

Proposal for Special Session at IEEE CASE 2022

Goal:

- Complex networks have served as a ubiquitous platform to deal with a myriad of real-world problems. Despite their primary success in the modeling of physics and biology related problems, they recently also emerged as a new computational paradigm for machine learning and artificial intelligence. Examples include unsupervised, semi-supervised and supervised learning techniques to deal with several learning tasks like community detection, dimension reduction, label propagation and high-level classification, just to name a few, which have been applied to a wide range of automation systems in Manufacturing, Agriculture, Health-care, and other related areas.
- This special issue is intended to timely reflect the major progresses in both research and technology development of intelligent solutions to Automation Science and Engineering based on properties and tools of complex networks. It covers a broad spectrum of topics, including, but not limited to:
 - Complex networks for supervised learning tasks
 - Complex networks for semi-supervised learning tasks
 - Complex networks for unsupervised learning tasks
 - Algorithms for network analysis tasks
 - Temporal and spatial networks
 - Synchronization phenomena in networks
 - Dynamical processes on complex networks
 - Graph neural networks models and applications
 - Applications of complex networks for automation tasks

Session Title: Advances in intelligent systems based on complex networks

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Contributions: As soon as this Special Session is approved, we will invite several researchers to submit their contributions here.