

APARAJITA KHAN

Email aparajita@stanford.edu
Contact Number +91-7384850465
Web <https://aparajita-k.github.io/>
Date of Birth 11 July 1990



Present Position

Postdoctoral Scholar
Neurosurgery, Stanford University
Stanford, CA-94305, USA

Education

- 2015-2021 Ph.D. in Computer Science - **Indian Statistical Institute**
Thesis: **Integrative Clustering of Multi-View Data: Subspace Clustering, Graph Approximation to Manifold Learning**
Supervisor: Prof. Pradipta Maji
Ph.D. Coursework Marks: **92%**
- 2012-2015 Master of Technology in Computer Technology - **Jadavpur University**
Specialization: Pattern Recognition & Bioinformatics
M. Tech thesis: Gene Clustering and Construction of Intra-Cluster Gene Regulatory Network
Supervisor: Prof. Mita Nasipuri
Gold Medalist, CGPA: **9.31/10**, First Class
- 2008-2012 Bachelor of Engineering – **University of Burdwan**
Computer Science & Engineering
Marks: **86.2%**, First Class with Honours
- 2008 Higher Secondary Examination (12th Class), CBSE
Hem Sheela Model School, Durgapur, West Bengal
Marks: **88.2%**, First Division
- 2006 Secondary Examination (10th Class), CBSE
Hem Sheela Model School, Durgapur, West Bengal
Marks: **88.8%**, First Division

Research Interests

Data Analysis and Pattern Recognition, Machine Learning, Multi-View Learning, Manifold Learning, Computational Biology and Bioinformatics, Multi-Omics Data Integration.

Publications: Total- 10

Selected Publications

1. **Aparajita Khan** and Pradipta Maji. “[Multi-Manifold Optimization for Multi-View Subspace Clustering](#)”. **IEEE Transactions on Neural Networks and Learning Systems**, pages 1-13, 2021. DOI: 10.1109/TNNLS.2021.3054789.
2. **Aparajita Khan** and Pradipta Maji. “[Approximate Graph Laplacians for Multimodal Data Clustering](#)”. **IEEE Transactions on Pattern Analysis and Machine Intelligence**, 43(3):798-813, 2021. DOI: 10.1109/TPAMI.2019.2945574.
3. **Aparajita Khan** and Pradipta Maji. “[Selective Update of Relevant Eigenspaces for Integrative Clustering of Multimodal Data](#)”. **IEEE Transactions on Cybernetics**, pages 1-13, 2020. DOI: 10.1109/TCYB.2020.2990112.
4. **Aparajita Khan** and Pradipta Maji. “[Low-Rank Joint Subspace Construction for Cancer Subtype Discovery](#)”. **IEEE/ACM Transactions on Computational Biology and Bioinformatics**, 17(4):1290-1302, 2020. DOI: 10.1109/TCBB.2019.2894635.

Awards and Recognition

1. **First Prize in Tenth IDRBT Doctoral Colloquium** for the paper entitled “Joint Eigenspace Approximation for Integrative Clustering of Multi-Omics Data”, December 07-08, 2020.
2. **Best Paper Award** for the paper entitled “Principal Subspace Updation for Integrative Clustering of Multimodal Omics Data” in the Proceedings of 3rd International Conference on Computational Intelligence and Networks (CINE 2017), Bhubaneswar, India, pp. 99--104, October 2017.
3. **University Gold Medal** from **Jadavpur University**, India, for standing First in Master of Technology in Computer Technology, 2015.

Work Experience

- **Project Fellow** for the project entitled “Case Based Reasoning in Signature Authentication to Prevent Fraudulent Transactions”, funded by University Grants Commission, under the supervision of Dr. Chitrita Chaudhuri, Department of Computer Science and Engineering, **Jadavpur University**, from 19 December 2013 – 30 June 2015.

Tutorials/Teaching

1. A. Khan, “Spectral Clustering and its Application in R”, in One Week Online Workshop on Statistics and Machine Learning in Practice at Department of Statistics, Brahmananda Keshab Chandra College, Kolkata, India, July 29, 2020.
2. A. Khan and A. Mandal, “Supervised Feature Selection, Principal Component Analysis, and Linear Discriminant Analysis”, in Short Term Course on Machine Learning for Practitioners at Indian Statistical Institute, Kolkata, India, November 19, 2019.

3. A. Khan, "Low-Rank Joint Subspace Construction for Multimodal Data Clustering", in Lightning Talk session in memory of Professor C. A. Murthy, at Machine Intelligence Unit, Indian Statistical Institute, Kolkata, India, March 14, 2019.
4. Teaching Assistant in Data and File Structures Laboratory MTech (CS): First year, First semester, offered by Professor Mandar Mitra and Malay Bhattacharyya, Indian Statistical Institute, Kolkata, India, July -December, 2018.

Journal Peer Review Activities

i) IEEE Transactions on Neural Networks and Learning Systems, ii) IEEE Transactions on Pattern Analysis and Machine Intelligence, iii) IEEE Transactions on Cybernetics, iv) IEEE Transactions on Systems, Man and Cybernetics: Systems, v) IEEE Journal of Biomedical and Health Informatics, vi) IEEE/ACM Transactions on Computational Biology and Bioinformatics

Coding/ Technical Skills

- R & Bioconductor
- Python (Numpy, Scikit-learn, PyTorch)
- C/C++
- MATLAB
- HTML, CSS
- LATEX
- CYTOSCAPE

GITHUB REPOSITORY: <https://github.com/Aparajita-K>

References

1. **Prof. Pradipta Maji**
Machine Intelligence Unit
Indian Statistical Institute
Email pmaji@isical.ac.in
Web <https://www.isical.ac.in/~pmaji/>
2. **Prof. Rajat Kumar De**
Machine Intelligence Unit
Indian Statistical Institute
Email rajat@isical.ac.in
Web <https://www.isical.ac.in/~rajat/>
3. **Prof. Bhargab B. Bhattacharya**
Distinguished Visiting Professor
Department of Computer Science and Engineering
Indian Institute of Technology Kharagpur
Email bhargab.bhatta@gmail.com
Web <https://www.isical.ac.in/~bhargab/>

Personal Details

Mother's Name: Monidipa Khan
Nationality: Indian

Father's Name: Giridhari Khan
Gender: Female

I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Aparajita Khan

January, 2022