Lamin Juwara

Education

2018-2022 **PhD. Computational Statistics & Data Privacy, QLS**, McGill University, Canada.
Title Privacy-preserving regression methods for distributed biomedical data
Advisors Dr Paramita Saha-Chaudhuri and Prof Yi Yang

2016-2018 **MSc. Biostatistics**, McGill University, Canada.
Title Virtual Pooling as a Privacy-preserving Analysis Tool
Supervisors Dr Paramita Saha-Chaudhuri

2015-2016 **MSc. Mathematics**, AIMS, 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

07/2022-Now **Postdoctoral Researcher**, Electronic Health Information Laboratory (EHIL), Ottawa.
- Application of machine learning methods to synthetic data generation.
- Evaluating privacy risks and utility of generative models.

01/2019-06/2022 **Biostatistician**, iMD Research Inc.
- Study design, data analysis, and report writing.

09/2017-01/2019 **Research Assistant**, Jewish General Hospital.
- Statistical Computing and data analysis

Summer 2017 **Visiting Research Scholar**, South African Centre for Epidemiological Modelling and Analysis.
- Developed web based applications for HIV incidence estimation (UNAIDS project)

Miscellaneous

01/2020-04/2020 **Math 324**, McGill University.
Graduate student assistant

2013-2015 **Mathematics Tutor**, KNUST, GHANA.

Awards and Scholarships

2018-2022 Mitacs Accelerate Fellowship, McGill University ($80,000)
2016-2018 MasterCard Foundation Scholarship, McGill University (>$100,000)
July, 2016 The Martin Rees Fellowship for Academic Excellence at AIMS Graduation, Stellenbosch University
2015-2016 African Institute for Mathematical Sciences (AIMS) Postgraduate Scholarship ($10,000)
June, 2015 Best graduating student, Department of Mathematics, KNUST Ghana (Highest CWA, class size - 140)

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Computer skills

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

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. Galindez JL, Juwara L, ... Schipper HM (2021). Salivary Heme Oxygenase-1: A Potential Biomarker for Central Neurodegeneration. Journal of Central Nervous System Disease. [link]
4. 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]
5. Juwara L, ..., Saha-Chaudhuri P, Velly A (2020). Predicting neuropathic pain after breast cancer surgery using machine learning. International Journal of Medical Informatics. [link]
6. 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	Reviewed for Journal of Survey Statistics and Methodology (×1)
03/2021	Co-Reviewed 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]

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