# Active Particles, Volume 1 : Advances in Theory, Models, and Applications /

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Monografía

This volume collects ten surveys on the modeling, simulation, and applications of active particles using methods ranging from mathematical kinetic theory to nonequilibrium statistical mechanics. The contributing authors are leading experts working in this challenging field, and each of their chapters provides a review of the most recent results in their areas and looks ahead to future research directions. The approaches to studying active matter are presented here from many different perspectives, such as individual-based models, evolutionary games, Brownian motion, and continuum theories, as well as various combinations of these. Applications covered include biological network formation and network theory; opinion formation and social systems; control theory of sparse systems; theory and applications of mean field games; population learning; dynamics of flocking systems; vehicular traffic flow; and stochastic particles and mean field approximation. Mathematicians and other members of the scientific community interested in active matter and its many applications will find this volume to be a timely, authoritative, and valuable resource



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