



Sufficient Statistics for Multi-Agent Systems

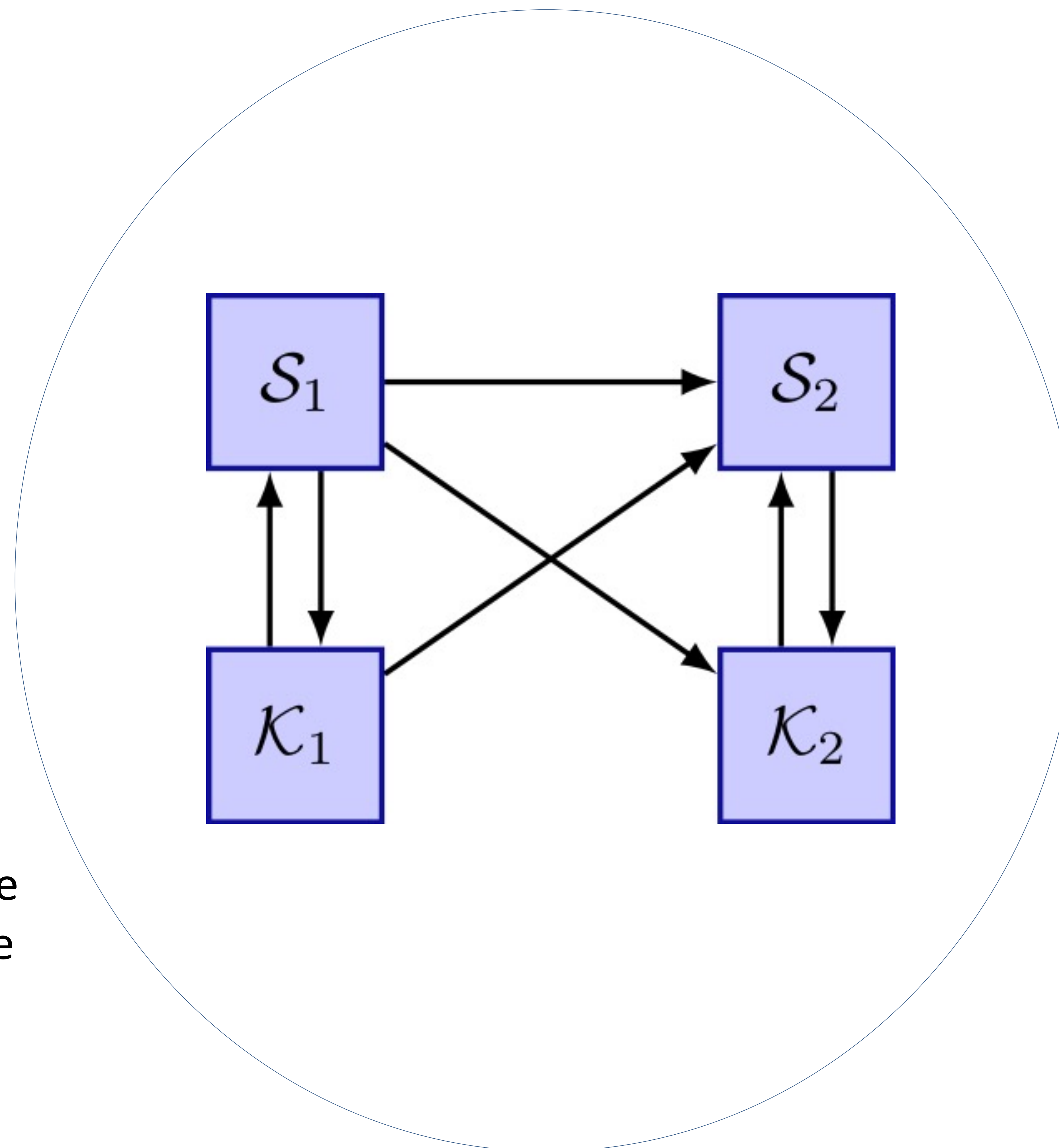
NSF Award CPS-1544199, PI Sanjay Lall, Stanford University

Challenge:

- Determine the minimal information needed for multiple agents to be able to make optimal decisions.

Solution:

- Characterization of the sufficient statistics for multi-agent systems
- Sufficient statistics for multiple agents are different from those made by an individual agent



Scientific Impact:

- The approach used can connect with several methods:
- Dynamic programming
- Reinforcement learning

Broader Impact:

- Provides mathematical framework for understanding information efficiency
- Outreach programs for high-school students working on self-driving systems