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**Title:**

Decentralized stabilization of interconnected finite-dimensional and infinite-dimensional systems

**Abstract:**

We discuss the applications of small-gain theorems to design of decentralized controllers for interconnected multi-agent systems. We focus on possible extensions of the existing approaches to the case of networks with infinite set of interconnected agents. Our goal is to provide a suitable gain assignment and to define a suitable normed space as the state space of the entire network in order to ensure the applicability of the classical scheme to the infinite-dimensional case.