School from UP Board with 71% of marks.

Research Publications

Refereed Journal Publications

- On duality for a second-order multiobjective fractional programming problem involving type-I functions, Ramu Dubey and S.K. Gupta, Georgian Math. J. 2019; 26(3): 393–404 **(Impact Factor : 0.54).**

- Symmetric duality results for a nondi_erentiable multiobjective programming problem with support function under strongly assumptions, Ramu Dubey and Vishnu Narayan Mishra, RAIRO-Operations Research, 53 (2), 2019, 539-558 **(Impact Factor :1.025).**

- Optimality and duality results for a nondifferentiable multiobjective fractional programming problem, Ramu Dubey, Shiv K Gupta and Meraj Ali Khan, Journal of Inequalities and its Applications, 354 DOI 10.1186/s13660-015-0876-0 (2015) **(Impact Factor :1.47).**

- Special Class of Second-Order Non-Differentiable Symmetric Duality Problems with (G, α_f)-Pseudobonvexity assumptions, Ramu Dubey, Lakshmi Mishra and Rifaqat Ali , Mathematics, 7(8), 763, 2019 **(Impact Factor :1.74).**

- Second-order multiobjective programming problems and symmetric duality relations with G_f -bonvexity, S.K. Gupta, Ramu Dubey, I.P. Debnath, Opsearch, 54 (2), 365-387 (2016) (Scopus, Springer).

- Duality relations for second-order programming problem under (G, αf)-bonvexity assumptions, Ramu Dubey, Vishnu Narayan Mishra and Puneet Tomar, Asian- European Journal of Mathematics, 13, 1 (2018) (World Scientific, Scopus).

- Multiobjective fractional symmetric duality in mathematical programming with (C, Gf)-invexity assumptions, Ramu Dubey , Lakshmi Narayan Mishra and Clemente Cesarano, axoms, 8, 97 (2019) **(SCIE).**

- Duality results for a class of mixed type dual models under type-I functions, Ramu Dubey, Nonlinear Studies, 26, 541-556 (2019) **(ESCI & Scopus).**

- Duality relations for a nondifferentiable minimax fractional programming problem under generalized convexity, Ramu Dubey, Teekam Singh, Amit Tripathi and Dinesh Kumar, Nonlinear Studies, 26 1-13 (2019) **(Scopus).**

- Second-order multiobjective nondifferentiable fractional programming problem and duality relations under $(K \times Q) - (C, \alpha, \rho, d)$ -type-I functions, Ramu Dubey and Teekam Singh, Mathematics in Engineering, Science and Aerospace, 10, 1-11(2019) **(Scopus).**

- Nondifferentiable multiobjective higher-order duality relations for unified type dual models under type-I functions, Ramu Dubey and L.N.Mishra, Adv.Stud.Contemp. Math. 29, 373-382(2019) **(ESCI & Scopus).**

- Symmetric duality in non-differentiable programming using G-invexity, Ramu Dubey and S.K.Gupta, Int.J.Mathematics in Operational Research, 9(3),2016.

- Duality for a nondifferentiable multiobjective higher-order symmetric fractional programming problems with cone constraints, Ramu Dubey and S.K. Gupta, Journal of Nonlinear Analysis and Optimization, 7, 1-15 (2016).

- Second-order multiobjective symmetric programming problem and duality relations under (F, G_f)-convexity, Ramu Dubey, Vandana_ and Vishnu Narayan Mishra, Global Journal of Engineering Sciences. ISSN 2348 – 8034 , DOI: 10.5281/zenodo.1341853**. (Impact Factor- 5.070)**

- Higher-order symmetric duality in nondifferentiable multiobjective fractional programming problem over cone constraints, Ramu Dubey, Vishnu Narayan Mishra , Statistics, Optimization and Information Computing, 8, 187–205 (2020) **(ESCI & Scopus).**

- Duality relations for second-order multiobjective nondifferentiable Schaible type model under $(K \times Q) - C$ -type-I functions, Ramu Dubey, Chetan Swarup and

  Teekam Singh, American Journal of Mathematical and Management Sciences (Accepted) **(Scopus).**

- Duality for unified higher-order minimax fractional programming with support function under type-I assumptions, Ramu Dubey, Vishnu Narayan Mishra and Rifaqat Ali, Mathematics, 7(11), (2019)
  1034; https://doi.org/10.3390/math7111034 **(Impact Factor :1.74).**

- Spatial patterns dynamics of a diffusive predator-prey system with cooperative behavior in predators, Teekam Singh and Ramu Dubey*, Fractal,doi.org/10.1142/S0218348X21500857 (**Impact Factor : 4.63).**

- New class of G-Wolfe type symmetric duality model and duality relations under G_fbonvexityover arbitrarycones,RamuDubey,VishnuNarayanMishra and Rifaqat Ali , Journal of Inequalities and Applications, (2020) doi.org/10.1186/s13660-019-2279-0 **(Impact Factor :1.47).**

- Nondifferentiable G-Mond-Weir type multiobjective symmetric fractional problem and their duality theorems under generalized assumptions, Ramu Dubey , Lakshmi Narayan Mishra and Luis Manuel Sánchez Ruiz, Symmerty, 11(11), 1348, (2020) doi.org/10.3390/sym11111348 **(Impact Factor : 2.73).**

- Spatial Dynamics of predator-prey system with hunting cooperation in predators and type I functional response,TeekamSingh,RamuDubey and VishnuNarayan Mishra, **AIMS Mathematics,0**5 (01), 673-684, 2020. **(Impact Factor :1.427)**

- Duality for a nondifferentiable multiobjective second-order fractional programming problem involving (F,α,ρ,d)-V-type-I functions, Ramu Dubey and S.K. Gupta, springerProceedinginMathematics andStatistics143,729-741(2015)**(Scopus).**

- Nondifferentiable higher-order duality theorems for new type of new of dual model under generalized functions, Ramu Dubey and V.N. Mishra, Proyecciones Journal of Mathematics, 39, 15-29 (2020) **(Scopus).**

- Second-order nondifferentiable multiobjective mixed type fractional programming problems, Ramu Dubey and V.N. Mishra, International Journal of Nonlinear Analysis and Applications, 10.22075/ijnaa.2019.11445.1561 **(ESCI and Scopus).**

- Stability of generalized cube root functional (GCRF) equations in random normed spaces,EenaGupta, RenuChugh,RamuDubey* andV.N.Mishra,AdvancedStudied inContemporaryMathematics,31, 149-167(2021)**(ESCI and Scopus).**

- A note on solutions for an iterative functional equation in 2-Banach spaces, Jyotsana Jakhar, Renu Chugh,RamuDubey* andL.K.Mishra, AdvancedStudiedin ContemporaryMathematics,31,133- 147(2021)**(ESCI and Scopus).**

- Special class of G-Wolfe type fractional symmetric duality theorems under G- pseudoinvexity assumptions, Ramu Dubey, Arvind Kumar, Pooja Gupta, Shubham Jayswal and V.N.Mishra, Journal of Physics conference Series,1724(2021),012027, doi: 10.1088/1742-6596/1724/1/012027 **(Scopus).**

- An Innovation Approach to Future Prediction of Cardiovascular Disease using Machine learning technique, Chetan Swarup, Visvasam Devadoss Ambeth Kumar and Ramu Dubey*, Compurters, Materials & Continua (Submitted after minor revisions, **I.F. 4.9).**

- Computational Method to solve Burger,s equation Modelling diffusive shock waves in Viscous medium, Amit Tripath, Manoj Kumar, Shubham Jayswal and Ramu Dubey*, Numerical Methods for Partial Differental Equations-2020-3918 (**accepted, I.F. 2.63**)

- Modeling of Diffusive Patterns in Predator–Prey System using Turing Instability and Amplitude Equations, Ramu Dubey, Teekam Singh, V.N. Mishra and Mahmoud Abdel-Aty Information Sciences Letters 10(1), 1-13 (2021) **(ESCI & Scopus).**

- Pattern formation of prey-predator system with schooling behavior via amplitude equations, Teekam Singh , A.K. Shrivastava , Ramu Dubey and V.N. Mishra , Advances in Mathematics: Scientific Journal, 9 (2020), 11, 9697–9712 **(ESCI & Scopus).**

- Generalization of Szasz-Mirakjan-Kantorovich operators using multiple appell polynomials, Chetan Swarup, Pooja Gupta, Ramu Dubey and V.N. Mishra, Journal of Inequalities and Applications, (2020), doi.org/10.1186/s13660-020-02423-8 **(I.F. 1.47).**

- Image of polynomials under Generalized Sźasz Operators, Pooja Gupta Mangey Ram and Ramu Dubey*, Appl. Math. J. Chinese Univ. (accepted) **(I.F. 0.938)**

- Duality Relations for a Class of a Multiobjective Fractional Programming Problem Involving Support Functions, Vandana, Ramu Dubey, Deepmala, Lakshmi Narayan Mishra, Vishnu Narayan Mishra, American Journal of Operations Research, http://www.scirp.org/journal/ajor

- Numerical Study of Unit Purchase Cost Senstive Model with Variable demand under trade credits, Chetan Swarup, Manoj Kumar, Arvind Kumar and Ramu Dubey*, Compurters, Materials & Continua (Submitted after minor revisions, **I.F. 4.9).**

- Jacobi Collocation Technique to Solve Nonlinear Reaction-Diffusion Equation, Shubham Jaiswal, S. Das, Ramu Dubey and A.K. Tiwari. International Journal for Computational Methods in Engineering Sciences and Mechanics (Taylor & Francis), Doi: 10.1080/15502287.2021.1916691 **(Scopus)**

- Modeling of diffusive patterns in predator-prey system using Turning in stability and amplitude equations, Teekam Singh, Ramu Dubey, V.N. Mishra and M. Abdel- Aty, Information Sciences Letters, 10 (1), 5-16, 2020 **(Scopus)**

- A class of new type unified non-differentiable higher-order symmetric duality theorems over arbitrary cones under generalized assumptions, Ramu Dubey and V.N. Mishra, Yugoslav Journal of Operations Research, DOI: 10.2298/YJOR160517018B **(Scopus)**

- Stability of various functional equations in non-Archimedean (n, β)−normed spaces, Jyotsana, Renu Chugh and Ramu Dubey∗ , The journal of Analysis, Springer (Under Process). **(SCIE)**

- Generalized second-order G-Wolfe type fractional symmetric program and their duality relations under (G, ρ, θ)-bonvexity assumptions, Ramu Dubey, Rajnish Kumar and Khursheed Alam, Mathematics in Engineering, Science and Aerospace (Accepted, **Scopous Indexed**).

- A class of second order nondifferentiable symmetric duality relations under generalized assumptions, Ramu Dubey, Vandana, Vishnu Narayan Mishra, Seda Karateke, J. Math. Computer Sci., 21 (2020), 120–126. (**ESCI, Scopous Indexed**)

- Nondifferentiable Multiobjective Programming Problem under Strongly K-Gf- Pseudoinvexity Assumptions, Ramu Dubey, Lakshmi Narayan Mishra, Luis Manuel Sánchez Ruiz and Deepak Umrao Sarwe, Mathematics, 8, 738 (2020) doi:10.3390/math8050738 **(I.F. 1.74)**

Conference Proceedings

- Ramu Dubey and S. K. Gupta, "Duality for a nondifferentiable multiobjectiv second- order fractional programming problem involving (F, α, ρ, d) -V-type-I functions", springer Proceeding in Mathematics and Statistics 143, 729-741, 2015.

- Ramu Dubey and S. K. Gupta, "Duality for a nondifferentiable multiobjective second- order fractional programming problem involving (C, α, ρ, d) -V-typeI functions", presented in the "International Conference on Operational Research, ORSI" organized by ORSI-Tirupati Chapter, Department of Statistics, Sri Venkateswara University, Tirupati, Andhra Pradesh, December 1-3, 2014 (Best Paper Presentation award).

- S. K. Gupta and Ramu Dubey, "Duality for a nondifferentiable multiobjective fractional programming problem using G_f -invexity". Proceedings in the International Conference on Industrial Engineering and Operations Management, Dubai, United Arab Emirates (UAE), March 3-5, 2015.

- Teekam Singh, Kavita Srivastava, Arvind Kumar, Ramu Dubey and Vishnu Narayan Mishra, *Pattern formation of prey-predator system with schooling behavior via amplitude*

equations, Advances in Mathematics: Scientific Journal**,** 09 (11), 9697-9712, 2020. (SCOPUS Indexed).

➢ Ramu Dubey, Teekam Singh, Vrince Vimal and Bhaskar Nautiyal, *Multi-objective symmetric fractional programming problem and duality relations under* $(\Box, \Box_\Box, \Box, \Box, \Box)$ − *invexity over cone constraints,* International Conference on Soft Computing and Pattern Recognition**,** 244-253, 2019, Springer Cham.(SCOPUS Indexed)

➢ Higher-order Fractional Programming Problem And Their Duality Theorems In Vector OptimizationWith Cone-h-invex Functions, Tarun Kumar Gupta, Rajesh Kumar Tripathi, Chetan Swarup, Kuldeep Singh and Ramu Dubey*, proceedings of International Conference on Recent Trends in Applied Mathematical Sciences (AIPCP21-AR-ICRTAMS2020, Accepted) .(SCOPUS Indexed)

➢ Non-differentiable Higher-order Fractional Programming Problem And Their Duality Results Under Cone-invexFunctions, Rajesh Kumar Tripathi, Arvind Kumar, Ramu Dubey*, Awanish Kumar Tiwari, Jasvendra Tyagi, and Vishnu Narayan Mishra, proceedings of International Conference on Recent Trends in Applied Mathematical Sciences (AIPCP21-AR-ICRTAMS2020, Accepted) .(SCOPUS Indexed).

Book Chapters:

➢ Teekam Singh and Ramu Dubey, *Pattern formation dynamics of predator- prey system with hunting cooperation in predators,* **Mathematics in Engineering Sciences: Novel Theories Technologies, and Applications,** 243-274, 2019, CRC Press.

➢ Ramu Dubey and Teekam Singh, *Dynamical complexity of patchy invasion in prey-predator model,* **Recent Advances in Mathematics for Engineering,** 168-189, 2020, CRC Press.

➢ Ramu Dubey and V.N. Mishra, Unified-type nondifferentiable second-order symmetric duality results over arbitrary cones, Topics in Contemporary Mathematical Analysis and Applications (Accepted).

List of Patents:

- ➢ ISPT-4-G Mobile Banking intelligent and Secured Payment Transfor Using 4-G Mobile Banking, **Application Number:202011013767, Published on 08/05/2020.**

- ➢ DDCP-Monitoring : Disease Diagonses Clinical Prediction and Monitoring Usng IOT-Based, **Application Number: 202011013374, Published on 19/06/2020.**

- ➢ Coronavirus (Covid-19) Diagonstic Reagent Kits, **Application Number: 202011018851, Published on 26/06/2021.**

- ➢ MMP-ML-TECHNIQUE: Managing a Manufacturing Process Operation Using Machine Learning Techniques, **Application Number: 202011016776, Published on 26/09/2020.**

Reviewer of Journals

- ➢ Applied Mathematics and Computation
- ➢ Journal of Applied Mathematics
- ➢ Journal of Computational and Applied Mathematics

Details of Ph.D. Supervision:

The following students at J.C. Bose University of Science and Technology, YMCA, Faridabad are under my supervision

S.No.	Title of Thesis/ Research Field	Name of Students	Date of Enrollment
1.	Applications of optimization in nonlinear dynamics	Ramesh Kumar	July, 2019
2.	Spatiotemporal Modeling of ecological systems via weakly nonlinear analysis	Kuldeep Singh	January, 2020
3.	-	Jyoti	January, 2020
4.	-	Balram	November, 2020

Workshop Attended

- Attended the workshop on "high performance computing", August 3-4, 2016, organized by Mathematical Colloquium, Department of Mathematics, IIT Roorkee, Roorkee, Uttarakhand, India.

- Attended the workshop on "Optimization Techniques for Solving Industrial Problems (OTSOP-16)", October 15, 2016, organized by Mathematical Colloquium, Department of Mathematics, IIT Roorkee, Roorkee, Uttarakhand, India.

- Attended the workshop on "Advanced Numerical Techniques and Its Applications", May 06-11, 2019, organized by Department of Mathematics, Graphic Era Hill University, Dehradun Graphic Era Deemed to be University, Dehradun.

SCHOLASTIC ACHIEVEMENTS

- BOS members in **Lingay's Vidyapeeth**, Faridabad

- Selected in MPPSC in 2021 as an Assistant Professor (**1029022**)

- **Best paper presentation award** in 2014, "International Conference on Operational Research, ORSI" organized by ORSI-Tirupati Chapter, Department of Statistics, Sri Venkateswara University, Tirupati, Andhra Pradesh, December 1-3, 2014".

- **Project Entitled**: Deanship of Scientific Research at King Khalid University, Saudi Arabia **Grant Number: R.G.P.1/152/40**

Ph.D. Supervisor

Dr. Shiv Kumar Gupta
(Associate Professor)

Department of Mathematics IIT
Roorkee,
Roorkee, (Uttarakhand) India, 247667

Personal Information

Nationality: Indian

Address: H. No-28 , Sector-11D Faridabad-121 006, Haryana-India.

Languages Known: English andHindi.

Declaration

Iherebydeclarethattheabovestatementsmadebymearetruetothe best of my knowledge and belief.

Place: Faridabad   Yours faithfully

(Dr. Ramu Dubey)