Samopriya Basu

MITACS Accelerate Post-Doctoral Fellow (2022–present)
Department of Statistics & Actuarial Science, Simon Fraser University, Burnaby, BC, Canada

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	Apartment 5905	*E-mail*: samopriya_basu@sfu.ca
	Burnaby, BC – V5C 0K4	*Web*: sampr0b.github.io
	Canada	*Blog*: avzaagzonunaada.wordpress.com

Education

PhD Statistics (Advisor: Prof. Jan Hannig) — **December 2021**
The University of North Carolina
Chapel Hill, North Carolina, USA

MSc Statistics — **May 2015**
The University of Calcutta
Calcutta, West Bengal, India

BSc Statistics (Hon.), Mathematics, Economics — **July 2013**
The University of Calcutta
Calcutta, West Bengal, India

Research Areas

- *Statistics*: Statistical Paradigms (Fiducial & Bayesian), Inverse Problems, Stochastic Calculus, Uncertainty Quantification, Applications in the Geosciences and Linguistics

- *Linguistics*: NLP for Under-Researched Languages, Production–Perception Interface, Computational Approaches to Areal & Historical Linguistics, Languages of the North American Pacific Northwest, Languages of the Caucasus, Indo-Iranic Languages

Papers

- A. ARORA, S. BASU, A. FARRIS, GOPALAKRISHNAN R.; "B^{h}āṣācitra: Visualizing the Dialect Geography of South Asia"; in *Proceedings of the 2nd International Workshop on Computational Approaches to Historical Language Change* (2021)

- A. ARORA, S. BASU, A. FARRIS, S. KOLICHALA; "Computational Historical Linguistics and Language Diversity in South Asia"; in *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics, Volume 1: Long Papers* (2022)

- A. ARORA, S. BASU, A. FARRIS, S. KOLICHALA; "Jambu: A Historical Linguistic Database for South Asian Languages"; in *Proceedings of the 20th SIGMorPhon Workshop on Computational Research in Phonetics, Phonology, and Morphology* (2023)

- S. BASU, D. BINGHAM, D. ESTEP, D. SCHOUTEN, F. YAZDI; "Bayesian Inversion and Uncertainty Quantification for Muon Tomography"; to be submitted (Dec. 2023) to *Journal of Geophysical Research: Solid Earth*

- R. TEGETHOFF, S. BASU; "Four new Lautgesetze in the Indo-Aryan Languages of the Hindukush–Karakoram"; to be submitted (2024) to *Münchener Studien zur Sprachwissenschaft*

- S. BASU, J. HANNIG; "Fiducial Inversion for Parameters of Stochastic Differential Equations with Constant Diffusion"; to be submitted (2024) to *SIAM/ASA Journal on Uncertainty Quantification*

Books	• S. Basu, T. Butler, D. Estep, N. Panda; *A Ramble through Probability*; manuscript submitted (Sep. 2023) to *SIAM Computational Science & Engineering*
	• S. Basu, A. Kulkarni (editors); *Proceedings of (Formal) Approaches to South Asian Languages, 13* (forthcoming, 2024)

Books

- S. Basu, T. Butler, D. Estep, N. Panda; *A Ramble through Probability*; manuscript submitted (Sep. 2023) to *SIAM Computational Science & Engineering*
- S. Basu, A. Kulkarni (editors); *Proceedings of (Formal) Approaches to South Asian Languages, 13* (forthcoming, 2024)

Web Publications

- A. Arora, S. Basu, A. Farris, Gopalakrishnan R.; *B^{h}āṣācitra* (2021)
- A. Arora, S. Basu, A. Farris, S. Kolichala; *Jambu* (2023)

Teaching

- Teaching Assistant for various Statistics courses
  (University of North Carolina at Chapel Hill; 2016, 2017)
- Instructor for *Introduction to Data Models and Inference*
  (University of North Carolina at Chapel Hill; 2018, 2019, 2020)
- Instructor for *Applied Multivariate Analysis*
  (Simon Fraser University; Spring 2024)

Award

Bilingual Abstract Award at the *Statistical Society of Canada (SSC) Annual Meeting, 2023*
(with Jean Lecoulant and Faezeh Yazdi)

Professional Activities

- Senator (2017–2019): Graduate and Professional Student Federation, UNC–Chapel Hill, representing the Department of Statistics and Operations Research
- Refereed twice for the journal *Stat* (2018, 2020)
- Refereed twice for the *Special Interest Group on Typology (SIGTyp) Workshop on Research in Computational Linguistic Typology and Multilingual NLP* (2022, 2023)
- Research Consultant (May 2022–present): IDEON Technologies Inc., Richmond, BC
- Research Consultant (June 2023–present): *Atlas of the Languages of Iran*, Geomatics and Cartographic Research Centre, Carleton University, Ottawa, ON
- Organizer: SFU Salish Forum (with Danica Reid, Julia Schillo & Lauren Schneider)

Software

R (proficient), Python (familiar), MatLab (familiar), typesetting in LaTeX

Languages

- Speaking and reading proficiency in Bengali (native), English (fluent), Hindi-Urdu (fluent), Ossetic (advanced), Kashmiri (intermediate)
- Limited reading and/or communicating ability in Russian, Sanskrit, Coptic, German, Circassian

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