

Dr. Priyanka Kalita

Assistant Professor, Department of Statistics,
Bhattadev university, Bajali, Pathsala-781325,
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Profile Summary

- Completed **Post-Doctoral Fellowship** in **Mathematics** from **IIT Delhi** in **2022**.
- Working on **data analysis** and **stochastic modeling** in energy optimization of **5G networks**.
- Gained professional experience working as an **Assistant Professor** from **Goalpara college**, Assam for nearly 2years.
- Currently working on two research projects as a research collaborator in
 - (i) Development and study of methods for reliability enhancement of tethered high-altitude unmanned telecommunication platforms (Under DST Indo-Russia, March 2023 - Feb. 2026).
 - (ii) Reliability Analysis of Anti-Drone Systems (Sponsored by DRDO Chess, Hyderabad, Sep 2023-Aug 2025).

Education

- **Post-Doctoral Fellow** from Department of **Mathematics**, **IIT Delhi**, New Delhi, India in **2022**.
- **Ph.d (Statistics)** from **Gauhati University**, Assam, India in **2020**.
- **M.Sc. (Statistics with 86%)** from **Gauhati University**, Assam, India in **2013**.
- **B.Sc. (Statistics with 84.5%)** from **Arya Vidyapeeth College**, **Gauhati University**, Assam, India in **2011**.

Skills

- C-Programming, MATLAB, SPSS, SAS, R-Programming
- MS Office, Windows, Linus

Work Experience

 Assistant Professor, Department of Statistics , Bhattadev University, Bajali, Assam	Feb'23- Current
 Assistant Professor, Department of Statistics , Amity University, Noida, India.	Jul'22 – Jan'23
 Post-Doctoral Fellow, Department of Mathematics, IIT Delhi, New Delhi , India.	Apr'21 – March'22
 Assistant Professor, Department of Statistics, Goalpara College, Assam, India.	Aug'19 – Feb'21

List of publication in (SCI/ SCI expanded) Journal:

1. **S. Dharmaraja**, Badiyasara. H, Tripathia. S, **Kalita. P**, Raj. R: **Reliability Analysis of an Anti-Drone System by Considering Random Environmental Factors**, *Reliability: Theory and Applications*, 19, 3(79), (2024) , pp. 186-205.
2. **Kalita. P**, S. Dharmaraja: **Stochastic Modeling of Sleeping Strategy in 5G Base Station for Energy Efficiency**, *Telecommunication Systems*, 83 (2023), pp. 115 - 133. (SJR in Q2)
3. **Kalita P** and S. Dharmaraja: **Stochastic Modelling for Energy Efficiency in Modified Discontinuous Reception (MD-DRX) For LTE-5G Networks**, *International Journal of Communication Systems*, Vol. 36 (Issue 6), (2023) e5434, 33 pages. (SJR in Q2).
4. V Deepa, Haridass M, S. Dharmaraja and **Kalita P**: **Analysis of Energy Efficiency of small cell Base Station in 4G/5G networks**, *Telecommunication Systems*, 82 (2023), 381 – 401 (SJR in Q2).
5. S. Dharmaraja, Khichar D, **Kalita P** and Jain V: **Estimation of Mortality Rate of COVID-19 in India using**

SEIRD Model, *Opsearch*, 60 (2023) pp. 539 – 553 (SJR in Q2).

6. C K Deena Merit, Haridass M, S. Dharmaraja and **Kalita. P**: **Energy Efficiency in a Base Station of 5G Cellular Networks using M/G/1 Queue with Multiple Sleeps and N-Policy**, Vol. 25 (Issue 2), (2023) Article 48, 28 pages. (SJR in Q2).
7. Choudhury. G, **Kalita. P** and S. Dharmaraja : **Analysis of a model of batch arrival single server queue with random vacation policy**, *Communications in Statistics- Theory and Methods*, 50(22) (2021) 5314– 5357 (SJR in Q3).
8. **Kalita. P** and Choudhury. **G**: **A single server queue under random vacation policy**. *Rairo- Operations Research*, 55 (2021), 225-251 (SJR in Q2).
9. **Kalita. P** and Choudhury, G : **Analysis of batch arrival single server queue with random vacation policy and two types of general heterogeneous repeated service**. *International Journal of operational Research*, 42 (2021), 131 – 162 (SJR in Q3).
10. **Kalita. P**, Choudhury. G and S. Dharmaraja : **Analysis of Single server queue with modified vacation policy**. *Methodology and computing in Applied Probability*, 22 (2020), 511 – 553 (SJR in Q2).

List of publication in Conference

1. S. Dharmaraja, Chauhan. A, Prasad. A, **Kalita. P.** and Aggarwal. A, **Energy Provision Management in Hybrid AC/DC Microgrid Connected Base Station in 5G Cellular Networks**, *2023 7th International Conference on Information, Control, and Communication Technologies (ICCT)*, Astrakhan, Russian Federation, 2023, pp. 1-7.
2. S. Dharmaraja, Aggarwal. A, **Kalita. P.**, **Stochastic Modelling for Energy Efficiency in LTE-A and LTE-5G Networks**, In *International Conference on Distributed Computer and Communication Networks*, pp. 316-336. Cham: Springer Nature Switzerland, 2023.

Paper Presented and Conference/ Seminar Attended

- Paper entitled “**An M/G/1 vacation queueing model with Randomized vacation policy**” presented in “**International conference on Statistics & Information Technology for a Growing Nation**”, Organized by Department of Statistics, Sri Venkateswara University, Tirupati, A.P., India, during **30 Nov-02 Dec, 2014**.
- Paper entitled “**Analysis of a modified Batch arrival single server vacation queueing system with Bernoulli vacation schedule**” Presented in “**National seminar on Science and Technology for Human Welfare**”, Organized by Institute of Advanced study in Science and Technology, Guwahati, Assam, India, during **27 feb, 2017**.
- Participated in the “**National seminar on Ethnic Violence and its Impacts on Demographics in North Eastern Region**” Organized by Department of statistics, Gauhati University, Assam, India, during **February 16-18, 2013**.
- Paper entitled “**Some Aspects of Poisson ... vacation policy**” presented in “**International conference on Frontiers in Mathematics**” Organized by Department of mathematics, Gauhati University, Assam, India, during March 26-28, 2015.
- Participated in the “**2nd National workshop on Medical Image Processing**” Organized by Institute of Advanced study in Science and Technology, Guwahati, Assam, India, during **March 8-9, 2017**.
- Paper entitled “**Base Station Sleeping Strategy modeled with M/G/1 queue for Energy Saving in 5G Cellular Network**” presented in Operational Research Society of India Organized by Government Holkar Science College, Indore, Madhya Pradesh, India, **2022**.
- Paper entitled “**Stochastic modeling of Advanced Sleeping Strategy in 5G Base station for power optimization**” presented in “International Conference on Applied Mathematical Models” organized by Department of Mathematics, PSG College of Technology, Coimbatore, India, during **Jan 4-6, 2023**.
- Paper entitled “**Stochastic modeling of energy optimization in hybrid base station in 5G networks**” presented in “International symposium on Applied Optimization and Game Theoretic Models for

DecisionMaking” organized by Indian Statistical Institute, Delhi Centre during **Feb 01-03, 2023**.

- Invited talk on the topic of “Human Population Growth and climate change” organized by Goalpara college, Assam during 23-12-2023.
- Paper entitled “**Stochastic modelling for the energy and reliability of cloud integrated internet of things in 6G networks**” presented in International Conference named “ Fourth International workshop on Stochastic modeling and applied Research of Technology -SMARTY’24, Russia, on August 26-30, 2024.

Personal Details

Date of Birth: 2nd November 1990

Languages Known: English, Hindi & Assamese

Address: Vill. Tilapara, Goalpara, Assam- 783101, India.

