Seminar

MAX PLANCK INSTITUTE
FOR DYNAMICS AND
SELF-ORGANIZATION

Chaos-Based Reinforcement Learning with TD3

Prof. Toshitaka Matsuki

Assistant Professor
National Defense Academy of Japan
Yokosuka, Japan

Chaos-based reinforcement learning (CBRL) is a reinforcement learning approach that exploits the internal chaotic dynamics of the learning system for exploration. This approach addresses the question of how the brain achieves the variability of behavior necessary for exploratory learning from the reinforcement learning aspect.

CBRL agents also have the learning advantage of being able to switch between exploration and exploitation autonomously. We expect that improving CBRL can achieve models that learn how to explore or make decisions as transient dynamics. This presentation will report on our recent work introducing deep reinforcement learning techniques to CBRL.

Monday, March 11th, 2024 at 1:15 pm

MPI-DS, Lise-Meitner-Room (0.77)
Am Fassberg 17, Göttingen

Max Planck Institute for Dynamics and Self-Organization
Biomedical Physics Group
apl. Prof. Ulrich Parlitz
Email: ulrich.parlitz@ds.mpg.de
Am Faßberg 17, 37077 Göttingen, Germany