

## CCC2016 Workshop 4: Cooperative Control of Multi-Agent Networks

**Speakers:** Wei Ren (University of California, Riverside, USA)

Ming Cao (University of Groningen, the Netherlands)

Wenwu Yu (Southeast University, China)

Zhongkui Li (Peking University, China)

**Abstract:** While autonomous agents that perform solo missions can yield significant benefits, greater efficiency and operational capability will be realized from teams of autonomous agents operating in a coordinated fashion. Potential applications for networked multiple autonomous agents include environmental monitoring, search and rescue, space-based interferometers, hazardous material handling, and combat, surveillance, and reconnaissance systems. Networked multi-agent systems place high demands on features such as low cost, high adaptivity and scalability, increased flexibility, great robustness, and easy maintenance. To meet these demands, the current trend is to design distributed coordination algorithms that rely on only local interaction to achieve global group behavior. In the last decade, cooperative control of multi-agent systems has been the emerging and hot research area in the comm control unity.

The objective of this preconference workshop is to introduce in a tutorial manner the foundations and also some recent results in the field of cooperative control of multi-agent systems. Topics covered include consensus control, motion coordination, controlling evolutionary dynamics, and pinning control of complex networks. This workshop is expected to be of particular interest to a large body of audiences, especially the graduate students and the young researchers who are green hands in this area.