Naganand Yadati

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Google Scholar

Education

2016-2021 **Ph.D.**, *Department of Computer Science and Automation*,
Indian Institute of Science, Bangalore,
Thesis: Deep Learning over Hypergraphs.
Advisor: Prof. Partha Talukdar.

2014-2016 **M.Tech. in Information Technology**,
International Institute of Information Technology, Bangalore,
Advisor: Prof. Ashish Choudhury.

Research Focus

Deep Learning Emphasis on Graph Neural Networks, Learning on Hypergraphs and other Rich Structures (e.g., Causal Graphs, Heterogeneous Graphs, Temporal Graphs).

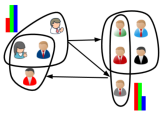
Work Experience

July 2022- Postdoctoral Research Fellow,
School of Computing,
National University of Singapore,
Supervisor: Prof. Arnab Bhattacharyya.

2017 Research Intern,
International Business Machines Corporation (IBM),
Group: IBM-IRL (India Research Labs),
Topic: Canonicalisation of Open Knowledge Bases.

2012 Intern,
Integra Micro Systems,
Group: Product Team,
Topic: Android Mobile File Transfer using C Programming.

Publications

1 

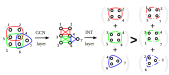
Graph Neural Networks for Soft Semi-Supervised Learning on Hypergraphs,
Naganand Yadati, Tingran Gao, Shahab Asoodeh, Partha Talukdar, and Anand Louis,
In Proceedings of 25th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD) 2021,
code.

2 

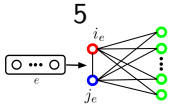
Knowledge Base Question Answering through Recursive Hypergraphs,
Naganand Yadati, Dayanidhi R S, Vaishnavi S, Indira K M, and Srinidhi G,
In Proceedings of the European Association for Computational Linguistics (EACL) 2021 (Short).

3 

Neural Message Passing for Multi-Relational Ordered and Recursive Hypergraphs,
Naganand Yadati,
In Advances in Neural Information Processing Systems (NeurIPS) 2020,
neurips page | code.

4 

NHP: Neural Hypergraph Link Prediction,
Naganand Yadati, Vikram Nitin, Madhav Nimishakavi, Prateek Yadav, Anand Louis, and Partha Talukdar,
In Proceedings of the ACM Conference on Information & Knowledge Management (CIKM) 2020,
slides | code.

5 

HyperGCN: A New Method for Training Graph Convolutional Networks on Hypergraphs,
Naganand Yadati, Madhav Nimishakavi, Prateek Yadav, Vikram Nitin, Anand Louis, and Partha Talukdar,
In Advances in Neural Information Processing Systems (NeurIPS) 2019,
slides | code.

Program Committee Membership

2020- Neural Information Processing Systems (NeurIPS).
2021- International Conference on Machine Learning (ICML).
2020- International Conference on Learning Representations (ICLR).
2022 Learning on Graphs Conference (LOG).
2021 Association for the Advancement of Artificial Intelligence (AAAI).
2021 Transactions on Pattern Analysis and Machine Intelligence (TPAMI).
2020 European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD).
2020 Neurocomputing.

Awards

2022 Outstanding Reviewer for ICML 2022 (Top 10%).
2021 Expert Reviewer for ICML 2021.
2020 Top 10% Reviewer for NeurIPS 2020.
2019 Google Travel Grant for NeurIPS 2019.

Tutorial

Graph-based Deep Learning in Natural Language Processing,
Shikhar Vashishth, Naganand Yadati, and Partha Talukdar,
In Proceedings of the 2019 Conference on Empirical Methods in Natural Language Processing and the 9th International Joint Conference on Natural Language Processing (EMNLP-IJCNLP): Tutorial Abstracts CoDS-COMAD 2020: 7th ACM IKDD CoDS and 25th COMAD,
slides | code | video part 1 | video part 2.

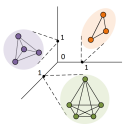
Workshop Moderatorship

Graphs and More Complex Structures for Learning and Reasoning (GCLR),
Tarun Kumar, Deepak Maurya, Nikita Moghe, Naganand Yadati, Jeshuran Chelladurai, and Aparna Rai,
In The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI), 2021,
videos.

Invited Talks

2021 ShareChat, Deep Learning over Hypergraphs for Recommendation.
2021 Microsoft Cambridge, Deep Learning over Hypergraphs.
2019 Indian Institute of Science Seminar, Graph Convolution on Hypergraphs.
2017 Ramaiah Institute Of Technology, Introduction to Deep Learning.

Co-authored Publications

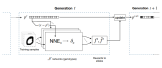


Lovasz Convolutional Networks,
Prateek Yadav, Madhav Nimishakavi, Naganand Yadati, Shikhar Vashishth, Arun Rajkumar, and Partha Talukdar, In International Conference on Artificial Intelligence and Statistics (AISTATS) 2019,
code.

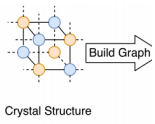
KVQA: Knowledge-Aware Visual Question Answering,
Sanket Shah, Anand Mishra, Naganand Yadati, and Partha Talukdar,
In The Thirty-Third AAAI Conference on Artificial Intelligence (AAAI) 2019,
website.

Workshop Papers

HEAL: Embedding Attributed Multi-layer Hypergraphs,
Naganand Yadati, Tarun Kumar, Deepak Maurya, Partha Talukdar, Balaraman Ravindran,
In Deep Learning on Graphs: Methods and Applications AAAI 2022.



Biologically Plausible Neural Networks via Evolutionary Dynamics, Dopaminergic Plasticity,
Sruthi Gorantla, Anand Louis, Christos H Papadimitriou, Santosh Vempala, Naganand Yadati,
In Real Neurons & Hidden Units @ NeurIPS 2019.



MT-CGCNN: Integrating Crystal Graph Convolutional Neural Network with Multitask Learning for Material Property Prediction,
Soumya Sanyal, Janaki Balachandran, Naganand Yadati, Abhishek Kumar, Padmini Rajagopalan, Suchismita Sanyal, and Partha Talukdar,
In NeurIPS 2018 Workshop on Machine Learning for Molecules.

Teaching Assistantship

2018 Linear Algebra and Applications.

Academic Courses

Ph.D. Real Analysis, Linear Algebra and Applications, Probability and Statistics, and Pattern Recognition and Neural Networks.

M.Tech. Approximation Algorithms, Foundations of Big Data Algorithms, and Algorithms for Massive Data.

Skills

Tools/Languages LaTeX, Python, PyTorch/Tensorflow, C, Linux, and Git.