This study explores evolutionary training of Counter-Propagation Neural-networks (CPNs). It concerns navigating a robot in an environment that differs from the trained one. To diversify trained solutions, and to obtain controllers for various scenarios, a multi-objective evolutionary approach is used. The evolved controllers exhibit multi-objective characteristics. For the studied case, the CPNs are found to be statistically superior to the Feed-Forward Networks in both the obtained performances and the learning rates.

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Seminar Announcement

Title: Evolutionary Learning of Counter-Propagation Neuro-Controllers for Multi-Objective Robot Navigation

Speaker: Prof. Amiram Moshaiov
Affiliation: Tel-Aviv University, Israel

- Date: 13:30-14:30, June 12, 2015
- Place: Hino Campus, Building 2, Lecture Room 402
- Language: English
- Participation Fee: Free

Abstract: This study explores evolutionary training of Counter-Propagation Neural-networks (CPNs). It concerns navigating a robot in an environment that differs from the trained one. To diversify trained solutions, and to obtain controllers for various scenarios, a multi-objective evolutionary approach is used. The evolved controllers exhibit multi-objective characteristics. For the studied case, the CPNs are found to be statistically superior to the Feed-Forward Networks in both the obtained performances and the learning rates.

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