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Long range self-organization in bacterial swarms CHONG CHEN, YILIN WU, The Chinese University of Hong Kong, WU YILIN TEAM — When grown on air-semisolid interface, many bacteria are able to move in groups and expand rapidly, in a manner called swarming. Bacteria swarming displays rich collective behavior. In this work, we focus on the interaction between swarm cells of *E. coli* and their fluid environment. Using novel tracers, we discovered large scale self-organization in *E. coli* swarming colonies that spans a distance of millimeters. This long range self-organization most likely results from local interactions. The results provide new insights into the collective behavior in active matter systems.

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