Saikat **Banerjee**

STATISTICAL GENETICS · BAYESIAN METHODS · SYSTEMS MEDICINE · DATA SCIENCE

T4/103, Am Faßberg 11, Göttingen 37077, Germany

☐ (+49) 17621103442 | ✉ saikat.banerjee@mpibpc.mpg.de

⌂ saik.at | ⬡ banskt | in banskt

👥 8 Sep. 1985 | ⚑ Indian

I successfully managed multiple identities: data science postdoc / physics PhD / chemistry Masters / entrepreneur / free-lance graphic designer and web developer. I write equations, develop software, lead projects and design stuff.

Experience

Postdoctoral Fellow, Max Planck Institute for Biophysical Chemistry   *Göttingen, Germany*
ADVISOR: DR. JOHANNES SÖDING   *May 2015 – Present*

- Developed a Bayesian methodology and software for large scale analyses of medical data.
- Communicated our method in an international peer-reviewed journal as the first author of a research article.
- Presented our work at an international conference (ISMB 2019). Invited to speak at the University of Göttingen.
- Coordinated a project to develop a software for analysing large scale transcriptomics data. Communication in progress.
- Supervised a Master's thesis and mentored three internship students.

Research Associate, Indian Institute of Science   *Bengaluru, India*
ADVISOR: PROF. BIMAN BAGCHI   *May 2014 - Apr. 2015*

- Led two projects with challenging deadlines and international collaborations: (1) Understanding the origin of long-range hydrophobic force, and (2) Role of biological water in the hydration shell of proteins.
- Communicated both of them in international peer-reviewed journals, one of them as first author.
- In charge of administration and maintenance of high performance computing (HPC) cluster from Sep. 2011 to Apr. 2015.

Co-founder, Beejig   *Bengaluru, India*
A B2B COMPANY FOR WORD-OF-MOUTH MARKETING   *Jan. 2012 - Sep. 2013*

- Extensively involved in conceptualization, market research and app development.
- Raised initial funding of $20000 and recruited sales manager along with a team of two sales executives.
- Deployed our marketing tool for Lakme India chain of salons in Bengaluru. Their sales increased by 12% in only two months, and we were invited to launch our program in Mumbai.
- Organized the dissolution of our company by selling the assets to a bigger company.

Education

PhD (Statistical Physics), Indian Institute of Science. More than 10 peer-reviewed publications.   *2014*

M.S. (Chemistry), Indian Institute of Science. Class rank 2nd with a CGPA of 6.9 out of 8.   *2009*

B.Sc., University of Calcutta. Ranked 1st among all colleges in the university.   *2007*

Skills

Programming	Python, FORTRAN, C++, Java
Bioinformatics	GWAS, EQTL, Finemapping, PrediXcan
Molecular Dynamics	LAMMPS, GROMACS
Web	HTML5, CSS, PHP, Node.JS
Languages	Bengali (native), English (fluent), Hindi (fluent), German (basic)
Others	Linux, Bash, LaTeX, Git, VMD, Adobe Illustrator, Adobe Photoshop, Inkscape

Software

B-LORE Bayesian multiple logistic regression with variable selection.
TEJAAS L_2 regularized 'reverse' multiple linear regression for discovering trans-eQTLs.

Select Publications

Bayesian multiple logistic regression for case-control GWAS. Saikat Banerjee, Lingyao Zeng, Heribert Schunkert and Johannes Söding. *PLOS Genetics*, DOI:10.1371/journal.pgen.1007856 (2018)

Orientational order as the origin of the long-range hydrophobic effect. Saikat Banerjee, Rakesh S. Singh and Biman Bagchi. *The Journal of Chemical Physics*, **142**, 134505 (2015)

Diffusion on a rugged energy landscape with spatial correlation. Saikat Banerjee, Rajib Biswas, Kazuhiko Seki and Biman Bagchi. *The Journal of Chemical Physics*, **141**, 124105 (2014)

Enhanced pair hydrophobicity in the water–dimethyl sulfoxide (DMSO) binary mixture at low DMSO concentrations. Saikat Banerjee, Susmita Roy and Biman Bagchi. *The Journal of Physical Chemistry B*, **114**, 12875–12882 (2010)

Select Presentations

Annual meeting of the International Society for Molecular Biology (ISMB 2019) *Basel, Switzerland*
Bayesian logistic regression for case-control GWAS *Jul. 2019*

Advanced seminar for statistical genetics *Göttingen, Germany*
Invited by Dr. Henner Simianer, Georg August Universität *Jan. 2017*

Honors & Awards

2015 **Best Poster**, Faraday Discussions FD177, Royal Society of Chemistry
2009 **Best Poster**, Frontier Meeting in Chemical Biology
2007 **Gold Medalist**, 1st position in B.Sc. Chemistry Honors at the University of Calcutta
2002 **National Merit Scholarship, Govt. of India**, 23rd rank in final school examination, West Bengal

Extracurricular Activity

Consultant, Z-Axis Labs *U.S.A., 2014*

• Led a team of two developers and a graphic designer to create an iOS app.

Graphic design and web development, Freelancer

• Curated award-winning logos and created web / brand identity for more than 20 startups.
• Designed two book covers for Oxford University Press

Hobbies

• Photography, Hiking, Long distance biking