

## **Sparse Control of Aligement models**

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We focus on a general Cucker-Smale system, modeling self-organization and consensus emergence in a group of interacting agents. We show how it is possible to control this model in order to enforce or facilitate pattern formation or convergence to consensus. In particular, we are interested in designing control strategies that are "sparse" in the sense that they require a small amount of external intervention, and "time sparse" in the sense that such strategies are not chattering. These sparsity features are desirable in view of practical applications. We present a variational principle to design simple sparse feedback strategies steering the system to consensus. We then combine these results with local controllability properties to get global controllability results.