

Evolutionary Robotics and Swarm Intelligence inspires best selling author

'Prey', the latest novel of Michael Crichton (best selling author of 'Jurassic Park', 'Sphere', and of the 'E.R.' TV series, among others), is inspired upon research in Evolutionary Robotics and Swarm Intelligence.

Nevada desert: A new high-tech company is engineering colonies (swarms) of nano-robots that interact using simple communication rules derived from animal colonies and can autonomously co-evolve as predators and prey. Their purpose is to self-assemble in order to form a highly flexible, flying eye to monitor hostile environments. But some nano-robots leak out of the factory into the desert and rapidly evolve in unexpected ways.

'This novel is entirely fictitious, but the underlying research programs are real', Crichton writes in the appendix, and provides a list of scientific references on which his novel is based, including the book on Evolutionary Robotics (MIT Press) by Nolfi and Floreano, EvoNet members. 'Prey' is especially inspired upon work on co-evolution of predator-prey robots and swarm robotics.

While Crichton's book is typical 'creature-turning-against-creator' science fiction, life-like machines capable of evolution and self-organization are attracting increasing interest from the scientific and technology community. These systems can be used to study evolutionary and social phenomena for which there is no fossil record, as well as to generate new devices with improved robustness and adaptive properties.

Swarm-bots is a project sponsored by the Future and Emerging Technologies program of the EC, which is studying new approaches to the design and implementation of self-organising and self-assembling artefacts. A description of work in swarm robotics related to material used by Crichton can be found at Swarm-bots web site: <http://www.swarm-bots.org>.

A gentle introduction to Evolutionary Robotics (including co-evolutionary predator-prey robots) can be found at: <http://asl.epfl.ch/research/projects/EvolutionaryRobotics/index.php>.

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