

**Special Session on  
Graph neural network and its applications  
at  
The 22nd International Conference on Intelligent Systems Design and Applications  
(ISDA'22)  
on  
World Wide Web  
December 12-14, 2022  
<https://www.mirlabs.org/isda22/>**

### **Objectives and Scope**

Neural networks have gained more popularity in recent days due to their ability to analyze image, video, audio and text data types. Graphs are important structures made by vertices and edges and have the capability to correlate data in non-Euclidean space and their interactions which could be directed or undirected based on the arrowhead in the edges. Thus a graph can be used to represent a variety of systems including social (information retrieval, recommendations, fraud detection), biological (bioinformatics, drug discoveries) and knowledge based (computer vision, natural language processing, computer graphics) systems. Graph Neural Networks (GNNs), an important tool which embeds graph representation learning into neural network framework, has led to impressive progress in many classification, regression, reasoning and prediction problems. This special section aims to disseminate the theoretical and real time practical effectiveness of GNN in real world applications. It will provide a forum for both academia and industrial experts to share their ideas and to submit their contributions.

### **Subtopics**

The topics include, but are not limited to:

- Theoretical GNN
- Representation learning on graphs
- Reinforcement learning on graphs
- Geometric deep learning (graph CNNs/RNNs)
- GNNs for personalized recommendation
- Applications of GNN to image and video processing
- Applications of GNN to biological system
- Applications to social networks
- Applications to speech processing
- Application to infrastructure, transportation and power networks

### **Paper Publications**

- Proceedings will be published in Lecture Notes in Networks and Systems, Springer (Indexed in SCOPUS, INSPEC, WTI Frankfurt eG, zbMATH, SCImago)  
<https://www.springer.com/series/15179>
- Papers maximum length is 10 pages
- Papers must be formatted according to Springer format (Latex/word) available at:  
<https://www.springer.com/de/authors-editors/book-authors-editors/manuscript-preparation/5636#c3324>

### **Important Dates**

Paper submission due: September 30, 2022

Notification of paper acceptance: October 31, 2022

Registration and Final manuscript due: November 15, 2022

Conference: December 12-14, 2022

### **Special Session Chairs**

- S.Radhika, Sathyabama Institute of Science and Technology, Chennai, India.
- A.Chandrasekar, Department of Computer Science Engineering St.Joseph's College of Engineering, Chennai. India.

**Information Contact:** S..Radhika <radhika.eee@sathyabama.ac.in>