BIO-DATA

Official Address	**Permanent Address**	
Dr. Priti Gupta	**13 C, JD**	
Professor	**Pritampura**	
Deptt. of Statistics	**New Delhi, 110034**	
M.D. University, Rohtak	**Haryana**	
Mob. No.: 098100-46226	**DOB: 03-10-1962**	
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Experience:

a) Research	33 years
b) Teaching	31 years

Field of Specialization — Information Theory, Coding Theory, Fuzzy Set Theory and its Applications

Educational Qualification — M. Phil (Gold Medalist), Ph. D

Ph. D students (guided) — 09

M. Phil students (guided) — 14

Ph. D students (working) — 02

Papers published

a) International Journals	29
b) National Journals	21

Conferences Attended

a) International	05
b) National	09

Participation in Orientation / Refresher Courses

Name of the Course	Duration	Name of the Institution Where attended
1. Orientation Course	05.12.1994 to 30.12.1994 (Four weeks)	Centre for Professional Development in Higher Education, University of Delhi, Delhi

2. Refresher Course	08-03-1999 to 28-03-1999 (Three weeks)	Department of Mathematics, M.D. University, Rohtak
3. Refresher Course	16-11-1999 to 07-12-1999 (Three weeks)	Academic Staff College, Jamia Millia Islamia
4. Refresher Course	14.08.2000 to 08.09.2000 (Four weeks)	Academic Staff College, Jawaharlal Nehru University, Delhi

Detailed list of Ph. D students guided :

Sr. No	Title	Year	Name
1	Lower Bounds in Some Information Measures in Terms Of the best 1:1 codes and Estimation of Parameter	1993	Rajni Sharma
2	Study of Some performance Function of a Discrete Memory less Channel and Characterization of Measure of Information Improvement	1998	Narender Singh
3	A study of Performance Function and Probability of Error for Some Information Measures	2006	Hari Arora
4	Some Quantitative-Qualitative Measures Of information and coding	2011	Niranjan
5	Application of Generalized Kapur's Entropy and Intuitionistic fuzzy sets (IFS) in Communication System and Medical Diagnosis of Headache	2012	Vijay Kumar
6	Probabilistic and Fuzzy Measures of Information theory in Decision Making	2016	Prince
7	A Study Divergence Measures in Fuzzy Sets and their Applications	2016	Santosh
8	Characterization and Generalization of Fuzzy Information Measure and their role in Coding and Medical Diagnosis	2016	Abishek
9	Generalization of Entropy Measures in Intuitionistic and Interval-Valued Intuitionistic Fuzzy Environment	2016	Partiksha Dubey

Ph.D. Students Working :

Sr. No	Title	Name

1	Development of Non-probabilistic Measures and their Applications in Feature Selection	Omdutt Sharma
2	On Information Theoretic Measures in Fuzzy Environment	Alka Rani

M. Phil. Students Guided :

Sr. No	Title	Year	Name
1	A Study of Measures of Information	1989	Neena Goyal
2	A Study of Cascaded Channels and Equivocation Inequalities	1990	Bhawani Singh
3	A Study of Channel Capacity and Its Generalization	1990	Sanjay Kumar
4	A Study of Some Measures Of Useful Information Energy	1992	Santosh Kumari
5	Study of Performance Function for Discrete Memory less Channel	2001	Manorma
6	A Study of 1:1 Codes in Terms of Entropies	2003	Manju
7	A Study of Useful Information Measure and Useful Code Word Length	2004	Satish Kumar
8	Information Measure and Probability of Error	2008	Niranjan
9	Information Measures and Discrete Memory Less Channel with Capacity of Different Orders	2008	Sudesh Barak
10	Non-Existence Measure of Information with Maximum and minimum Entropy Prescriptions	2010	Neetu Rani
11	Generalized Quantitative – Qualitative Measure of Inaccuracy and Coding	2012	Sandhya
12	A Study of Different Measures of Genetics by using Information Theory	2014	Omdutt
13	A Study of Time Frequency Representation using Renyi's and Kapur's Entropy	2014	Sushila

14	A Study of Some Intuitionistic Fuzzy Measures of Information	2016	Alka

Academic Responsibilities held:

a) Member of various academic bodies such as U.G. / P.G. Board of studies in Statistics, Faculty of Physical Sciences and Academic Council of MDU, Rohtak.

b) Member of Inspection committee for colleges of MDU, Rohtak.

c) External expert for Ph.D. and M. Phil. Examination for various universities in India.

d) Paper setter for various Universities in India.

e) Working as a referee for various National and International Journals:

- Information Sciences

- International Journal of Applied Mathematical Sciences

- International Journal of Management & System Sciences.

- International Journal of Mathematics and Operational Research

- Walailak Journal of Science and Technology

f) Life member of Indian Society of Information Theory and Application.

g) Actively engaged in framing of curricula and syllabi for various courses run by the department.

h) Worked as a resource person and delivered lectures in refresher course in Statistics and Applications held at MDU, Rohtak during Oct, 11-31, 1994.

i) Worked as Judge in the quiz contest organized by the Department of Statistics, MDU, Rohtak.

j) Member of the National Advisory Committee in Manav Rachna International University, Faridabad

k) Act as a Convener of 3 days National workshop on "Sample Surveys and Data Analysis (Using Software – SPSS, MINITAB and R)".

l) Working as Head of the Department, Department of Statistics, M.D. University, Rohtak.

m) Act as a Convener of 3 days National Conference on "Statistics & Optimization Techniques (NCSOT)".

n) Member of Selection Committee of UGC for Post Doctorate Fellowship.

o) Vice Chancellor Nominee of Selection Committee.

p)   Incharge of Field Tour.

List of publications

➤ Characterization of Relative 'Useful' information having Utilities as   Monotone Function Aplikace Matematiky 31.10-18(1986). (With R.K. Tuteja).

➤ Sub-Additive measure in relative 'Useful' information, Tamkang Journal of Mathematics, 17(3) 97-104 (1986). (With H. C. Taneja and R. K. Tuteja).

➤ An axiomatic characterization of relative "Useful" Information Journal of Information and Optimization Sciences, 7(1) 49-57 (1986). (With R. K. Tuteja)

➤ Two generalized measure of relative "useful" information, Journal of Indian society of Statistics & Operation Research, 8(1-40) 37-42 (1987).

➤ On a coding theorem connected with 'Useful' Entropy of Order $\acute{\alpha}$ and type β, Kybernetika 23 (5) 420-27 (1987). (With R. K. Tuteja)

➤ On axiomatic Characterization of Generalized measure of Relative "Useful" information, Tamkang journal of mathematics18 (30 61-68 (1987).

➤ On measure of Relative Information with preference, Communication in Statistics Theory and Methods 17, 1449-1464, 193-198 (1989). (With R. K. Tuteja).

➤ Lower bounds of the 'Useful' mean Codeword length for the best 1:1 code, Journal of Indian Mathemat5ics, 53,231-236 (1988) (With R. K. Tuteja).

➤ On a coding theorem Connected with 'Useful' Entropy of Order α. International Journal of Mathematics and Mathematics Science, 12(1) 193-198 (1989). (With R. K. Tuteja).

➤ Order $\acute{\alpha}$ Weighted information Energy for Bivariate Probability Distribution, DEL, Journal of Science and engineering Research, 8, 7-12(1990). (With R. K. Tuteja and Shobha Choudhary).

➤ Lower Bounds on L(D) In Terms Of Renyi Entropy, Tamkang Journal of mathematics, 22(4) 335-342 (1991) (With Rajni Sharma).

➤ Weighted Entropy of order $\acute{\alpha}$ and type β, Information Energy, Soochow journal Of Mathematics, 19(2) 129-138 1983. (With R. K. Tuteja and Shobha Choudhary)

➤ Measure of Information and Their Application to Coding and Discrete Memory less Channel- A Review, Current Trends in information Theory, Statistics and O.R. Proceeding of Third Annual Conference of ISITA And National Symposium on Statistics and management Science Application To Trade and Industry 60-69 (2001).(With R. K. Tuteja)

- Lower bound on Exponential Mean Codeword length for 1:1 Codes, Current Trends in Information Theory, Statistics and O.R, Proceeding of Third Annual Conference of ISITA and National Symposium on Statistics and Management Science Application to Trade Industry 109-118 (2001). (With R. K. Tuteja).

- On Weighted Information Improvement, Journal of Pure and applied Mathematical Sciences, Vol.LV111, No 1-2, 94-99 (2003). (With G. K. Arora and R. P. Singh).

- J-Divergence for continuous Probability Distribution, International Journal of Management & System Sciences, (20)1, 41-44(2003). (With R. K. Tuteja and G. K. Arora).

- Fano's Inequality For Probability Based on Renyi's Information, Dias Technology Review, The International Journal for Business and IT, 2(1) 58-63 (2005) (With Hari Arora)

- Generalized (r, s)-Entropy and probability Of Error, Published in the proceedings of "National Conference of Application of Mathematics in Engineering and Technology & 7th Annual Conference of ISITA, 26-28 March, 2005, MIMIT, Malout, 75-78.

- Error bound and useful entropy of order ά and degree β, Journal of Indian Society of Statistics and Operational Research Vol.27 (1-4), 17-23 (2006). (With Hari Arora).

- Generalised Performance Function for Weighted (r, s) Entropy of Discrete Memory less Channel under Single and Multiple Constraints, Indian Journal of Mathematics, 48(2), 153-165 (2006). (Hari Arora)

- Computation of Performance Function For β. Entropy of discrete Memory less Communication Channel under Single and multiple Constraints, East African Journal of Physical Sciences 7(1), 2006. (Hari Arora)

- An Algorithm of Find Channel Capacity For (r, s) Entropy, Journal of Indian Society of Statistics and Operational Research Vo.27 (1-4), 35-41 (2006). (With Hari Arora and Bhupender Parasher).

- Arimoto's Measure and Probability of Error, Antratica Journal of Mathematics, Vol.XIV (i), 2007. (Hari Arora)

- Generalized Performance Function for weighted- β. Entropy of discrete Memory less Communication Channel under Single and multiple Constraints, Journal of Mathematics and System Sciences, Vol. IV, No.1, pp.1-10, 2008. (with Hari Arrora)

- Generalized Exponentiated Mean Code Word Length for 1:1 codes and Generalized Quantitative-Qualitative Measure of Inaccuracy, Pure and Applied Mathematical Sciences, Vol.LXX, No.1-2, September 2009 (with Niranjan and Hari Arora).

- One-one coding and Generalized quantitative-qualitative Measure of Inaccuracy, International Journal of Applied Mathematical Analysis and Applications, Vol. V, No. 2, pp197-204, 2010.(with Niranjan)

- General Pseudoadditivity of Kapur's Entropy prescribed by the existence of equilibrium, International Journal of Scientific & Engineering Research, Volume 1(3), December-2010 (with Vijay Kumar)

- Measuring of Time-Frequency Representation (TFR) Content - Using the Kapur's Entropies, Eds.:S. Ranka et al., Communications in Computer and Information Science, ICS 2010, Part I, CCIS 94, 381-390, 2010, Springer.(with Vijay Kumar)

- Application of Intuitionistic Fuzzy sets (IFS) in Medical Diagnosis of Headache, Proceedings of 4th International Conference on Quality, Reliability and Infocom Technology (ICQRIT) (Trends and Future Directions), 356-359, 2011, Narosa, (with Vijay Kumar)

- On best 1:1 Codes for generalized quantitative - qualitative Measure of inaccuracy, African Journal of Mathematics and Computer Science, Research Vol. 4 (3), 159-163 March 2011. (with Niranjan and Hari Arora)

- On Concavity of difference Divergence Measures of Fuzzy Information-I, Journal of Indian Society of Statistics and Operation Research, Vol. XXXII, No. 1-4, 17-32, December 2011, (with Santosh Kumari and R.P. Singh)

- On Concavity of difference Divergence Measures of Fuzzy Information-II, Journal of Indian Society of Statistics and Operation Research, Vol. XXXII, No. 1-4, 33-48, December 2011, (with Santosh Kumari and R.P. Singh)

- Inequalities Among Weighted Fuzzy Mean Divergence – Measure and their Concavity, Aryabhatta Journal of Mathematics and Informatics, vol. 4, No. 2, 217-234, july- dec, 2012. (with Santosh Kumari and R.P. Singh)

- Stability Criteria of Extensive and Non- Extensive Entropy Measures under the Deformed Specification of Q- Exponential Distribution. In the Proceeding of International Conference on Information and Mathematical Sciences, held at Baba Farid College of Engineering and Technology, Bathinda, Punjab, India, on 24-26 october, 2013. (with Vijay Kumar, Y. K. Sharma and Prince)

- An Application of Intuitionistic Fuzzy Sets and Fuzzy Relations for Medical Diagnosis of Diabetes. In the proceedings of International Conference on Recent Trends in Materials and Devices, ICRTMD-2013, held at Amity University, Noida, India, on 30-31 october, 2013. (with Prince and Vijay Kumar)

- Comparative Analysis between Intuitionistic Fuzzy Set Theory and Fuzzy Information Theory in the Medical Diagnosis of Tuberculosis. In "Mathematical Sciences International Research Journal", Vol. 3, Issue 1, ISSN: 2278-8697, ISBN: 978-93-84124-03-8, (with Prince and Vijay Kumar)

- A Measure of Divergence between Fuzzy Sets with Advancements in Information Theory, International Journal of Computer Applications (IJCA), 2014. (with H.D. Arora and Partiksha Tiwari)

- "Selection of Course for the Intermediate Passed out Students by using Fuzzy Information Measure", International journal of Applied Engineering Research, 9,1331-1336

- "Harmonic measure of fuzzy entropy and their normalization", International Journal of Statistika and Mathematika, 10(3), 47-51 (2014)

- "Applying a Probabilistic Information Measure in Intuitionistic Fuzzy Theory to Select Laptop Computers" In the Proceedings of NATIONAL SEMINAR "TECHNO TRYST 2016: DIGITAL INDIA: Technological Leaps for Developing Smart Cities" held on 19 march 2016, in Delhi Institute of Advanced Studies, Rohini, Delhi SBN:- 978-81-927406-7-6 0 (With Prince)

- "Selection of Suitable Land for Kharif Crops by using Different Techniques in Intuitionistic Fuzzy Set Theory" International Journal of Applied Engineering Research, ISSN 0973-4562 Vol. 10 No.94, pp. 79-82, 2015. (With Prince and Vijay Kumar)

- "On Some generalized exponential entropy for fuzzy sets", proceedings of the 3rd of international conference of reliability, Infocom Technologies and Optimization trends and future directions, 7014702 with H.D. Arora and Partiksha Tiwari (2015)

- "FEATURE SELECTION: AN OVERVIEW" International Journal of Information Engineering and Technology, Vol. 1, Issue 1, pp. 1-12. (With Omdutt) (2015)

- Decision Making Approach using Weighted Coefficient of Correlation along with Generalized Parametric Fuzzy Entropy Measure", International Journal of Fuzzy System Application (IJFSA), Volume 5, Issue 4, Article 2, Scopus Indexed. (With P. Tiwari)

- "Measures of Cosine Similarity intended for Fuzzy sets, Intuitionistic and Interval-Valued Intuitionistic Fuzzy sets with Application in Medical Diagnoses" Proceedings of the 10th India com. 3rd International Conference on Computing for Sustainable Global Development 7724586 pp 1846-1849 with partiksha Tiwari (2016)

- "Coefficient of Correlation for Intuitionistic Fuzzy Sets and Its Application to Decision Making" Proceedings of NATIONAL SEMINAR Techno Tryst 2016 DIGITAL INDIA: Technological Leaps for Developing Smart Cities, 19th March 2016, Delhi Institute of Advanced Studies, ISBN: 978-81-927406-7-6, pp. 171-178.(With P. Tiwari)

- "Generalized Entropy for Intuitionistic Fuzzy Sets" Malaysian Journal of Mathematical Sciences (MJMS) 10(2): 209-220 (2016), ISSN: 1823-8343, EISSN: 2289-750X. (With H. D. Arora and P. Tiwari)

- "An Approach to Data Reduction and Decision Making Problem by Hybridization of Fuzzy Soft Set and Graph Theory" International Journal of Computer Applications (IJCA) (0975-8887), vol. 175, no. 2, oct. 2017 (with Omdutt Sharma and Prince Goyal)

- "Some similarity and distance measures on fuzzy rough sets & it's applications", International Journal of Engineering, Science and Mathematics (IJESM) (2320-0294), vol. 6, Issue 5, Sept. 2017, pp.85-105 (with Omdutt Sharma, Alka Rani)

- "A sine trigonometric similarity measure on fuzzy rough set and its application in medical diagnosis", Arya Bhatta Journal of Mathematics and Informatics 9(1),2722-283 with Omdutt Sharma (2017)

Conferences, Symposium Attender/Papers Presented

- Attended symposium' On Recent Advances in Stochastic Models and Related Fields" held at M.D.U. Rohtak, Mar.25-27, 1989 and presented a paper entitled "Characterization of Relative Useful Information and its Generalization.

- Attended the "55th Annual Indian Mathematical Society Conference" held at University of Delhi, Delhi Dec.27-30, 1989 and presented a paper entitled "Order- ά, Weighted Information energy".

- Attended "National Seminar on Operational Research and Management Decision making" held at Delhi University, Delhi Nov.19-20, 1993 and presented a paper entitled "On additively Property of Weighted Entropy".

- Attended "International Conference on Stochastic Models" held at Delhi University, Delhi Jan 10-12, 1994 and presented a paper entitled "Coding Theorems Connected with Useful generalized Inaccuracy".

- Attended "First Annual Conference and National Symposium on Stochastic process and their Applications" held at M.D.U. Rohtak, Feb3-5 1996 and presented a paper entitled" Generalised Weighted-γ Performance functions of a Discrete Memory less Channel.

- Attended "Joint 9th National Conference of the Vigyan Parishad of India on applied and Industrial Mathematics And 5th Annual Conference of ISITA" held at NSIT, New Delhi , Feb, 22-24 2002 and presented a paper entitled "An Algorithm For Calculating Generalized-Performance Function Of a Discrete Memory less Channels".

- Attended " First International Conference of The New Millennium on History Of Mathematical Sciences", held at Indian National Science Academy Bahadur Shah Zafar Marg, New Delhi Dec.20-23,2001 and presented a paper Entitled "Information Measures and Generalized Performance Function.

- Attended 7th annual conference of Society of Statistics, Computer and Applications held at Sri Venkateshwara College, New Delhi Dec.22-24, 2004 and presented a paper, "Fano's Inequality for probability Based on Renyi's Information".

- Attended one day workshop on "information and technology" organized by Department of Computer Science and Application, M.D. University, Rohtak on 7th Jan.2006.

- Attended "National Conference On Information Technology: Settings Trends In Modern Era & 8th Annual Conference ISITA" held at N.C. College of Engineering, Panipat, Mar.18-20,2006 and presented a paper entitled "Computation Of Performance Function for An Entropy Of Discrete Memory- less Communication Channel Under Single And Multiple Constraints".

- Attended 3rd International Conference on Quality, Reliability and Infocom Technology" held at Indian National Science-Academy, Bahadur Shah Zafar Marg, New Delhi , Dec.2-4, 2006 and presented a paper entitled "Generalised Performance Function for Weighted (r, s) Entropy of Discrete Memory-less Channel under Single and Multiple Constraints.

- Attended "National Conference on History of Mathematics and Recent Developments", held at Department of Mathematics, M.D.U, Rohtak, Dec.20-22.

- Attended Fourth International Conference on Quality, Reliability and Infocom Technology held at University of Delhi, New Delhi, December 18-20, 2009 and presented a paper entitled 'On Best 1:1 Codes for Generalized Quantitative-Qualitative Measure of Inaccuracy'.

- Attended 3rd International Conference on Reliability, Infocom Technology and Optimization (ICRITO) held at Amity Institute of Information Technology Amity University Uttar Pradesh, Oct. 8-10, 2014.