

Department of Statistics

Dr. Santosh Kumar Chaudhary, Ph.D.

Assistant Professor

Department of Statistics

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Personal Information:

Full Name	Dr. Santosh Kumar Chaudhary
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ORCID ID	0000-0002-2350-4266
Web of Science ID	Nil
Google Scholar Link	https://scholar.google.co.in/citations?user=RM78MQ8AAAAJ&hl=en
Researcher ID	Nil
IRINS	<u>Nil</u>
Journal Papers	6
Conference Papers	2
Sponsored Projects & Consultancy	Nil
Book and Book Chapters	Nil
Doctoral Students	Nil
Brief Profile	<p>Santosh Kumar Chaudhary is an Assistant Professor of Statistics at Central University of Jharkhand, Ranchi, India. He has a PhD in Mathematical Statistics from IIT Kharagpur, a master's degree in Statistics from IIT Bombay, and also a master's degree in mathematics from IIT Delhi. He holds a graduate degree in Mathematics from Delhi University. His Research interest is Mathematical Statistics, particularly Reliability, Entropy and Extropy estimation.</p> <p>In his academic career, he secured AIR 17 in IIT-JAM, AIR 03 in GATE, and AIR 50 in CSIR-JRF. Before joining Central University of Jharkhand, He was assistant Professor in BIT Mesra. Santosh Kumar Chaudhary also worked as an Assistant Professor at Shiksha O Anushandhan University in Bhubaneswar.</p>

Educational Qualifications:

- **Ph.D. (Statistics)** from Indian Institute of Technology (IIT), Kharagpur, India in the year 2025.
Topic: On Weighted Information Measure: Properties, Inference and Applications
- **M.Sc. (Statistics)** from Indian Institute of Technology (IIT), Bombay, India in the year 2021.
- **M.Sc. (Mathematics)** from Indian Institute of Technology (IIT), Delhi, India in the year 2018.
- **B.Sc.(H) Mathematics** from University of Delhi, India in the year 2015.

Courses Taught:

B.A./B.Sc., M.A./M.Sc.

Professional Experience

- Assistant Professor of Statistics in Department of Statistics at Central University of Jharkhand, Ranchi, Jharkhand (December 23, 2024, to till date).
- Assistant Professor of Statistics at Centre for Quantitative Economics and Data Science, BIT Mesra, Ranchi, Jharkhand (April 12, 2024, to December 18, 2024)

Research and Teaching Interests

- Probability & Statistics,
- Decision Theory,
- Information Theory.
- Statistical Inference
- Reliability Estimation
- Entropy and Extropy

Articles Published in Journals

1.	Chaudhary, S. K., Gupta, N., & Roy, A. (2024). On cumulative and relative cumulative past information generating function. <i>Communications in Statistics - Theory and Methods</i> , 1-27. https://doi.org/10.1080/03610926.2024.2446397
2.	Chaudhary, S. K., & Gupta, N. (2024). General weighted extropy of minimum and maximum ranked set sampling with unequal samples. <i>Communications in Statistics - Theory and Methods</i> , 1-27. https://doi.org/10.1080/03610926.2024.2386420
3.	Chaudhary, S. K., & Gupta, N. (2023). General weighted cumulative residual (past) extropy of minimum (maximum) ranked set sampling with unequal samples. <i>Communications in Statistics - Theory and Methods</i> , 1-23. https://doi.org/10.1080/03610926.2023.2279910
4.	Gupta, N., & Chaudhary, S. K. (2023). On general weighted extropy of ranked set sampling. <i>Communications in Statistics - Theory and Methods</i> , 1-14. https://doi.org/10.1080/03610926.2023.2179888

5.	Gupta, N., & Chaudhary, S. K. (2023). Some characterizations of continuous symmetric distributions based on extropy of record values. <i>Statistical Papers</i> , 1-18. https://doi.org/10.1007/s00362-022-01392-y
6.	Chaudhary, S. K., Gupta, N., & Sahu, P. K. (2023). On general weighted cumulative residual extropy and general weighted negative cumulative extropy. <i>Statistics</i> , 1-26. https://doi.org/10.1080/02331888.2023.2241595

CONFERENCE PROCEEDINGS

1.	Gupta, N., Kumar Chaudhary, S. (2023). On Partial Monotonicity of Some Extropy Measures. In: Giri, D., Gollmann, D., Ponnusamy, S., Kouichi, S., Stanimirović, P.S., Sahoo, J.K. (eds) Proceedings of the Ninth International Conference on Mathematics and Computing. ICMC 2023 2023. Lecture Notes in Networks and Systems, vol 697. Springer, Singapore. https://doi.org/10.1007/978-981-99-3080-7_14
2.	Kumar Chaudhary, S., Gupta, N. (2023). Characterization of exponential distribution using extropy with application in testing exponentiality Proceedings of the Eleventh International Conference on Mathematics and Computing. ICMC 2025. Lecture Notes in Networks and Systems, vol 699. Springer, Singapore.

CONFERENCE/WORKSHOPS /SEMINAR

1. Participated and presented a paper entitled "General Weighted Extropy of Ranked set sampling with unequal sample" in the Annual Conference of International Indian Statistical Association (IISA) 2024, held at Cochin University of Science and Technology, jointly organized by Department of Statistics, Cochin University of Science and Technology and International Indian Statistical Association during 27-31 December 2024.
2. Participated and presented a paper entitled "General weighted cumulative residual (past) extropy of minimum (maximum) ranked set sampling with unequal samples" in "International Conference on Advances in Data Analytics & Official Statistics" held during May 24-26, 2024, at Savitribai Phule Pune University (Formerly, University of Pune), Pune, Maharashtra, India.
3. Participated and presented a paper entitled "Some characterizations of continuous symmetric distributions based on extropy of record values" in "The International Workshop on Reliability Theory and Survival Analysis (IWRTSA-2023)" held during 20-22 December 2023 at the Department of Mathematics, MIT, Manipal, Karnataka, India.
4. Attended and Presented Paper "On partial monotonicity of some extropy measure" in "**9th International Conference on Mathematics and Computing (ICMC 2023)**", held during Jan 6-8, 2023 at **BITS Pilani K. K. Birla Goa Campus**, Goa, India.
5. Attended and Presented Paper "On partial monotonicity of some extropy measure" in "The 88th Annual Conference of the Indian Mathematical Society" held during December 27 - 30, 2022 at "Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India".
6. Attended "**Instructional Schools for Teachers**" on the topic "Advanced Topic in Statistical Learning" held during July, 11-23, 2022 at "Indian Statistical Institute (ISI), Kolkata".

7. Attended and Presented Paper "On partial monotonicity of some extropy measure" in "Eighth International Conference on Statistics for Twenty-first Century-2022 (ICSTC 2022)" held during December 16-19, 2022 by Department of statistics, Kerala University.
8. Attended "International Workshop on Distribution Theory and its applications: 2022" held during December 13-15, 2022 by Department of statistics, Kerala University.
9. Attended workshop on the topic "Communication skills" held during Sept 30, 2014 at "Zakir Husain Delhi College (ZHDC), Delhi University, Delhi".
10. Attended workshop on the topic "Group and symmetry" held during December 22 -23, 2017 at "The National Academy of Sciences, India (NASI), Allahabad".
11. Attended a workshop on the topic "R & Python programming" held during August 30-31, 2019 at "Indian Institute of Technology (IIT) Bombay".
12. Attended workshop on the topic "History of Indian Mathematics before 16th Century" held during Dec 30-31, 2019 at "The National Academy of Sciences, India (NASI), Allahabad".
13. Participated in the "E-Quiz on National Statistics Day -2023" organized by Department of Mathematics and Statistics, ST. FRANCIS COLLEGE, Koramangala, Bengaluru, India 560034 (Affiliated to Bengaluru City University, Approved by AICTE & Govt. of Karnataka) on 30/06/2023.

POSITION OF RESPONSIBILITY (POR)

Mentor, Summer of Science, IIT BOMBAY [May- July 2023]

- Guided 5 UG Students of IIT BOMBAY for Financial Mathematics Summer Project.
- Project monitoring suggested Textbook, reviewed the midterm report, reviewed final report in Summer 2022.
- The primary responsibility of a mentor is to provide recommendations for books and other resources, as well as review your report submissions. Mentors are not obligated to teach you specific topics personally, but they will offer assistance if you encounter any challenges and guide you throughout your journey.

Mentor, Summer of Science, IIT BOMBAY [May- July 2022]

- Guided 5 UG Students of IIT BOMBAY for Probability and statistics Summer Project.
- Project monitoring suggested Textbook, reviewed the midterm report, reviewed final report in Summer 2022.
- The primary responsibility of a mentor is to provide recommendations for books and other resources, as well as review your report submissions. Mentors are not obligated to teach you specific topics personally, but they will offer assistance if you encounter any challenges and guide you throughout your journey.

Mentor, Summer of Science, IIT BOMBAY [May- July 2021]

- Guiding 2 UG Students of IIT BOMBAY for Discrete Mathematics, Coding Theory Project.
- Guiding 1 UG Student of IIT BOMBAY for Linear Algebra Project.
- Guiding 1 UG Student of IIT BOMBAY for Set theory, Logic, and Category Theory Project.
- Project monitoring suggested Textbook, reviewed the midterm report, reviewed final report in Summer 2021.
- The primary responsibility of a mentor is to provide recommendations for books and other resources, as well as review your report submissions. Mentors are not obligated to teach you specific topics personally, but they will offer assistance if you encounter any challenges and guide you throughout your journey.

Department Coordinator, ISCP, IIT BOMBAY [2020-21]

- Part of a team of 2 OC, 31 DC, and 177 SC under the Institute student companionship program.
- Leading a team of 4 students' companions (SC) of our department to ensure juniors don't face any difficulty.
- Helped 7 students in their online registration during the Covid-19 pandemic.
- Selected one amongst 31 Department Coordinators out of 89 applicants based on Interviews Peer Review and SOP.
- Trained by the Student Wellness Centre, Gender Cell, and tata institute of social sciences (TISS) towards better mentoring.
- Leading a team of 5 Student Companions to plan and organize formal and informal sessions for 39 new entrants in the department to help them on academic and non-academic fronts.
- Worked in a team of 177 people and coordinated the re-orientation at the department level for 39 new entrants.
- Compiled and developed the department's Master's handbook in coordination with Student Companions that serves as an informative manual for PG freshmen.
- Interviewed candidates to select a team of 4 Student Companions for the department

Students Companion, ISCP, IIT BOMBAY [2020-21]

- Mentoring 7 Junior for every type of Help
- 144 student Companions were selected out of 356 applicants based on Interviews and Peer Review.
- Worked in a team of 177 people.
- Helped the Department Coordinator in conducting e-orientation at the department level for 39 new entrants.
- Mentored 7 students throughout the year helping them on academic and non-academic fronts during and after the Covid19 pandemic.

Mentor, Summer of Science, IIT BOMBAY [May- July. 2020]

- Guided 1 Student of IIT BOMBAY for Linear Algebra Project.
- Guided 2 Students of IIT BOMBAY for the Probability and statistics Project.
- Guided 1 Student of IIT BOMBAY for the Game Theory Project.
- Project monitoring suggested Textbook, reviewed the midterm report, reviewed final report in Summer 2020.

Convener, Group for Rural Activity, IIT Bombay [2019-21]

- Served GRA (Group for Rural activities), IIT Bombay as a convener.
- Organized mid-semester and end semester camps in rural India to consider and solve problems.

Placement Interview Coordinator (IC), IIT Bombay [Dec. 2019]

- Served as Interview Coordinator (IC) in the placement team in December 2019 in IIT-Bombay.
- Volunteered online test and interview during placement.

PhD. Interview Coordinator (IC), IIT Bombay [Dec. 2019]

- Served as a PhD interview coordinator during PhD admission in December 2019 in IIT-Bombay.
- Volunteered outsider PhD applicants to their respective departments and venues.

Overall Coordinator, Mathematics Society, IIT Delhi [2016-18]

- Served “Mathematics Society IIT DELHI” for two years.
- Organized freshers, department fest, farewell, and many other events at IIT DELHI.

Member, Mathematics Society, ZHDC, Delhi University [2012-15]

- Served as an active Member of the” Mathematics society ZHDC DU” from July 2012- to May 2015.
- Organized many events like Department freshers Party, Departmental fest, Department farewell every year.

Class Representative, ZHDC, Delhi University [2013-14]

- Served as Class Representative (CR) of 2nd year B.Sc.(H) Mathematics (60 students) in ZHDC, DU.
- Coordinate with teachers and students to make final decisions.