
Curriculum Vitae: Lamin Juwara

Education

2018–2022 **PhD. Computational Statistics Stream, Quantitative Life Sciences**, McGill University

Title Privacy-preserving regression methods for distributed biomedical data

Advisors Dr Paramita Saha-Chaudhuri and Prof Archer Yi Yang

2016–2018 **MSc. Biostatistics**, McGill University, Canada

Title Virtual Pooling as a Privacy-preserving Analysis Tool

Supervisor Dr Paramita Saha-Chaudhuri

2015–2016 **MSc. Mathematics**, AIMS and Stellenbosch University, South Africa

Title Reverse-engineering T-cell proliferation dynamics

Supervisor Dr Wilfred Ndifon

2011–2015 **BSc. Mathematics (Hons)**, Kwame Nkrumah University of Science and Tech., Ghana

Title Representation Theory of Finite Groups

Supervisor Dr Richard Kena Boadi

Work Experience

07/22–Now **Postdoctoral Research Associate**, Electronic Health Information Laboratory, University of Ottawa

- Application of machine learning methods to synthetic data generation.

01/19–06/22 **Biostatistician**, iMD Research Inc, Montreal QC

- Study design, data analysis, and report writing.

01/20–04/21 **Graduate Teaching Assistant in Statistics, Math 324**, McGill University

- Sampling distributions, point and interval estimation, hypothesis testing, analysis of variance, contingency tables, nonparametric inference, regression, Bayesian inference.

09/17–01/19 **Data Analyst**, Lady Davis Institute at the Jewish General Hospital, Montreal QC

- Study design, analysis, and report writing.

Summer 2017 **Visiting Research Scholar**, South African Centre for Epidemiological Modelling and Analysis

- Developed web based applications for HIV incidence estimation (UNAIDS project)
- R Shiny Framework

Scholarships, Awards, & Prizes

June, 2021 Best poster prize, PhD category. The Ninth Canadian Statistics Student Conference

2019–2022 Graduate Excellence Award, Quantitative Life Sciences, McGill University (\$13,500×3)

2018–2022 Mitacs Accelerate Fellowship, McGill University (\$80,000)

Feb., 2018 Best poster prize, 14th Annual Student Research Day of the Department of Epidemiology, Biostatistics and Occupational Health. McGill University.

2016–2018 MasterCard Foundation Scholarship, McGill University (>\$100,000)

July, 2016 The Martin Rees Fellowship for Academic Excellence at AIMS South Africa Graduation, Stellenbosch.

2015–2016 African Institute for Mathematical Sciences (AIMS) Postgraduate Scholarship (\$10,000)

June, 2015 Best graduating student, Department of Mathematics, KNUST Ghana (Rank: 1/140).

Selected articles

1. [Juwara L](#), Saha-Chaudhuri P (2022). A Hybrid Covariate Microaggregation Approach for Privacy-Preserving Logistic Regression. *Journal of Survey Statistics and Methodology*. [link]
2. Saha-Chaudhuri P, [Juwara L](#) (2021). Survival Analysis under the Cox Proportional Hazards model with Pooled Covariates. *Statistics in Medicine*. [link]
3. Cressatti M, Galindez JL, [Juwara L](#), ... Schipper HM (2020). Characterization and heme oxygenase-1 content of extracellular vesicles in human biofluids. *Journal of Neurochemistry*. [link]
4. [Juwara L](#), ..., Saha-Chaudhuri P, Velly A (2020). Predicting neuropathic pain after breast cancer surgery using machine learning. *International Journal of Medical Informatics*. [link]
5. Cressatti M, [Juwara L](#), Galindez JL, ... Schipper HM (2020). Salivary miR-153 and miR-223 levels as diagnostic biomarkers of idiopathic Parkinson disease. *Movement disorders*. [link]

Peer reviewed abstracts (selected)

1. [Juwara L](#), Yang Y, and Saha-Chaudhuri P. Improving the efficiency of meta-analysis estimators for privacy-preserving Cox regression. QLS Research Day, 2022.
[*Oral presentation*]
2. [Juwara L](#), Yang Y, and Saha-Chaudhuri P. Privacy-preserving Cox proportional hazards regression with aggregate covariates. Annual Canadian Statistics Student Conference, 2021.
[*Best poster prize, PhD category*]
3. [Juwara L](#) and Saha-Chaudhuri P. Predictive modeling under data privacy restrictions. Statistical Society of Canada annual Conference, 2020. [*Travel award*]
4. [Juwara L](#) and Saha-Chaudhuri P. Microaggregation as a Privacy-Preserving Analytical Tool for Analysis of Confidential Distributed Data. International Society of Pharmacoepidemiology mid-year meeting, 2018.
[*Travel award*]
5. [Juwara L](#), Schmidt A, and Saha-Chaudhuri P. Virtual Pooling as a Privacy-preserving Analysis Tool to Estimate Covariate Hazard Ratio (HR) of Cox Proportional Hazard Model. 14th Annual Student Research Day of the Department of Epidemiology, Biostatistics and Occupational Health, 2018.
[*Best poster award*]

Software & other services

- 05/2022 Reviewer for *Journal of Survey Statistics and Methodology* (×1) & *JMIR AI* (×1)
- 03/2021 Co-Reviewer for *JMIR Medical Informatics* (×1)
- 05/2019 Incidence estimation tools (UNAIDS tools) [link]
- 08/2018 Prevalence and Incidence Calculator: Calculates HIV incidence from prevalence survey data that include biomarkers of recent infection. UNAIDS [link]
- 2018-Now Maintain several R-Packages (e.g. [link]) and Web-based tools [link]

Computer skills

- Advanced R, Python, MatLab, \LaTeX , Linux, SAS, and Office suites
- Intermediate HTML, Visual Basics, and SPSS.

Dr. Paramita Saha-Chaudhuri

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Department of Mathematics and Statistics, University of Vermont

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Prof. Archer Yi Yang

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Dr. Wilfred Ndifon

AIMS Network Research Director & Professor of Theoretical Biology.

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