

# A SURVEY ON CONSENSUS PROTOCOLS IN MULTI-AGENT SYSTEMS

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## Abstract:

In the past few year, the research community has paid much attention to consensus problems in multi-agent systems, especially, for wireless sensor networks, i.e. control systems that are physically distributed and cooperate by exchanging information through a communication network. This paper gives a brief survey on consensus problems for multi-agent systems based on the current literature. In particular, the general view of the consensus protocols as well as its applications in various fields are presented. Furthermore, we also summarize the studies on designing the consensus matrix according to its convergence analysis. Finally, we give some open problems that can be investigated in the future.

**Key words:** Consensus Protocols; Multi-agent systems; Graph Theory; Formation control; Coordination control.