NAVRACHANA UNIVERSITY
a UGC recognized University

Program Chair - BSc-Data Science
Assistant Professor

Dr. Umme Salma Pirzada

School of Engineering and Technology

Qualifications

- PhD (Applied Mathematics) from MSU, Baroda in 2013
- M.Sc (Applied Mathematics) from MSU, Baroda in 2002

Working Experience

- 18 years of teaching experience in M. S. University of Baroda and Navrachana University of Vadodara at Undergraduate / Postgraduate/ PhD level
- Guiding 2 PhD research scholars in Applications of Machine Learning in Social media opinion mining for mental health, Detection rate of polyps for better diagnosis

Achievements

- Postdoctoral fellow (2014 - 2016) of NBHM, DAE, Government of India. More than 16 research publication in national and international Journals.
- Delivered several expert talks on variety of topics like, Fuzzy Logic, Fuzzy Optimization, Python Programming, Latex, Machine Learning, Logistic Regression at home / other universities
- Organised many events, workshops on Latex, Python Programming, Fuzzy Logic, Machine Learning

Research Interest

- Fuzzy mathematics, Artificial Neural Networks, Optimization problems and their applications, Differential equations, Modelling and solution of real world problems using Machine learning, Deep learning and Neuro-Fuzzy techniques, applications of data science in interdisciplinary areas

Publications

- U. M. Pirzada and D. C. Vakaskar, Solution of fuzzy heat equation under fuzzified thermal diffusivity. Industrial and Applied Mathematics, Springer (2017) , 271- 281.
- J. P. Sharma, B. S. Ratanpal, U. M. Pirzada, V. S. Shah, A. B. Chavada, N. B. Dave, Study of Effect of Perturbation Due to Oblateness of The Earth on Satellites, 19th Annual Cum 4th International Conference of Gwalior Academy of Mathematical Sciences (GAMS) on "Advances in Mathematical Modeling to Real World Problems" (2014), 338 - 343.

- V. D. Pathak and U. M. Pirzada, The Optimality Conditions for Single variable Fuzzy-valued functions, International Conference on Computational Intelligence and Multimedia Applications, 2007, IEEE Computer Society, Volume 2, (2007), 357-363.
- U. M. Pirzada and S Rama Mohan, Fuzzy form of Euler method to solve fuzzy differential equations accepted in Journal of Fuzzy Logic and Modeling in Engineering (2020)
- B. S. Ratanpal, Jaita Sharma, U. M. Pirzad and Vishant Shah Simulation of Motion of Satellite under the Effect of Oblateness of Earth and Atmospheric Drag ArXiv:1610.02156 [physics.space-ph], The International journal of analytical and experimental modal analysis, (2019), 2514- 2526
- U. M. Pirzada and D. C. Vakaskar, Fuzzy solution of homogeneous heat equation having solution in Fourier series form, Journal of Spanish Society of Applied Mathematics(SeMA), Springer, 76, (2019) 181 - 194
- U. M. Pirzada, Linear fuzzy-valued function, The Journal of Fuzzy Mathematics, 27, 1, (2019) 77- 84
- U. M. Pirzada, Optimal Solution of Nonlinear Fuzzy Optimization Problem under Linear Order Relation, Mathematics Today, 34, (2018) 144-158
- U. M. Pirzada and D. C. Vakaskar, Non-dominated Solution of Fuzzy Maximum-Return Problem, The Journal of Fuzzy Mathematics 26, 1, (2018) 11 - 24
- U. M. Pirzada and D. C. Vakaskar, Existence of Hukuhara differentiability of fuzzy-valued functions. The Journal of Indian Mathematical Society 84(3 - 4) (2017) 239-254 ArXiv:1609.0474 [math.GM]
- U. M. Pirzada and D. C. Vakaskar, On heat equation and its comparative solutions. International Journal of Advances in Applied Mathematics and Mechanics 3(4) (2016) 135-141
- U. M. Pirzada and D. C. Vakaskar, Solution of fuzzy heat equations using Adomian Decomposition method. International Journal of Advances in Applied Mathematics and Mechanics 3(1) (2015) 87 - 91
- U. M. Pirzada and Jaita Sharma, Linear Fuzzy Regression Model. Advanced Modeling and Optimization, Volume 17, Number 1, (2015) 67- 71.
- U. M. Pirzada and V. D. Pathak, Newton Method for Solving Multi-variable Fuzzy Optimization Problem. Journal of Optimization Theory and Applications; Springer, 156(3), (2013) 867 - 881; DOI: 10.1007/s10957-012-0141-3
- V. D. Pathak and U. M. Pirzada, Necessary and Sufficient Optimality Conditions for Nonlinear Unconstrained Fuzzy Optimization Problem. Journal of Indian Mathematical Society, 80, (2013) 141 - 155.
- V. D. Pathak and U. M. Pirzada, Necessary and Sufficient Optimality Conditions for Nonlinear Fuzzy Optimization Problem. International Journal of Mathematical Science Education, Volume 4, Number 1, (2011) 1-16.
- V. D. Pathak and U. M. Pirzada, First and Second-order Optimality Conditions for L-Fuzzy Optimization Problems. Advanced Modeling and Optimization, Volume 13, Number 1, (2011) 77-88.
- V. D. Pathak and U. M. Pirzada, The Optimality Conditions for Fuzzy Optimization Problem under the concept of Generalized Convexity. Advances in Applied Mathematical Analysis, Volume 5, Number 1, (2010) 23-38.