Evolutionary Robotics (Micro-515)

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Today’s menu

- Presentation of instructors
- Course objectives & organization
- Course evaluation
- Course topics

- Introduction to Evolutionary Algorithms
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MIT Press 2000, 2004
MIT Press 2008, 2010
Springer 2009

Teachers

Dario Floreano
Davide Zappetti
Anand Bhaskaran
Przemek Komatowski
Grégoire Heitz

Labs & Robogen project
What is Evolutionary Robotics?

Co-development of robotic brains & bodies inspired from evolution

Course objectives

- Learn about evolutionary and neural algorithms
- Gain hands-on experience in software / hardware labs
- Design, perform, and analyze experiments in a team
- Learn to write scientific reports and make presentations
Course organization

• Every Wednesday, 13:00 – 16:00
• Lectures: MED 01418
• Labs: BC 07
• Moodle
  – Updated slides and labs the day before the lecture
  – Announcements through Moodle Forum
  – Enrolment key: none (but must be enrolled)

Course material and prerequisites

• Bibliography:
  *Bio-Inspired Artificial Intelligence*
  Floreano and Mattiussi, MIT Press, 2008

• Hand-outs on Moodle
• Check Points (exam questions)

• Prerequisites:
  – Matlab required
  – Python and Linux -> if not familiar, you must read tutorial on Moodle before next week
Evaluation

• Written examination (50% of the final mark)
  – Multiple questions taken from check points

• Robogen project (50% of the final mark)
  – Written report (6 pages, double column)
  – Presentation (~10’ per team)