Liton **Chakraborty**

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PROFESSIONAL SUMMARY:

- Lead socio-economic analyst addressing social vulnerabilities, environmental injustices, social protection & poverty reduction.
- Perform national-scale GIS, data & statistical analyses to address socio-economic issues pertaining to social policy development.
- Provide data-driven policy analysis support to Strategic & Service Policy Branch at Employment and Social Development Canada.
- Have an extensive academic background in economics, applied statistics and GIS methodology to support federal policy analysis.
- I am also a technical consultant contributing to policy-informed applied research initiatives at McGill, York & UWaterloo.

KEY TECHNICAL SKILLS:

Socio-Economic Analytics	Policy Analysis	Statistical Analysis
Geospatial Visualization	Economics/Econometrics	Research & Publication
GIS (ArcGIS, QGIS)	Stata, SPSS	R, Python

POLICY RESEARCH INTERESTS:

- Evaluate and address the distributional impacts of climate-related hazards, risks and disasters to inform public policies.
- Investigate the environmental justice and equity implications associated with climate change, hazards, and disaster risks.
- Analyze socioeconomic vulnerabilities in communities that are disproportionately impacted by climate change-related risks.
- Influence disaster and emergency management policies by applying principles of justice, equity, and evidence-based research.

EDUCATION:

Oct 2021 — Ph.D., Human Geography & Environmental Management, University of Waterloo
Dissertation title: Social equity dimensions of flood risk management in Canada
Field(s): Distributional Impacts of Flood Risk on Socioeconomically Disadvantaged and Marginalized Groups
Distributive Environmental Justice | Social Justice and Equity Implications of Climate Change Risk
Social Vulnerability | GIS-based Hazard & Exposure Analysis | Integrated Flood Risk Assessment

Aug 2014 — M.A., Economics (course-based, one year), University of Waterloo
Research title: Do Budget Deficits Induce Growth in a Rapidly Developing Market-Based Economy?
An Empirical Investigation in Bangladesh
Field(s): Applied Macro Economics, Macro-Econometrics

Jun 2012 — MSc., Business & Economics (thesis-based, two years), Uppsala University
Thesis title: Electoral Success in Swedish Municipal Councils: The Role of Occupation and Politicians' Characteristics
Field(s): Public and Political Economics, Applied Micro Econometrics

Aug 2004 — MSS & BSS (4-years honors), Economics, Shahjalal University of Sci. & Tech.

EMPLOYMENT:

May 2025 – — **Adjunct Faculty Member**, Graduate Program in Disaster & Emergency Management (DEM), Faculty of Graduate Studies, York University, Toronto, ON
- Collaborate with graduate students, faculty members, and researchers, and contribute to the education and mentorship of the next generation of leaders in the field of Disaster and Emergency Management (DEM).

Dec 2024 – — **Policy Analyst** (Indeterminate), Strategic & Service Policy Branch, Employment and Social Development Canada, Toronto, ON
- Analyze social, economic, and demographic data to identify inequities and emerging trends, providing evidence-based recommendations to enhance federal social programs' inclusivity and equity.
- Collaborate across departments and with external stakeholders to design integrated social policy solutions aligned with department priorities.
- Develop and apply innovative research methods, leveraging data to evaluate the social and economic impacts of policies and programs.
- Advise senior leadership on social policy issues, emphasizing poverty reduction, removing barriers for underserved groups, and promoting affordability, the standard of life and social well-being of Canadians in line with the Employment and Social Development Act.
- Conduct stakeholder consultations with community organizations, Indigenous groups, and equity-seeking stakeholders to ensure inclusive policy development.
- Monitor and evaluate programs using GBA+ and equity-focused approaches to ensure fairness, accessibility, and alignment with departmental objectives.
- Create accessible knowledge products like reports and briefs to inform decision-making and support evidence-based policy design.
- Facilitate horizontal policy initiatives through data-sharing agreements and integrated policy development frameworks.

Oct 2024 – April 2025	**Adaptation Advisor**, Nova Scotia Department of Environment and Climate Change, Halifax, NS

- Provide strategic guidance to support initiatives aimed at strengthening community and organizational resilience to climate change
- Contribute to promoting climate adaptation and equity across Nova Scotia

Dec 2020 – Dec 2024	**Senior Policy Analyst** (Indeterminate), Emergency Management & Programs Branch, Public Safety Canada, Ottawa, ON

- Lead policy and research analyst on the department mandate of gender-based analysis plus (GBA+), place-based social vulnerability, and systemic inequity analysis to support Canada's task force on the national flood insurance and relocation program.
- Perform geospatial analysis using data on climate-related hazards, demographics, socioeconomic and racial/ethnic characteristics, residential properties, and critical infrastructures to assess the consistency, accuracy, and limitations of climate change risk, social risk, and data-driven disaster and emergency management policies in Canada.
- Conduct research and review methodologies by consulting academic research, industry standards, and international case studies to identify best practices for the program.
- Formulate best practices, policy considerations, and recommendations for equitable and fair flood insurance solutions, drawing on complex geospatial data and modeling.
- Prepare project documents, presentations, briefing notes, maps, graphs, data visualizations, spatial analyses, technical support for policy teams, and policy research reports tailored for non-technical audiences.
- Facilitate coordination between departmental and inter-departmental projects and working groups to support cross-functional policy development.

May 2021 – Dec 2024	**Researcher** (contract, part-time), Climate Risk Research Group Faculty of Environment, University of Waterloo, Waterloo, ON
Jan 2019 – Dec 2024	**Professor (part-time),** Conestoga College, Kitchener, ON

- Courses Taught RSCH8120 – Policy, Standards, and Evaluation | ECON1030 – Macroeconomics | MATH 1010 – Business Mathematics | ECON1020 – Microeconomics

Sep 2017 – Dec 2017	**Sessional Lecturer**, Lakehead University - Orillia Campus, Orillia, ON

- Courses Taught MATH0210 – Quantitative Methods for the Social Scientist | GEOG 2271 – Quantitative Methods in Geography

Sep 2014 – Apr 2015	**Sessional Lecturer**, University of Waterloo, Waterloo, ON

- Courses Taught ECON 101 – Introduction to Microeconomics | ECON 221 – Statistics for Economists

Sep 2013 – Dec 2020	**Graduate Teaching & Research Assistant** in Geography, Environment, Economics, and Public Service, University of Waterloo, Waterloo, ON
Sep 2010 – Aug 2013	**Graduate Teaching & Research Assistant** in Economics & Micro Econometrics Uppsala University & University of Gothenburg, Sweden
Jan 2007 – Aug 2010	**Senior Lecturer** (Full-time) in Economics & Statistics, School of Business, University of Liberal Arts Bangladesh, Dhaka, Bangladesh
Feb 2005 – Dec 2006	**Lecturer** (Full-time) in Economics & Statistics, School of Business, Presidency University, Dhaka, Bangladesh
Feb 2004 – Jan 2005	**Lecturer** (Full-time) in Economics & Business, School of Business, The University of Comilla, Dhaka, Bangladesh

PEER-REVIEWED PUBLICATION:

Chakraborty, L., Spinney, J. A., Malomo, D., Thistlethwaite, J., Motlaghzadeh, K., Jahangir, M. S., Henstra, D., Andrews, S., & Pulatsu, B. (2025). Assessing the environmental justice implications of seismic risk in Ottawa-Gatineau and Montreal metropolitan areas. *International Journal of Disaster Risk Reduction*. https://doi.org/10.1016/j.ijdrr.2025.105516

Chakraborty, L., Bourke, R., Godsoe, M. (2023). Understanding Risk: A Social Vulnerability Index for Canada. *HazNet*. 18(1), Spring/Summer. http://haznet.ca/understanding-risk-social-vulnerability-index-canada/

Chakraborty, L., Rus, H., Henstra, D., Thistlethwaite, J., Minano, A., & Scott, D. (2022). Exploring spatial heterogeneity and environmental injustices in exposure to flood hazards using geographically weighted regression. *Environmental Research*. https://doi.org/10.1016/j.envres.2022.112982.

Chakraborty, L., Thistlethwaite, J., Scott, D., Henstra, D., Minano, A., & Rus, H. (2022). Assessing social vulnerability and identifying spatial hotspots of flood risk to inform socially just flood management policy. *Risk Analysis*. https://doi.org/10.1111/risa.13978.

Chakraborty, L., Thistlethwaite, J., Minano, A., Henstra, D., & Scott, D. (2021). Leveraging hazard, exposure, and social vulnerability data to assess flood risk to Indigenous communities in Canada. *International Journal of Disaster Risk Science*. https://doi.org/10.1007/s13753-021-00383-1.

Chakraborty, L., Rus, H., Henstra, D., Thistlethwaite, J., & Scott, D. (2020). A place-based socioeconomic status index: Measuring social vulnerability to flood hazards in the context of environmental

justice. *International Journal of Disaster Risk Reduction*, 43, 101394. https://doi.org/10.1016/J.IJDRR.2019.101394.

Rajeb, M., Hossain, M.M., & **Chakraborty, L**. (2017). "Gross Value Added of Agriculture Sector in Bangladesh: An Econometric Investigation," *Terengganu International Finance and Economics Journal* (TIFEJ), 2(1): 56 – 66. https://myjms.mohe.gov.my/index.php/tifej/article/view/1595

Hussain, T., **Chakraborty, L**., & Kabir, M.A. (2009). "Testing Weak Form of Efficiency on Dhaka Stock Exchange: An Application of Technical Trading Rule and Random Walk Model," *North-South Business Review*, 3(1).

Malakar, B., Khan, M.H., & **Chakraborty, L**. (2007). "The Zoo as Ecotourism Attraction - Visitor Reactions and Perceptions: The Case of Dhaka Zoo, Bangladesh," *Dhaka University Journal of Business Studies*, 28(2).

▪ *Policy Research Report*

Andrey, J., Thistlethwaite, J., **Chakraborty, L**., Jahangir, M.S., Motlaghzadeh, K., Watterodt, F., Castillo, B., Mendis-Millard, S. (2023). "Inclusive resilience: A socio-economic vulnerability index to map flood risk for targeted communications and disaster risk reduction." Waterloo, Ontario: Partners for Action, University of Waterloo.

Andrey, J., Wright, J., Thistlethwaite, J., **Chakraborty, L**., Jahangir, M.S., Motlaghzadeh, K., Watterodt, F., Christy, E., Mendis-Millard, S. (2023). "Data for Flood Resilience: Building Evidence for Equity-Informed Investment, Planning and Foresight". Waterloo, Ontario: Partners for Action, University of Waterloo, and The Co-operators Group Limited. https://uwaterloo.ca/partners-for-action/sites/default/files/uploads/files/p4a_funding_media_release_2022_0.pdf

Chakraborty, L., Thistlethwaite, J., & Henstra, D. (2021). "Flood Vulnerability and Climate Change: Improving flood risk assessment by mapping socioeconomic vulnerability in a mid-sized Canadian city." Canadian Climate Institute, 17 pp. https://climateinstitute.ca/publications/flood-vulnerability-and-climate-change/

Scott, D., Minano, A., **Chakraborty, L.,** Thistlethwaite, J., & Apajee, Y. (2020). "Flood Risk Analysis of Canadian Health and Emergency Infrastructure," Ottawa: Health Canada, 28 pp.

▪ *Book Chapter*

Chowdhury, T. A., Das, A. B., **Chakraborty, L**., & Barai, M. K. (2020). NGOs for Development: Experience of Bangladesh. In Bangladesh's Economic and Social Progress (pp. 351-380). Palgrave Macmillan, Singapore. Retrieved from https://link.springer.com/chapter/10.1007/978-981-15-1683-2_12

▪ *Presentations, Guest Lecture & Conference Attendance*

Chakraborty, L. (2024). "Spatial and temporal changes in socioeconomic vulnerability to flood hazards in Canada". Research paper presented at the 2024 Society for Risk Analysis (SRA) Annual Meeting, JW Marriott Austin, Texas, December 8 – 12, 2024.

Chakraborty, L. (2024). "Assessing distributive environmental injustices and socio-spatial heterogeneity to seismic risk in the built environment of Ottawa and Montreal". Research paper presented at the 3rd International Conference on Natural Hazards and Risks in a Changing World - Addressing Compound and Multi-Hazard Risk, Amsterdam, The Netherlands, June 12-13, 2024.

Chakraborty, L. (2023-24). Guest lecture on "Social Issues in Disaster Management", School of Administrative Studies, York University, Toronto, ON, Winter 2023, 2024

Chakraborty, L. (2023). Keynote speaker at the 7th International Conference on Environment and Disasters (ICED2023). http://iced.ac.cn/speakerDetail/2023/en?id=16

Chakraborty, L., Thistlethwaite, J., & Henstra, D. (2023). "Housing affordability and disproportionate flood risk exposure of economically insecure residents in Canada." Research paper presented at the 2023 Society for Risk Analysis (SRA) Annual Meeting, Renaissance Washington, D.C., December 10 – 14, 2023.

Jahangir, M.S., Motlaghzadeh, K., **Chakraborty, L.,** Mendis-Millard, S. (2023). A novel probabilistic machine-learning approach for identifying flood risk hotspots. Research paper presented at the Canadian Water Resource Association (CWRA) 2023 National Conference, Halifax, Nova Scotia, June 18-21, 2023.

Chakraborty, L. (2023). "Socio-geographic and health inequalities of Indigenous Peoples to COVID-19 across health regions in Canada." Research paper presented at the Annual Canadian Sociological Association (CSA-SCS) Conference, Federation of Humanities and Social Sciences Congress, York University, Toronto, Ontario, May 29 – June 2, 2023.

Chakraborty, L. (2023). "Spatio-temporal changes in social vulnerability and socioeconomic variability in Canada." Invited speaker at the International Conference on Climate Risk, Vulnerability and Resilience Building, UNESCO Headquarters, Paris, France, April 19, 2023 – April 21, 2023.

Chakraborty, L. (2022). "Assessing Exposure of Healthcare Facilities and Emergency Management Critical Infrastructure to Flooding Across Canada." Research paper presented at the SRA 2022 Annual Meeting, Tampa, Florida. December 4-8.

Chakraborty, L. (2022). "Focus on the Census Data Linkages." Academic Panel Member on Virtual Workshop Session 4, 2022 CRDCN National Fall Data Forum, Oct 19, 2022.

Chakraborty, L. (2022). "Atlantic Canada Flood Mapping Conference." Workshop proposal accepted for Day 2 workshop sessions and presented on "Canada-wide equity considerations in flood mapping and community-engaged flood risk communication," organized by Natural Resources Canada and CLIMAtlantic, Halifax, Oct 5-6, 2022.

Chakraborty, L. (2022). "Spatial concentration of socioeconomic inequality and GBA+ factors in public policy development." Policy research paper presented on the 2022 GIS-day program at the University of Manitoba, (Virtual) Mar 2, 2022.

Chakraborty, L. (2021). "Using geographically weighted regression to assess environmental injustice in the distribution of flood risk across Canada." Research paper presented at the 8th International Conference on Water and Flood Management (ICWFM), (Virtual) March 29-31.

Chakraborty, L. (2020). "National-scale flood risk assessment: Adjoining 100-year flood hazard exposure and social vulnerability maps at the census tract level across Canada." Paper presented at the SRA 2020 Annual Meeting (Virtual), December 13-17.

Chakraborty, L. (2020). "National-scale flood risk assessment: GIS-based flood hazards exposure and vulnerability mapping at the census tract level across Canada." Research paper presented at the Half-day 'Mapping from Home' virtual mini-conference, Canadian Cartographic Association, Jun 10.

Chakraborty, L., Minano, A., Scott, D., Thistlethwaite, J., & Henstra, D. (2019). "Assessing Social Vulnerability to Flood Hazards in Canada's Three Largest Census Metropolitan Areas." Research paper presented at the 42nd Applied Geography Conference 2019, Charlotte, NC, USA, October 23-25.

Chakraborty, L., Scott, D., Thistlethwaite, J., Henstra, D., & Rus, H. (2019). "Constructing an area-based socioeconomic status index in the context of environmental justice assessment across Canada: A Principal Components Analysis Approach." Paper presented at the SRA 2019 Annual Meeting, Arlington, VA, USA, December 8-12.

Chakraborty, L. (2018). "Analyzing social inequalities in flood risk exposure through assessing environmental justice implications for flood risk management, and valuing preferences for flood vulnerability reduction measures in Canada using a discrete choice experiment." The Ph.D. thesis presented at the CAGONT 2018 conference, University of Toronto, ON, October 19-20.

Chakraborty, L. (2016). "Integrated community-based disaster risk reduction approach to flood risk management: A good practice project in Ayutthaya, Thailand." Research paper presented at the Canadian Association of Geographers of Ontario Conference (CAGONT), Waterloo, ON, October 28–29.

Uddin, G.S. & **Chakraborty, L**. (2009). "International Trade, Financial Development and Economic Growth Nexus in Bangladesh: Empirical Evidence from Time Series Approach." Research paper presented at the International Finance Conference, IIMC, Joka, Calcutta, India, December 3-5.

Hussain, T., **Chakraborty, L.**, & Kabir, M.A. (2008). "Is Dhaka Stock Exchange Efficient? An application of Technical Trading Rule." Research paper presented at the International Conference on Recent Developments in Statistical Sciences (ICSS), BCFCC, Dhaka, Bangladesh, December 26–27.

COLLABORATIVE RESEARCH PROJECTS:

Neighbourhood housing affordability and flood risk in Canada (with Jason Thistlethwaite and Daniel Henstra) - writing manuscript for publication, Climate Risk Research Group: University of Waterloo, 2023-2025.

Spatial and temporal changes of social vulnerability to flood hazards in Canada: A sensitivity analysis, writing manuscript for publication, 2023-2025.

Assessing socio-spatial and health inequalities in the distribution of infection fatality and case fatality from COVID-19 to Indigenous peoples in Canada (with Dr. Ranjan Datta)– writing manuscript for publication, 2023-2025.

Evaluating flood exposure of health care and emergency management critical infrastructure (with Daniel Scott, Daniel Henstra, Jason Thistlethwaite, and Andrea Minano) – writing manuscript for publication, 2023-2025.

Analyzing urban resilience: Building evidence for equity-driven investment, planning, and foresight (with Sharmalene Mendis-Millard, Jason Thistlethwaite, Julie Wright) – Co-Investigator in a 2-year "Partners for Action" project, Funded by Co-operators, 2022 – 2024.

AWARDS, RECOGNITION & SCHOLARSHIPS:

2024	Society for Risk Analysis (SRA) International Travel Award
2023	UNESCO Headquarters 2023 International Conference Travel Award as an invited panel speaker
2022	"*Creativity and Innovation Award*" – received a formal departmental recognition award from "Public Safety Canada" for significant contribution to the "Canada-Wide Flood Hazard Model project."
2020	Graduate Research Studentship (GRS) Under the University Research Chair in Climate and Society, Dr. Daniel Scott, Funded by Health Canada
2020	Adaptation Canada 2020 Conference Travel Award
2020	Canadian Association of Geographers (CAG) Annual Conference Travel Award
2019	Society for Risk Analysis (SRA) Graduate Student Travel Award
2018	CRDCN Emerging Scholars Grant Award
2015 – 2019	Faculty of Environment Dean's Scholarship for Doctoral Studies, University of Waterloo
2013 – 2014	Economics Graduate Scholarship, University of Waterloo
2012 – 2013	SIDA Scholarship for Doctoral Studies, University of Gothenburg
2001	Economics Graduate Scholarship, Shahjalal University of Science & Technology

RESEARCH IMPACT (PRESS RELEASE, NEWS & MEDIA COVERAGE):

- Vulnerable populations in B.C. more at risk to flooding: study. Kelowna Capital News, Terrace Standard, Vancouver Island Free Daily (Aug 29, 2022).
- Indigenous people at greater risk of flooding caused by climate change: study, APTN National News (Aug 26, 2022).
- Low-income residents, visible minorities disproportionately affected by flooding risks in Canada: study, CTV News, abc17NEWS (Aug 22, 2022).
- Vulnerable communities face a higher risk of socioeconomic injustice due to flood hazards, Waterloo News, PreventionWeb (UNDRR), phys.org, Smart Water Magazine, Municipal Information Network, NationTalk, and SkyNews (Aug 22, 2022).
- Exploring spatial heterogeneity and environmental injustices in exposure to flood hazards using geographically weighted regression, Water Institute Research, Issue 13, WaterResearch Spotlight May 3, 2022).
- Des inondations aux conséquences plus désastreuses pour les Autochtones (Floods with more disastrous consequences for Aboriginal people), CBC ICI.Radio-Canada.Ca (January 14, 2022).
- New study shows B.C. Indigenous communities vulnerable to climate change risks, Kamloops News (Jan 11, 2022).
- Net Zero: Indigenous communities more vulnerable to flooding, iPolitics (Jan 7, 2022).
- Indigenous communities face a higher risk of socioeconomic vulnerability due to flooding, Waterloo News, PreventionWeb (UNDRR), Science Magazine, Smart Water Magazine (Jan 6, 2022).
- Indigenous communities at higher risk of climate change-induced flooding, study shows, CTV News (Jan 6, 2022).
- Social inequities put Indigenous communities at greater flood risk, study finds, National Observer (Dec 24, 2021).
- Study identifies Indigenous communities that are hotspots for flooding risk, Toronto Star (Dec 30, 2021).
- Socioeconomic Vulnerability and Flood Risk in the Current Era of Climate Change, Canadian Coastal Resilience Forum, Researcher Spotlight Series (Nov 30, 2021).

OTHER SCHOLARLY ACTIVITIES:

2022 - **Reviewer,** *Sustainability*
An international, cross-disciplinary, scholarly, peer-reviewed, and open-access MDPI journal of environmental, cultural, economic, and social sustainability of human beings.

2022 - **Reviewer,** *Environmental Science & Technology*
An impactful multidisciplinary environmental research journal of ACS Publications that aims to be transformational and direction-setting, publishing rigorous and robust papers for a multidisciplinary and diverse audience of scientists, policymakers, and the broad environmental community.

2022 - **Reviewer,** *International Journal of Disaster Risk Reduction*
A peer-reviewed ScienceDirect, Elsevier journal for researchers, policymakers and practitioners across diverse disciplines: earth sciences and their implications; environmental sciences; engineering; urban studies; geography; and the social sciences.

2021 - **Reviewer,** *Natural Hazards*
A peer-reviewed Springer journal for publishing original research work on all aspects of natural hazards, including the forecasting of catastrophic events, risk management, and the nature of precursors of natural and technological hazards.

2021 -   **Reviewer,** *Journal of Environmental Management*
A peer-reviewed Elsevier journal for publishing original research on managing environmental systems and improving environmental quality.

2018 –   **Reviewer**, *Social Indicators Research*
An International and Interdisciplinary Journal of Springer for Quality-of-Life Measurement.

COURSES TAUGHT/ASSISTED:

- **Faculty of Environment, University of Waterloo, Waterloo, ON**
  ENVS 278: Applied Statistics for Environmental Research; GEOG 207: Climate Change Fundamentals; PLAN 320: Economic Analyses for Regional Planning; GEOG 181: Designing Effective Maps; GEOG 203: Environment and Development in a Global Perspective; GEOG 202: Geography of the Global Economy; GEOG 101: Human Geographies: People, Space, and Change
- **Master of Public Service program, University of Waterloo, Waterloo, ON**
  PS 625: Economics and Public Policy I; PS 624: Economic Research Methods & Data Analysis
- **Department of Economics, University of Waterloo, Waterloo, ON**
  ECON 201: Microeconomic Theory for Business and Policy; ECON 221: Statistics for Economists ECON 101: Introduction to Microeconomics, ECON 351: Labour Economics
- **Faculty of Environment, Lakehead University, Orillia, ON**
  MATH-0210-FAO & MATH-0210-FAB: Quantitative Methods for the Social Scientist GEOG-2271-FAO: Quantitative Methods in Geography
- **School of Business & School of Interdisciplinary Studies, Conestoga College, Kitchener, ON**
  POLS8090: Public Policy; RSCH 8120: Policy, Standards, and Evaluation; ECON 1030: Macroeconomics; ECON 1020: Microeconomics; MATH 1010: Business Mathematics

OTHER PROFESSIONAL EXPERIENCE:

Jul 2009 – Aug 2009   **Trainer,** Data analytical techniques on Intermediate MS Excel
A custom-made Excel Training for GEMCON group Employees, Dhaka, Bangladesh

Jun 2005 – Dec 2006   **Proctor (in charge)**, Presidency University, Dhaka, Bangladesh

PROFESSIONAL DEVELOPMENT TRAINING/CERTIFICATES ATTENDED (Selected):

May 2025   SPSD/M Black Box Training (English), Statistics Canada, April 25 – May 2, 2025

Aug 2023   SCS 1860 - Foundations of Project Management, School of Continuing Studies, University of Toronto, May 24 – Aug 16, 2023

Sep 2022   *Equity, Diversity & Inclusion for Disaster & Emergency Management: A speaker series* Organized by CIFAL at York University, Bi-weekly sessions, Sept 21-Nov 30, 2022

Sep 2022   *The First Nations Principles of OCAP® Workshop* Organized by First Nations Information Governance Centre (FNIGC), Sept 26-27, 2022

Feb 2022   *Disaster Ethics (mini-online course)* Instructed by Professor David Etkin, Faculty of Liberal Arts & Professional Studies at York University

Jan 2020   *Active Learning Strategies* Teaching and Learning Centre, Conestoga College Professional Development Workshop

Dec 2018   *Creating a Positive Learning Environment* Teaching and Learning Centre, Conestoga College Professional Development Workshop

Oct 2011   *Copenhagen Economics Talent Day'11* Copenhagen Economics, Sankt Annæ Plads 13 / DK-1250 Copenhagen, Denmark

Jul 2008   *Research Methods for Business and Social Sciences* Conducted by Dr. Syed Saad Andaleeb, Professor and Chair of Marketing, Penn State Erie, USA; organized by ULAB, Dhaka, Bangladesh

EXTRACURRICULAR ACTIVITIES:

Jan 2008 – Aug 2010   **Faculty Advisor**, ULAB Business Club, Dhaka, Bangladesh

Jun 2009   **Coordinator and advisor**, Budget Analysis Workshop 2009-10 Organized by ULAB Business Club and Jagoree, held in ULAB Auditorium, Dhaka, Bangladesh

Jan 2006 – Dec 2006   **Faculty Advisor**, Presidency University Cultural Club, Dhaka, Bangladesh

Aug 2003   Cultural Secretary, Graduation Completion Fest, SUST, Sylhet, Bangladesh

2001 – 2002   General Secretary, Theatre SUST, Bangladesh

OTHER INFORMATION:

Citizenship   Canadian
Affiliations   Member, Canadian Sociological Association (CSA)

Member, Society for Risk Analysis (SRA)
Member, Canadian Water Resource Association (CWRA)
Member, Canadian Association of Geographers (CAG)

LANGUAGE:
English (Advanced) | French (Beginners) | Bengali (Native)

SECURITY CLEARANCE:
Level II Secret Clearance until August 2032 (Protected A & B, Confidential and Secret)
Reliability Status until October 2028 (Protected A & B)

SUMMARY OF QUALIFICATIONS:
- Over 16 years of academic experience in teaching, policy-focused research, and interdisciplinary projects, with 5+ years in data-driven policy analysis and evidence-based decision-making in public service.
- Skilled in researching and analyzing primary and secondary data using various methodologies, including qualitative, quantitative, and statistical analysis, to provide evidence-based insights for internal and external decision-making.
- In-depth knowledge of affordable housing and core housing needs, with research experience focused on vulnerable populations and communities. Well-versed in racial/ethnic, social, economic, and political factors influencing housing policies.
- Experienced in managing projects using web-based tools such as Gantt charts, work breakdown structures (WBS), and Monday.com for project estimation, budgeting, task distribution, stakeholder collaboration, project administration, and risk management.
- Proficient in collecting and analyzing extensive confidential microdata, including social, economic, and health surveys, population censuses, and residential address points, specifically for housing research (Statistics Canada census and surveys, CANSIM tables, and various administrative data sources).
- Strong supervisory and leadership skills in technical analysis, report writing, presentations, teaching undergraduate courses, and managing policy development projects.
- Experienced in coaching, training, and mentoring newly recruited teaching and research assistants, as well as colleagues in public service, while fostering team-building with senior colleagues.
- Effective communicator with diverse audiences, both verbally and in writing, honed through extensive experience as a researcher and presenter at academic conferences, seminars, and professional development workshops.
- Applied expertise in statistical software and programming languages, including Stata, IBM SPSS, R, and Python, as well as GIS-based software like GeoDa, MGWR, QGIS, and ArcGIS.
- Maintains strong relationships with industry contacts and a robust professional network.
- Outgoing and enthusiastic, with a collaborative approach to working with colleagues and community partners.

SUMMARY OF TECHNICAL QUALIFICATIONS:
- **Economic, Social, Housing, Health, and Spatial Data Modeling and Research Design**
    1. Comprehensive knowledge of quantitative and qualitative research methods, including survey design, multivariate regression, and spatial econometrics, to assess the causes and impacts of spatial, economic, and social phenomena.
    2. Proficient in utilizing statistical software and programming languages such as Stata, SPSS, R, and Python, as well as GIS-based software like GeoDa, GWR4, QGIS, and ArcGIS, for predictive analysis in fields like economics, socio-environmental geography, environmental sociology, statistics, quantitative social sciences, and public health.
- **Social Vulnerability, GBA+, Systemic Inequity, and Community Well-being Assessment Expertise**
    1. In-depth understanding of place-based and multi-scale socioeconomic vulnerability to climatic hazards (e.g., floods, wildfires) with a focus on intersectional approaches and the integration of Gender-Based Analysis Plus (GBA+) in evidence-based decision-making.
    2. Extensive knowledge in analyzing social inequality, researching social indicators, measuring community well-being, and conducting spatial distribution and social vulnerability assessments across communities.
    3. Advanced expertise in applying quantitative research methods (e.g., economic, econometric, geospatial) to evaluate social, spatial, and environmental inequities in exposure to climatic hazards.
    4. Strong understanding of risk-based all-hazards management, inclusive social resilience, equity-based principles in disaster risk management, and related policy analysis.

- **Geospatial Flood Risk Assessment and Management Expertise**
  1. Comprehensive expertise in integrated flood risk assessment and management methodologies.
  2. Skilled in residential flood exposure analysis, social vulnerability and flood risk mapping, and geospatial risk hotspot analysis.
  3. Proficient in communicating flood risk effectively with government and academic partners, research organizations, and Canadian Crown corporations, including CMHC and CIRNAC.

FUNCTIONAL COMPETENCIES:
Research, Exploration, and Solution-Oriented:
- *Research and Hypothesis Development:* Create testable hypotheses and conduct studies to support evidence-based decisions.
- *Data Analysis and Reporting:* Utilize advanced research methods to analyze data and produce policy research reports, presenting findings at various professional events.
- *Communication Skills:* Translate technical information for non-technical audiences and recommend solutions based on research.
- *Stakeholder Consultation:* Work with stakeholders to solve real-world problems and develop practical solutions.
- *Organizational Integration:* Facilitate communication between staff and executives, ensuring engagement and alignment on priorities and strategic goals.