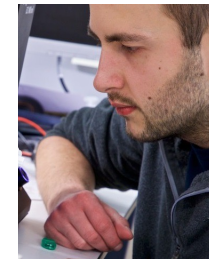


Evolutionary Robotics

Introduction to the course



Dario
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1. Lectures

Evolutionary computation
Evolutionary Strategies
Multiobjective Evolutionary Optimization
Unsupervised Neural Networks
Supervised and Reinforcement Learning
Evolution of Neural Controllers
Evolutionary and Neural Learning
Morphogenetic Algorithms
Evolution of Body and Neural architectures
Competitive and Cooperative Evolution
Towards Self-Reproducing Robots

Assessed: MCQ

2. Python exercises

Genetic Algorithms
Evolutionary Strategies
Evolutionary Multiobjective Optimization



3. Robogen project

Sim: Evolution of neural controllers for robots
Sim: Co-evolution of robot bodies and brains
Sim: Design your own evolutionary task
DLL: Print, assemble, transfer controller

Assessed: presentation + demo of robots