

SS2: Complex Networked Systems Analytics and Control

Special Session

Abstract

There is a great interest in controlling of complex networks, including Complex Networks, as this has great potential to make a big impact on tackling important societal challenges. There have been many attempts to use control theory to approach this research challenge, however, due to the heterogeneous nature of complex networks and their non-linear character, neither the network model nor the dynamics can be analytically described. This poses severe constraints on controllability of complex networks. To address these issues, there is an urgent need for extensive research into the complex networks' controllability, as well as, suitable control methods and mechanisms that would enable to direct the evolution of such networks in a desired way.

This special session aims to address the analysis and control of complex networked systems, and what is more important to identify the areas where complex networks analysis and control can be effectively applied and provide the knowledge that is not accessible for other types of analysis.

KM