

CURRICULUM VITAE

DR. KAKALI KARMAKAR (SUR)

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Kolkata 700126



General Information

Date of Birth: 03.11.1975 Caste: General Sex: Female Citizenship: Indian

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Professional Experience

- As Assistant professor (Grade –I) at Department of Mathematics, B.P.Poddar Institute of Management and Technology, Poddar Vihar, 137, V.I.P. Road, Kolkata-52, West Bengal, India from 01.07.2021 till date
- As Assistant professor (Grade –II) at Department of Mathematics, B.P.Poddar Institute of Management and Technology, Poddar Vihar, 137, V.I.P. Road, Kolkata-52, West Bengal, India from 01.07.14. to 30.06.21
- As Assistant professor (Grade –III) at Department of Mathematics, B.P.Poddar Institute of Management and Technology, Poddar Vihar, 137, V.I.P. Road, Kolkata-52, West Bengal, India from 09.08.08 till 30.06.14.
- As lecturer at Global Institute of Science .and Technology from 23.08.07 to 08.08.08
- As lecturer at Barasat College from 24.09.04 to 22.08.07.

Research Activity

Broad Area: Operations research

Keywords: Entropy optimization and application to traffic flow;

Blending Problem Optimization using Genetic Algorithm.

Entropy in machine learning

Education

- 1992- Passed Madhyamik Pariksha with 75.3% under W.B.B.S.E.
- 1994- Passed Higher Secondary Examination with 72.65% under W.B.C.H.S.E.
- 1998- Passed graduation with mathematics hon. with 50.6% from Department of Mathematics, University of Kalyani.
- 2000- Passed Post-graduation in pure mathematics with 58.7% from Department of Mathematics, University of Kalyani.

- 2002- Passed Bachelor of Education with 65.8% from Department of Education, University of Kalyani.
- 2013, 5th August- Awarded PhD (having course work) from Department of Mathematics, Bengal Engineering and Science University [Presently Indian Institute of Engineering Science and Technology] Shibpur; Howrah-711103, West Bengal, India, entitled “Entropy Optimization and Its Applications in Social Sciences” under the supervision of Professor S. K. Mazumder.

Achievements

- National Scholarship for Madhyamik Pariskha in 1990.
- 23rd June-21st July, 2012, UGC sponsored “95th Orientation Programme” organised by Academic Staff College, University of Calcutta; awarded grade A.
- 10 th July- 31 th July, 2014; UGC sponsored “Refresher course in Mathematics” organised by Academic Staff College, University of Calcutta; awarded grade A.
- 18 th June, 2022; Certificate of Achievement on becoming certified virtual classroom teacher organized by Bethune College and West Bengal Higher Education Department

Publications

- Kakali Karmakar (Sur) and Sanat Kumar Majumder; Maximum entropy approach in a traffic stream; *Applied Mathematics and Computation*; Vol. 195, (2008), pp. 61–65.
- ISSN/ISBN 0096-3003.
- Kakali Karmakar (Sur) and Sanat Kumar Majumder; Minimum cross entropy approach to rectangular input-output model; *Journal of Technology*; Vol. XXXXI, (2009) pp. 71-82.
- Kakali Karmakar (Sur) and Sanat Kumar Majumder; Optimization of the utility of a structural model of the demand for multi-destination non-work travel using maximum entropy method; *International Journal of Pure and Applied Sciences and Technology*; Vol.4(1), (2011), pp. 23-29. ISSN/ISBN 2229-6107.
- Kakali Karmakar (Sur) and Sanat Kumar Majumder; Construction of a New Airport in a developing country, using entropy optimization method to the model. *General Mathematics Notes*; Vol.-8, No.-I, pp 29-34. ISSN/ISBN 2219-7184.
- Kakali Karmakar (Sur) and Sanat Kumar Majumder; Node entropy optimization of novel graph class Universal hierarchical graph using entropy optimization method; *Advances in Modelling Series D. Computer Science and Statistics 2013* (accepted on 07.09.2013); vol 18; no 02 ;pp77- 90. ISSN/ISBN 1291-5211.
- Kakali Karmakar (Sur), Subhasish Das and Koushik Ghosh; 'Pareto Optimization- An Approach to find the Optimal Solution of Blending Problem in a Production Unit'; *Journal of the Calcutta Mathematical Society* vol 20, no. 2, pp 207-211 (2024) S 2231-5314 (XX) (UGC- CARE enlisted), received 23 February, 2024.

Paper Presented in Conference/Seminar (National/International)

- 13th to 15th January, 2010; Paper presented on Maximum entropy distributions of performance measures in queuing and their optimization using entropy optimization method in “International Conference on Recent Advances in Mathematics and Applications”, organised by Department of Mathematics, University of Burdawn.
- 09th -11th December. 2011; Paper presented on “Optimization of node entropy of novel graph class universal Hierarchical graph, using Shanon maximum entropy principal” in “International Conference on Recent Advances in Mathematical Sciences and Applications”, organised by Calcutta Mathematical Society, kol-64.
- 19th - 21th December. 2014, Paper presented on “Optimization of entropy rate of finite Markov Chain” in “International Conference on Current Developments in Mathematics and Mathematical Sciences, organised by Calcutta Mathematical Society, kol-64.
- 9th -12th January,2018 Presented a paper on ‘Application of maximum entropy optimization principle to optimize the net benefit charge of the use of road’ International Conference on Mathematical Analysis and Application in Modeling’, organised by, Department of Mathematics, Jadavpur University.
- 16th -19th December,2018 presented paper on “Optimization of differential entropy to estimate uncertainty in a multivariate normally distributed ecological model.” 51st Annual Convention of the Operational Research Society of India & International Conference (ORSI 2018) IIT Bombay.
- 8th March,2019, presented paper on “Conditional differential entropy modelling to measure uncertainty in ecological model” in National Seminar on "Current Trends in Mathematics and its Applications, (NSCTMA-20le) Organized by Department of Mathematics ,Jadavpur University.
- International Conference on Advancement of Mathematical Sciences and Computer Vision (ICAMSCV-2023); Organized by Calcutta Mathematical Society, Kolkata, India 09 - 11 December, 2023

Invited Talk

- 12th August,2016, presented talk on Entropy optimization and its applications in operation research in seminar on “operations research and its applications” organised by B.P.P.I.M.
- 27th April,2019 presented talk as resource person in the “State level mathematics seminar” organized by Bidhannagar Municipal School and Calcutta Mathematical Society.
- 7th March, 2020 presented talk as resource person in the “State Level Ganit Mela” 2020, organized by Bantra M.S.P.C. School and Calcutta Mathematical Society.

Conference/Seminar attended

- 15th March, 2005; UGC sponsored State level seminar on “Wealth Creation and Ethics” organised by Goenka College of Commerce and Business Administration; kol-12.
- 12th-13th August,2005; State level seminar on “Role of the Indian Judiciary in the Socio Economic and Political Development of India” organised by Barasat College, kol-126.
- 28th March,2009; Conference on “Recent Trend in Computing Technologies” organised

by B.P.Poddar Institute of Management and Technology and Computer Society of India.

- 29th June -5th July 2011; “Staff Development Programme on MATLAB and LaTeX for Engineering Applications under Total Quality Improvement Scheme (TQIS); organised by B.P.Poddar Institute of Management and Technology ; kol-52.
- 23rd June-21st July, 2012, UGC sponsored “95th Orientation Programme” organised by Academic Staff College, University of Calcutta; awarded grade A.
- 4th May, 2013; DST and DRDO sponsored Conference on “Challenges of Basic Research in Innovating Technology” organised by B.P.Poddar Institute of Management and Technology ; kol-52.
- 13th -17th January,2014; TEQIP – II Sponsored Short-Term Course on “Mathematics, its Role and Application in Engineering and Technology” organised by National Institute of Technology, Durgapur.
- 19th February,2014; “Seminar on Algorithms and its Applications” organised by B.P.Poddar Institute of Management and Technology.
- 29th July, 2015; Workshop on “Recent Development on Optimization and Operation Research” organised by Department of Applied Mathematics, University of Calcutta.
- 10th July- 31st July,2014; UGC sponsored “Refresher course in Mathematics” organised by Academic Staff College, University of Calcutta; awarded grade A.
- 29th July ,2015; Workshop on “Recent Development on Optimization and Operation Research” organised by Department of Applied Mathematics, University of Calcutta.
- 21st -29st June,2016; “Teacher’s Enrichment Workshop in Mathematics” organised by Calcutta Mathematical Society and Higher Education Department. Govt. WB.
- 9th -11st December,2016; “International Conference on Applications of Mathematics in Topology, Dynamics, Physical, Biological and Chemical Systems” organised by Calcutta Mathematical Society.
- 28th June-1st July,2018,” Short Term Training Programme on Numerical and Statistical Method Using Software Tools” organised by National Institute of Technical Teachers” Training and Research, Kolkata.
- 10th -15th July,2018 FDP on “Behavioral remodeling for enhancing the classroom delivery of teachers” organised by E&ICT Academy IIT Guwahati in association with B.P.Poddar Institute of Management and Technology.
- 13th -22nd June2019, “Workshop on Advanced Mathematics (WAM 2019)” organised by Calcutta Mathematical Society.
- 29th February2020; “One day National Seminar on Applied Mathematics and Mathematical Physics” organized by Calcutta Mathematical Society.
- 23-27th, June, 2020; “Global Workshop on Recent Trends in IOT with Cloud” organized by Department of Information Technology, B.P.P.I.M.T
- 4th June,2020; “Webinar Introduction to Decision Tree and Ensemble Machine learning”

organized by Department of Information Technology, B.P.P.I.M.T

- 7th -9th August,2020; “3-day webinar on “Scope of studies with innovation and challenges”” organized by Department of Applied Sciences and Humanities; BPPIMT.
- 25th August,2020, “one day state level webinar on “undergraduate text of mathematics: future prospects and opportunities”, organized by Department of Mathematics, Jhargram Raj college, Jhargram – 721507.
- 24th July, webinar on "Mathematics for epidemiology" organized by Department of applied Sciences, school of natural and applied sciences; Maulana Abul kalam Azad University of Technology, West Bengal, India.
- January 16-17, 2021, “International Web Seminar on Applied Mathematics & Mathematical Physics, Number Theory and Analysis” organized by Calcutta Mathematical Society AE-374, Sector I, Salt Lake City, Kolkata - 700064, WB, India
- “International Web Seminar on Applied Mathematics & Mathematical Physics, Number Theory and Analysis”; (AMMPNTA-2021); January 16-17, 2021; organized by Calcutta Mathematical Society AE-374, Sector I, Salt Lake City, Kolkata - 700064, WB, India.
- Two-day Webinar on “Recent Advances in Photonic Devices and Optical Information Processing” Organized by Optoelectronics Research Group, B. P. Poddar Institute of Management & Technology Date: 20th and 21st August, 2021.
- One day National Seminar on History of Science Organized by Calcutta Mathematical Society, Kolkata, India 6th September, 2023

Workshop/STTP attended

- 29th June -5th July 2011; “Staff Development Programme on MATLAB and LaTeX for Engineering Applications under Total Quality Improvement Scheme(TQIS) ; organised by B.P.Poddar Institute of Management and Technology ; kol-52.
- 13th -17th January, 2014; TEQIP – II Sponsored Short-Term Course on “Mathematics :its Role and Application in Engineering and Technology” organised by National Institute of Technology, Durgapur.
- 21st -29st June,2016; “Teacher’s Enrichment Workshop in Mathematics” organised by Calcutta Mathematical Society and Higher Education Department, W.B. Govt.
- 28th June-1st July,2018, ”Short Term Training Programme on Numerical and Statistical Method Using Software Tools” organised by National Institute Of Technical Teachers“ Training And Research, Kolkata.
- Online Workshop on Emerging Areas in Mathematics (WEAM-2021) (One Week Faculty

Development Programme) Organised by Calcutta Mathematical Society 10-17 July, 2021

Faculty Development Program attended

- 10th -15th July,2018 FDP on “Behavioral remodeling for enhancing the classroom delivery of teachers” organised by E&ICT Academy IIT Guwahati in association with B.P.Poddar Institute of Management and Technology.
- 14th-18th September,2020, “TEQIP-iii funded faculty development programme” organised by Department of applied science, school of natural and applied sciences Maulana Abul Kalam Azad University of Technology, West Bengal, India in association with the Islamic University of Science and Technology, Jammu and Kashmir, India.
- 21th-25th July,2020. 5-dayOnline Faculty Development Program on Universal human values for Deeksharambh (Student Induction Program) organized by Department of Mechanical Engineering; National Institute of Technology; Patna
- 04-08th Jan 2022; ATAL FDP " ASTRONOMY, ASTROPHYSICS AND RELATED CHALLENGES, organised by the Department of Applied Science and Humanities in collaboration with the Department of Electronics and Communication Engineering, BPPIMT.
- NEP 2020 Orientation & Sensitization Programme under Malaviya Mission Teacher Training Programme (MM-TTP) of University Grants Commission (UGC) Organized by UGC - Malaviya Mission Teacher Training Centre, University of Kashmir, Srinagar from 17th to 30th May, 2024(Online)
- Short Term Course on Mathematical and Computer Sciences (STCMCS2024) ORGANISED BY Calcutta Mathematical Society;19-26th June,2024; secured grade A.

Administrative Contribution

- Class Coordinator of the first year B.Tech students since last seven years at B.P.Poddar Institute of Management and Technology ; kol-52
- NSS Project Guide for first year B.Tech students 2014-2017; at B.P. Poddar Institute of Management and Technology.
- Coordinator of Medical Assistance Cell
- Coordinator of OMEGATRIX event in Techfest

- 25 th May,2020; Coordinator of webinar on application of mathematics organized by Department of Applied Sciences and Humanities; BPPIMT
- 10 th June and 17th June2020, Coordinator of Webinar on Awareness on COVID 19 in post lockdown period organised by IQAC cell and BPPIMT cell
- Member of antiragging cell
- Member of Canteen / Housekeeping / Hygiene Committee
- Member of 04-08th Jan 2022; ATAL FDP " ASTRONOMY, ASTROPHYSICS AND RELATED CHALLENGES, organised by the Department of Applied Science and Humanities in collaboration with the Department of Electronics and Communication Engineering, BPPIMT.
- Act as head examiner in MAKAUT semester examination
- Act as examiner in MAKAUT semester examination

Professional Membership of association

- life member of Calcutta Mathematical Society. Membership no LK/40
- life member of Indian Statistical Institute. Membership no L-8648
- life member of Operational Research society of India 1217/K/14/ML
- life member of Indian Mathematical Society.

Declaration

I hereby declare that the information furnished above is true to the best of my knowledge.

Kakali Karmakar(Sur)