

# Mano Vikash Janardhanan

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## Curriculum Vitae

🏠 Homepage: <http://homepages.math.uic.edu/~manovikash>

### Education

- 2014-2019 **PhD, Department of Mathematics, Statistics, and Computer Science, (in progress), University of Illinois at Chicago,**  
Advisor: Prof. Lev Reyzin.
- 2009-2014 **Integrated MS, Mathematics, Indian Institute of Science Education and Research,**  
Thiruvananthapuram, Kerala.

### Research Interests

My areas of interest include machine learning, data science and optimization. In particular, I have been working on problems in computational learning theory at the intersection of machine learning and graph theory for my PhD.

### Experience

#### Research

- 2018 May- **Research Intern**, Google Research, New York.
- 2018 August - Worked with Research and Machine Intelligence team. (subteam: MAD Science)
  - Worked on using machine learning for time-series forecasting.
  - Advised by Dr. Vitaly Kuznetsov.
- 2016 May- **PhD Thesis Research**, University of Illinois at Chicago.
  - Present - Working on query models for graph learning and graph verification. [4]
  - Advised by Prof. Lev Reyzin.
- 2017 May- **PhD Thesis Research**, University of Illinois at Chicago.
  - Present - Working on developing measures to classify graphs and using these measures to find anomalies in static and dynamic graphs. [2]
  - Advised by Prof. Bhaskar DasGupta.
- 2015 August- **Independent Study**, University of Illinois at Chicago.
- 2016 May - Worked on a model for learning graphs using subgraph connectivity information. [5]
  - Advised by Prof. Lev Reyzin.
- 2013 August- **MS Thesis Research**, IISER, Thiruvananthapuram.
- 2014 May - *Topics in Ramsey Theory*
  - Used the probabilistic method to find lower bounds for some Ramsey-type functions. [7, 6]
  - Advised by Prof. Sujith Vijay.

#### Talks

- 2018 August **Google**, Research Seminar, New York.  
Graph Verification using a Betweenness Oracle

2017 October **Algorithmic Learning Theory**, Kyoto University, Japan.  
Graph Verification using a Betweenness Oracle

2017 December **FSTTCS**, Indian Institute of Technology, Kanpur.  
Network Construction with Connectivity Constraints

#### Other Professional Activities

**Reviewer**, International Conference on Randomization and Computation (RANDOM 2018), Algorithmic Learning Theory (ALT 2019), Conference on Learning Theory (COLT 2019).

**Organiser**, Graduate Theoretical Computer Science Seminar at the University of Illinois at Chicago.

#### Teaching

2014- 2018 **Lecturer and Teaching Assistant**, University of Illinois at Chicago.  
- Lectured and led discussion sections for various computer science and mathematics courses. (MCS 401, 275, 260 and MATH 090, 180, 210)  
- SEW Lecturer during summer 2015.

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#### Technical Skills

Programming/Scripting Languages: Python, C, C++, Mathematica and MATLAB.  
Other Languages/Frameworks/Tools: TensorFlow, HTML and  $\LaTeX$ .

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#### References

- [1] Mohsen Aliabadi and Mano Vikash Janardhanan. "On matchable subsets in abelian groups and their linear analogues". In: *arXiv preprint arXiv:1808.01376* (2018).
- [2] Bhaskar DasGupta and Mano Vikash Janardhanan. "How did the shape of your network change? (On detecting anomalies in static and dynamic networks via change of non-local curvatures)". In: *Submitted* (2018).
- [3] Mohsen Aliabadi and Mano Vikash Janardhanan. "On local matching property in groups and vector spaces". In: *Australasian Journal of Combinatorics* 70 (Jan. 2017).
- [4] M. V. Janardhanan. "Graph Verification using a Betweenness Oracle". In: *Algorithmic Learning Theory* (2017).
- [5] M. V. Janardhanan Y. Huang and L. Reyzin. "Network Construction with Connectivity Constraints". In: *FSTTCS* (2017).
- [6] M. Vikash Janardhanan and S. Vijay. "Ramsey Functions for Generalized Progressions". In: *Integers* 15 (2015).
- [7] M. Vikash Janardhanan. "Topics in Ramsey Theory [ArXiv e-prints (1404.7348)]". MA thesis. Indian Institute of Science Education and Research, Thiruvananthapuram, Apr. 2014.