Dr. Debarghya Ghoshdastidar



Personal and contact information

Personal information Date of birth: 27.08.1987

Nationality: Indian

Family status: Married; no children

CONTACT DETAILS Eberhard Karls Universität Tübingen

Department of Computer Science

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Education and employment

From Sep 2019	Assistant Professor at Department of Informatics, TU Munich
May 2016 – Aug 2019	Post doctoral researcher at Department of Computer Science, University of Tübingen
Aug 2012 – Apr 2016	Ph.D. in Computer Science at Department of Computer Science & Automation, Indian Institute of Science
Aug 2010 – Jul 2012	Master in System Science & Automation at Indian Institute of Science
${\rm Jul} \ 2006 - {\rm May} \ 2010$	Bachelor in Electrical Engineering at Jadavpur University, Kolkata

Awards and memberships

SINCE 2017	Fellow in Eliteprogramm für Postdocs of the Baden-Württemberg Foundation
2017	Commendation certificate from Indian Institute of Science for outstanding doctoral thesis. Thesis also nominated for ACM India doctoral dissertation award
2013 - 2016	Google Ph.D. Fellow in statistical learning theory (one of 39 candidates worldwide awarded in 2013)
2013	N. R. Khambati medal for best Masters student in Department of Electrical Engineering, Indian Institute of Science
2010	S. K. Basu medal for highest marks in laboratory and practical examinations of Bachelors (Electrical) in Jadavpur University

2010 All India Rank 4 (out of 52000 candidates) in Graduate Aptitude

Test in Engineering (Electrical), India

Research grants

2018 – 2022 Eliteprogramm für Postdocs of Baden-Württemberg Founda-

tion (114,000 Euros, plus 13.000 Euros from Uni Tübingen),

which funds one Ph.D. student for 3 years

Professional activities

Selection committee PhD applicants at International Max Planck Research School for

Intelligent Systems

REVIEWER Conferences: ICML; Neurips; AISTATS; COLT; IJCAI

Journals (selected): Annals of Statistics; IEEE TPAMI; IEEE TIT; IEEE TNNLS; IEEE SMC; Machine Learning; Automatica

Other: Mathematical Reviews

Teaching and mentoring

Instructor

Winter 2018/19 Lecture on **Statistical network analysis**

Department of Computer Science, University of Tübingen

Summer 2018 Seminar on Machine learning theory: Statistical inference

on networks

Department of Computer Science, University of Tübingen

Winter 2016/17 Seminar on Machine learning theory: Crowdsourcing algo-

rithms and their statistical analysis

Department of Computer Science, University of Tübingen

Teaching assistant / evaluator

Fall 2013, 2014, 2015 Teaching assistant for **Probability and statistics**

Department of Computer Science, Indian Institute of Science

Spring 2014 Evaluator (invited) for final year projects of bachelors students

Department of Computer Science & Engg., R. V. College of Engi-

neering, Bangalore

Ph.D. students supervised

SINCE DEC 2018 Leena Chennuru Vankadara (University of Tübingen)

Masters students / Interns mentored

2019 Sebastian Bordt (Intern, Uni Tübingen) 2014 – 2015 Nithish Pai (M.Sc., Indian Institute of Science) 2013 – 2014 Ajay Adsul, Jinu Krishnan (M.E., I.I.Sc.)

Invited talks

May 2019	Conference on Random matrix theory: Applications in the Information Era, Krakow, Poland
Ост 2017	Weierstrass Institute, Berlin, Germany
Ост 2016	University of Potsdam, Potsdam, Germany
SEP 2016	Dagstuhl seminar on Foundations of Unsupervised Learning, Wadern, Germany
Jan 2016	Indian Institute of Technology Bombay, Mumbai, India
Ост 2015	R. V. College of Engineering, Bangalore, India
Mar 2015	ACM-IKDD Conference on Data Sciences, Bangalore, India
Oct 2012	Bangalore Probability Seminar, Bangalore, India

Publications

Google scholar (as of June 2019): Total citations = 127, h-index = 8

Publications in refereed journal and conference proceedings

- 1. D. Ghoshdastidar and U. von Luxburg. Practical methods for graph two-sample testing. In S. Bengio, H. Wallach, H. Larochelle, K. Grauman and N. Cesa-Bianchi (Eds.), Advances in Neural Information Processing Systems (Neurips), 31, 2018.
- 2. D. Ghoshdastidar, M. Gutzeit, A. Carpentier and U. von Luxburg. Two-sample tests for large random graphs using network statistics. In S. Kale, O. Shamir and K. Chaudhuri (Eds.), *Annual Conference on Learning Theory (COLT)*, PMLR 65:954-977, 2017.
- 3. S. Haghiri, D. Ghoshdastidar and U. von Luxburg. Comparison based nearest neighbor search. In A. Singh and J. Zhu (Eds.), *International Conference on Artificial Intelligence and Statistics (AISTATS)*, PMLR 54:851-859, 2017.
- 4. D. Ghoshdastidar and A. Dukkipati. Uniform hypergraph partitioning: Provable tensor methods and sampling techniques. *The Journal of Machine Learning Research*, 18(50):1-41, 2017.
- 5. D. Ghoshdastidar, and A. Dukkipati. Consistency of spectral hypergraph partitioning under planted partition model. *The Annals of Statistics*, 45(1):289-315, 2017.
- 6. D. Ghoshdastidar, A. P. Adsul, and A. Dukkipati. Learning with Jensen-Tsallis kernels. *IEEE Transactions on Neural Networks and Learning Systems*, 27(10):2108-2119, IEEE, 2016.
- A. Dukkipati, D. Ghoshdastidar, and J. Krishnan. Mixture modelling with compact support distributions for unsupervised learning. In *Proceedings of International Joint* Conference on Neural Networks (IJCNN), pp. 2706-2713, IEEE, 2016.

- 8. D. Ghoshdastidar and A. Dukkipati. A provable generalized tensor spectral method for uniform hypergraph partitioning. In F. Bach and D. Blei (Eds.), *International Conference on Machine Learning (ICML)*, PMLR 37:400-409, 2015.
- 9. D. Ghoshdastidar and A. Dukkipati. Spectral clustering using multilinear SVD: Analysis, approximations and applications. In *AAAI Conference on Artificial Intelligence*, pp. 2610-2616, 2015.
- D. Ghoshdastidar and A. Dukkipati. Consistency of spectral partitioning of uniform hypergraphs under planted partition model. In Z. Ghahramani, M. Welling, C. Cortes, N. D. Lawrence and K. Q. Weinberger (Eds.), Advances in Neural Information Processing Systems (NIPS), 27:397-405, 2014.
- 11. D. Ghoshdastidar, A. Dukkipati, A. P. Adsul and A. S. Vijayan. Spectral clustering with Jensen-type kernels and their multi-point extensions. In *IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPR)*, pp. 1472-1477, IEEE, 2014.
- 12. D. Ghoshdastidar, A. Dukkipati, and S. Bhatnagar. Newton based stochastic optimization using q-Gaussian smoothed functional algorithms. *Automatica*, 50(10):2606-2614, Elsevier, 2014.
- 13. D. Ghoshdastidar, A. Dukkipati, and S. Bhatnagar. Smoothed functional algorithms for stochastic optimization using q-Gaussian distributions. *ACM Transactions on Modeling and Computer Simulation (TOMACS)*, 24(3):Article 17, ACM, 2014.
- 14. A. Dukkipati, G. Pandey, D. Ghoshdastidar, P. Koley, and D. M. V. Satya Sriram. Generative maximum entropy learning for multiclass classification. In *IEEE International Conference on Data Mining (ICDM)*, pp. 141-150, IEEE, 2013.
- 15. D. Ghoshdastidar and A. Dukkipati. On power-law kernels, corresponding reproducing kernel Hilbert space and applications. In AAAI Conference on Artificial Intelligence, 2013.
- 16. D. Ghoshdastidar, A. Dukkipati and S. Bhatnagar. q-Gaussian based smoothed functional algorithm for stochastic optimization. In *International Symposium on Information Theory* (*ISIT*), pp. 1059-1063, IEEE, 2012.

Preprints / Other publications

- 1. D. Ghoshdastidar, M. Gutzeit, A. Carpentier, and U. von Luxburg. Two-sample hypothesis testing for inhomogeneous random graphs. *Preprint at arXiv:1707.00833*.
- 2. D. Ghoshdastidar, M. Perrot, and U. von Luxburg. Foundations of Comparison-Based Hierarchical Clustering. *Preprint at arXiv:1811.00928*.
- 3. D. Ghoshdastidar and U. von Luxburg. Do nonparametric two-sample tests work for small sample size? A study on random graphs. NIPS-2016 workshop on Adaptive and Scalable Nonparametric Methods in ML.
- 4. D. Ghoshdastidar and A. Dukkipati. Coloring random non-uniform bipartite hypergraphs. *Preprint at arXiv:1507.00763*.