

# Niladri Chakraborty

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## CONTACT INFORMATION

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## EDUCATION

**University of Pretoria**, Pretoria, South Africa  
*Department of Statistics*  
Ph.D., Mathematical Statistics, 2017

- Dissertation Topic: ‘Generally Weighted Moving Average control charts for small shifts’
- Advisor: Dr. Schalk W. Human (University of Pretoria, South Africa)
- Co-advisor: Prof. Narayanaswamy Balakrishnan (McMaster University, Canada)

**University of Pune**, Pune, Maharashtra, India  
*Department of Statistics*

M.Sc., Statistics, 2009

**University of Calcutta**, Calcutta, West Bengal, India  
*Maulana Azad College*

B.Sc.(Hons.), Statistics (with Mathematics and Economics as minors), 2007

## HONORS AND AWARDS

Post-graduate Doctoral Bursary, University of Pretoria, South Africa, 2014-16.

STATOMET Bursary, University of Pretoria, South Africa, 2014 and 2016.

South African Research Chair Initiative (SARChI) Bursary at the Department of Statistics, University of Pretoria, South Africa, 2014 and 2017.

Junior Research Fellowship (JRF) (among the top 2% nationwide) through the ‘Joint CSIR-UGC (India) National Eligibility Test (NET)’ held on 20-06-2010.

Awarded grade ‘A’ in ‘Achievement-cum-Diagnostic Test in Mathematics’ held by All India Centre for Pedagogical Studies in Mathematics, 1999.

Awarded grade ‘A\*’ in the ‘Science Talent Search Examination’ conducted by ‘Jatiya Vijnan Parishad’ in association with Indian Science Congress Association, 1999-2000.

## EMPLOYMENT

**Department of Mathematical Statistics and Actuarial Science, University of the Free State, South Africa**

*Lecturer, Department of Mathematical Statistics and Actuarial Science* **February, 2021 - Present**  
As a lecturer, I have been heavily involved in teaching and research in statistics. I have supervised a number of honors students. Also, I have submitted a number of research articles in peer-reviewed, international journals.

**Department of Systems Engineering and Engineering Management**, City University of Hong Kong, Hong Kong

*Postdoctoral Research Fellow, Department of Systems Engineering and Engineering Management*  
**July, 2018 - August, 2020**

As a postdoctoral fellow, I have worked on reliability monitoring and process monitoring, helped prepare a number of industrial project proposal, and submitted a number of research articles. I have assisted undergraduate and graduate students with academic projects and related queries. Also, performed as one of crew members in the local organizing committee for MMR conference, 2019.

**XLRI Xavier School of Management**, Jamshedpur, India

*Research Fellow and Visiting Lecturer*

**January, 2018 - June, 2018**

Responsibilities include delivering a course on quantitative methods for decision making to company executives and producing effective research output on statistical methods useful in industrial decision making.

**Department of Statistics, University of Pretoria**, Pretoria, South Africa

*Graduate Research Fellow*

**January, 2014 - December, 2017**

Includes Ph.D. research, shared responsibilities for reviewing journal articles and other academic functions.

*Assistant Lecturer/Teaching Assistant*

**January, 2015 - August, 2017**

Duties at various times include office hours and shared administrative responsibilities with faculty instructor, fielding of various student academic inquiries, shared responsibility for lectures, exams, homework assignments, and grades.

**Department of Statistics, Delhi University**, Delhi, India

*Junior Research Fellow (CSIR-UGC, India)*

**June, 2011 - June, 2013**

Research involved reliability and life testing. Shared responsibilities for various academic activities.

**Applied Statistics Unit, Indian Statistical Institute**, Calcutta, India

*Project Linked Person*

**July, 2010 - November, 2010**

Worked in a research project called 'International Passenger Survey' funded by Ministry of Tourism, Govt. of India to study the demographic, economic and social profile of foreigners and NRIs coming to India and their contribution to Indian economy. Responsibilities involved fixing places and schedules using statistical techniques for 'International Passenger Survey' of the Ministry of Tourism, Govt. of India using R-programing.

*Statistical Trainee*

**October, 2009 - June, 2010**

Several assignments provided by the supervisor. Assisted the training of ISS (Indian Statistical Service) probationary officers and several other training programs organized time to time by the Applied Statistics Unit, Indian Statistical Institute, Calcutta.

## PUBLICATIONS

Chakraborty, N., Balakrishnan, N., & Finkelstein, M. (2023). On precedence tests with double sampling. *Statistics*, 57(3), 554-576.

Chakraborty, N., Lui, C. F., & Maged, A. (2023). A distribution-free change-point monitoring scheme in high-dimensional settings with application to industrial image surveillance. *Communications in Statistics-Simulation and Computation*, <https://doi.org/10.1080/03610918.2023.2202371>.

Iqbal, A., Mahmood, T., Nazir, H. Z., & Chakraborty, N. (2022). On the improved generalized linear model-based monitoring methods for Poisson distributed processes. *Concurrency and Computation: Practice and Experience*, 34(11), e6889.

Finkelstein, M., Cha, J. H., & Chackraborty, N. (2022). Balancing load and performance for different failure models. *Applied Stochastic Models in Business and Industry*, 38(2), 323-333.

Chakraborty, N., & Mahmood, T. (2021). Failure rate monitoring in generalized gamma-distributed process. *Quality Technology & Quantitative Management*, 18(6), 718-739.

Chakraborty, N., Human, S. W., Balakrishnan, N. (2018). A Generally Weighted Moving Average Exceedance Chart. *Journal of Statistical Computation and Simulation*, 88(9), 1759-1781.

Chakraborty, N., Human, S. W., Balakrishnan, N. (2017). A Generally Weighted Moving Average Chart for Time Between Events. *Communications in Statistics-Simulation and Computation*, 46(10), 7790-7817.

Chakraborty, N., Chakraborti, S., Human, S. W., Balakrishnan, N. (2016). A generally weighted moving average signed-rank control chart. *Quality and Reliability Engineering International*, 32(8), 2835-2845.

#### CONFERENCE PRESENTATIONS

*A distribution-free change-point monitoring scheme in high-dimensional settings*, International Conference on Computational Statistics, University of London, Birkbeck, 22-25 August.

*Failure rate monitoring in generalized gamma-distributed processes*, International Conference on Computational Statistics, University of Bologna, Italy, August 23 -26, 2022.

International Conference on Reliability, Maintainability, and Safety (ICRMS) as a member of the programme committee and session chair, August 21-24, 2022.

*Failure rate monitoring in generalized gamma-distributed processes*. South African Statistical Association (SASA) conference, Stellenbosch University, South Africa, December 1 - 3, 2021.

*A generally weighted moving average exceedance chart*. The Joint Statistical Meetings (virtual), August 8 - 12, 2021.

*A nonparametric test for high-dimensional data based on interpoint angles*. MMR conference, June 3 - 7, 2019, Hong Kong.

*Generally Weighted Moving Average Chart for Time Between Events*. World Statistics Congress, Marrakech, Morocco, July 16 - 21, 2017.

*A Generally Weighted Moving Average Signed-Rank Control Chart*. South African Statistical Association (SASA) conference, University of Pretoria, Pretoria, South Africa, November 30 - December 2, 2015.

*Optimal design of CUSUM-SIGN chart*. South African Statistical Association (SASA) conference, Rhodes University, Grahams Town, South Africa, October 28 - 30, 2014.

#### REFERENCES

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