
2015 Frank Rosenblatt Award

Sponsored by the IEEE Computational Intelligence Society

Marco Dorigo

For contributions to the foundations of swarm intelligence



Marco Dorigo's groundbreaking research on biologically inspired intelligent methods for solving optimization problems has helped launch the discipline of swarm intelligence. Swarm intelligence studies distributed systems whose problem-solving abilities derive from self-organized local interactions between their constituent components. Prof. Dorigo is most known for his work on the ant colony optimization (ACO) methodology, inspired by the foraging behavior of ants, which is used by researchers worldwide and has generated many high-performance algorithms. He is also a leading contributor to swarm robotics, which applies swarm intelligence principles to coordinate large groups of autonomous robots without relying on any external infrastructure or on any form of centralized control. This holds promise for performing tasks too difficult or dangerous for humans.

An IEEE Fellow, Dr. Dorigo is an F.R.S.-FNRS research director and a co-director of IRIDIA, the artificial intelligence lab of the Universit Libre de Bruxelles, Brussels, Belgium.