

# ANIMESH MUKHERJEE

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## CURRENT POSITIONS

02/2016–present: Associate Professor, Dept. of Comp. Sc. and Engg., IIT Kharagpur.  
08/2011–02/2016: Assistant Professor, Dept. of Comp. Sc. and Engg., IIT Kharagpur.  
01/2014–12/2019: Simons Associate, ICTP, Trieste, Italy.

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## EDUCATIONAL QUALIFICATIONS

BTech; Haldia Institute of Technology, Haldia, West Bengal, India; % Marks: 89; Ranked: 1<sup>st</sup>.  
Mtech; Indian Institute of Technology, Kharagpur, West Bengal, India; CGPA: 9.43; 4<sup>th</sup>.  
PhD; Indian Institute of Technology, Kharagpur, West Bengal, India.

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## ACADEMIC ACHIEVEMENTS

03/16: *CSCW Honorable Mention Award*.  
09/15: *IBM Faculty Award* from IBM.  
04/14: *Young Scientist Award* from Indian National Science Academy (INSA).  
09/13: *DAAD IIT Faculty Exchange*.  
08/13: *Simons Associate*, ICTP, Trieste, Italy.  
07/13: *NSF/TCPP CDER Center Early Adopter Award for Fall-13*, NSF, USA (2013).  
06/12: *Young Engineer Award* from Indian National Academy of Engineering (INAE).  
01/06: *Young Scientist Award* from Indian Science Congress Association (ISCA).

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## TEN MOST SIGNIFICANT PUBLICATIONS

1. Chakraborty, T., Kumar, S., Goyal, P., Ganguly, N. and **Mukherjee, A.** (2015). On the categorization of scientific citation profiles in computer sciences. *Communications of the ACM*, **58**(9),82–90.
2. Chakraborty, T., Srinivasan, S., Ganguly, N., Bhowmick, S. and **Mukherjee, A.** (2013). Constant communities in complex networks. *Nature Scientific Reports*, **3**, 1825.
3. Ghosh, S., Saha, S., Srivastava, A., Kuerger, T., Ganguly, N. and **Mukherjee, A.** (2013). Understanding Evolution of Inter-Group Relationships using Bipartite Networks. *IEEE JSAC*, special issue on *Emerging Technologies in Communications* **31**(8), 1–11.
4. Loreto, V., **Mukherjee, A.** and Tria, F. (2012). On the origin of the hierarchy of color names. *Proceedings of the National Academy of Sciences (PNAS)*, **109**(18), 6819-6824.
5. **Mukherjee, A.**, Tria, F., Baronchelli, A., Puglisi, A. and Loreto, V. (2011). Aging in language dynamics. *PLoS ONE*, **6**(2): e16677.
6. Choudhury, M., Ganguly, N., Maiti, A., **Mukherjee, A.**, Bruschi, L., Deutsch, A. and Peruani, F. (2010). Modeling Discrete Combinatorial Systems as Alphabetic Bipartite Networks: Theory and Applications. *Phys. Rev. E* **81**, 036103.
7. Maity, S. K., Saraf, R. and **Mukherjee, A.** (2016). #Bieber + #Blast = #BieberBlast: Early prediction of popular hashtag compounds. In *CSCW (16)*, San Francisco, CA. (to appear). **This paper (i) featured as MIT Tech Review best of the rest of arXiv; (ii) shall receive honorable mention award.**
8. Chakraborty, T., Patranabis, S., Goyal, P. and **Mukherjee, A.** (2015). On the formation of circles in co-authorship networks. In *KDD(15)*, Sydney, Australia.
9. Chakraborty, T., Srinivasan, S., Ganguly, N., **Mukherjee, A.** and Bhowmick, S. (2014). On the permanence of vertices in network communities. In *KDD(14)*, New York, USA.
10. Mitra, S., Mitra, R., Riedl, M., Biemann, C., **Mukherjee, A.** and Goyal, P. (2014). That's sick dude!: Automatic identification of word sense change across different timescales. In *ACL(14)*, Baltimore, USA.

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## SUMMARY OF RESEARCH OUTPUT

### High Impact Journals<sup>1</sup>

1. Chakraborty, T., Srinivasan, S., Ganguly, N., **Mukherjee, A.** and Bhowmick, S. (20XX). Permanence and Community Structure in Complex Networks. *ACM TKDD*, (accepted).

<sup>1</sup>See <http://cse.iitkgp.ac.in/~animeshm> for the full list of publications

2. Chakraborty, T., Kumar, S., Ganguly, N., **Mukherjee, A.** and Bhowmick, S. (20XX). GenPerm: A Unified Method for Detecting Non-overlapping and Overlapping Communities. *IEEE TKDE*, (accepted).
3. Sikdar, S., Ganguly, N., **Mukherjee, A.** (2016) Time series analysis of temporal networks. *EPJB Topical Issue on Temporal Network Theory and Applications*, **89**(1), 1–11.
4. Mitra, S., Mitra, R., Maity, S. K., Riedl, M., Biemann, C., Goyal, P. and **Mukherjee, A.** (2015). An automatic approach to identify word sense changes in text media across timescales. *JNLE*, special issue on *Graphs for NLP*, **21**(5), 773 – 798.
5. Chakraborty, T., Kumar, S., Goyal, P., Ganguly, N. and **Mukherjee, A.** (2015). On the categorization of scientific citation profiles in computer sciences. *Communications of the ACM*, **58**(9), 82–90.
6. Chakraborty, T., Tammana, V., Ganguly, N. and **Mukherjee, A.** (2015). Understanding and Modeling Diverse Scientific Careers of Researchers. *Journal of Informetrics*, **9**(1), 69–78.
7. Ganguly, N., Krueger, T., **Mukherjee, A.** and Saha, S. (2014). Epidemic spreading through direct and indirect interactions. *Phys. Rev. E*, **90**, 032808.
8. Saha, S., Ganguly, N., **Mukherjee, A.** and Krueger, T. (2014). Intergroup networks as random threshold graphs. *Phys. Rev. E.*, **89**, 042812.
9. Bhattacharjee, B., Manna, S. S. and **Mukherjee, A.** (2013). Information sharing and sorting in a community. *Phys. Rev. E.*, **87**, 062808.
10. Chakraborty, T., Srinivasan, S., Ganguly, N., Bhowmick, S. and **Mukherjee, A.** (2013). Constant communities in complex networks. *Nature Scientific Reports*, **3**, 1825.
11. Maity, S. K., **Mukherjee, A.**, Tria, F. and Loreto, V. (2013). Emergence of fast agreement in an overhearing population: The case of the naming game. *Euro. Phys. Lett.*, **101**, 68004.
12. Ghosh, S., Saha, S., Srivastava, A., Kuerger, T., Ganguly, N. and **Mukherjee, A.** (2013). Understanding Evolution of Inter-Group Relationships using Bipartite Networks. *IEEE JSAC*, special issue on *Emerging Technologies in Communications* **31**(8), 1–11.
13. Maity, S. K., Venkat, M. T. and **Mukherjee, A.** (2012). Opinion formation in time-varying social networks: The case of the naming game. *Phys. Rev. E*, **86**, 036110.
14. Loreto, V., **Mukherjee, A.** and Tria, F. (2012). On the origin of the hierarchy of color names. *Proceedings of the National Academy of Sciences (PNAS)*, **109**(18), 6819-6824. **Media Coverage:** PNAS Press Highlights, Scientific American, Live Science, MedicalXpress, The Hindu, Business Line, Times of News, BBC Future, Prospect Magazine (UK), Yahoo! News, Deccan Herald, MSN, Homunculus, Doctordisruption, Galileo Net, Scienza e Tecnica, Chinese EurekAlert, De Standaard, Design by Coffee, Blitz quotidiano, Wired (Italian). **Wikipedia entry: Color term.**
15. **Mukherjee, A.**, Tria, F., Baronchelli, A., Puglisi, A. and Loreto, V. (2011). Aging in language dynamics. *PLoS ONE*, **6**(2): e16677.
16. Choudhury, M., Ganguly, N., Maiti, A., **Mukherjee, A.**, Bruschi, L., Deutsch, A. and Peruani, F. (2010). Modeling Discrete Combinatorial Systems as Alphabetic Bipartite Networks: Theory and Applications. *Phys. Rev. E* **81**, 036103.
17. Choudhury, M., Saraf, R., Jain, V., **Mukherjee, A.**, Sarkar, S. and Basu, A. (2007). Investigation and Modeling of the Structure of Texting Language. *IJDAR* special issue on *Noisy Text Analytics*, Springer, **10**(3-4), 157–174.

### Tier-I Conferences

1. Sarkar, S., Kumar, S., Bhowmick, S., and **Mukherjee, A.** (2016). Sensitivity and Reliability in Incomplete Networks: Centrality Metrics to Community Scoring Functions, In *ASONAM (16)*, (short paper), San Francisco, CA. (to appear).
2. Maity, S. K., Saraf, R. and **Mukherjee, A.** (2016). #Bieber + #Blast = #BieberBlast: Early prediction of popular hashtag compounds. In *CSCW (16)*, San Francisco, CA. **This paper (i) featured as MIT Tech Review best of the rest of arXiv; (ii) received an honorable mention award.**
3. Maity, S. K., Ghuku, B., Upmaynu, A. and **Mukherjee, A.** (2016). Out of vocabulary words decrease, running texts prevail and hashtags coalesce: Twitter as an evolving sociolinguistic system. In *HICSS (16)*, Kauai, Hawaii. **This paper featured as MIT Tech Review best of the rest of arXiv.**
4. Singh, M., Patidar, V., Kumar, S., Chakraborty, T., **Mukherjee, A.** and Goyal, P. (2015). The role of citation context in predicting long-term citation profiles: an experimental study based on a massive bibliographic text dataset. In *CIKM (15)*, Melbourne, Australia.
5. Chakraborty, T., Patranabis, S., Goyal, P. and **Mukherjee, A.** (2015). On the formation of circles in co-authorship networks. In *KDD(15)*, Sydney, Australia.
6. Maity, S. K., Singh, J. S. and **Mukherjee, A.** (2015). Analysis and prediction of question topic popularity in community QA sites: A case study of Quora. In *ICWSM(15)*, Oxford, UK.
7. Chakraborty, T., Kumar, S., Goyal, P., Ganguly, N. and **Mukherjee, A.** (2014). Towards a Stratified Learning Approach to Predict Future Citation Counts. In *JCDL(14)*, UK.
8. Chakraborty, T., Srinivasan, S., Ganguly, N., **Mukherjee, A.** and Bhowmick, S. (2014). On the permanence of vertices in network communities. In *KDD(14)*, New York, USA.
9. Mitra, S., Mitra, R., Riedl, M., Biemann, C., **Mukherjee, A.** and Goyal, P. (2014). That's sick dude!: Automatic identification of word sense change across different timescales. In *ACL(14)*, Baltimore, USA.

10. Choudhury, M., Chatterjee, D., and **Mukherjee, A.** (2010). Global topology of word co-occurrence networks: Beyond the two-regime power-law, In *COLING(10)*, Beijing, China.
  11. Biemann, C., Choudhury, M., and **Mukherjee, A.** (2009). Syntax is from Mars while Semantics from Venus! Insights from Spectral Analysis of Distributional Similarity Networks, In *ACL(09)*, (short paper), Suntec, Singapore.
  12. **Mukherjee, A.**, Choudhury, M., Basu, A., and Ganguly, N. (2008). Modeling the Structure and Dynamics of the Consonant Inventories: A Complex Network Approach , In *COLING(08)*, Manchester, UK.
  13. Nath, J., Choudhury, M., **Mukherjee, A.**, Biemann, C., and Ganguly, N. (2008) Unsupervised Parts-of-Speech Induction for Bengali, In **LREC(08)**, Morocco, Marrakech.
  14. **Mukherjee, A.**, Choudhury, M., Basu, A., and Ganguly, N. (2007). Redundancy Ratio: An Invariant Property of the Consonant Inventories of the World's Languages, In *ACL(07)*, Prague, Czech Republic.
  15. Choudhury, M., **Mukherjee, A.**, Basu, A., and Ganguly, N. (2006). Analysis and Synthesis of the Distribution of Consonants over Languages: A Complex Network Approach, In *COLING-ACL(06)*, Sydney, Australia.
- Technology Developed**
16. FeRoSA: A faceted recommendation system for scientific articles. <http://ferosa.org>
  17. SweepSticks: A virtual mouse for people with neuro-motor disorders.
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#### SPONSORED PROJECTS

Unrestricted grant from Flipkart India Pvt. Ltd.  
Unrestricted grant from Yahoo! Research India.  
Unrestricted grant from Microsoft Research India.  
Post-disaster situation analysis, ITRA, DIT.  
Samsung GRO: Online social systems as bipartite networks.  
New Perspectives for computational social science, Indo-Italian DST.  
ICT for computational social science, Fast Track, DST.  
Data-driven approaches to opinion dynamics, Indo-Polish, DST.