



Contribution ID: 394

Type: Talk

[507] Memory network dynamics in projective simulation model

Thursday 24 August 2017 12:15 (15 minutes)

The projective simulation (PS) model is a physical approach to artificial intelligence. In the PS model, learning is realized by internal modification of the episodic memory network, both in terms of its structure and the weights of its edges. Through interactions with a task environment, the PS memory network adjusts itself dynamically, so as to increase the probability of performing better in subsequent time steps. Here we consider several examples of environments, in which the PS agent does self-adjustments due to glow, generalization and meta-learning mechanisms. The emphasis is made on examples of the PS agent applied to quantum optics experiments.

Author: MELNIKOV, Alexey A. (Institute for Theoretical Physics, University of Innsbruck)

Co-authors: Dr DUNJKO, Vedran; Dr MAKMAL, Adi; Mr POULSEN NAUTRUP, Hendrik; Prof. BRIEGEL, Hans J. (Institute for Theoretical Physics, University of Innsbruck)

Presenter: MELNIKOV, Alexey A. (Institute for Theoretical Physics, University of Innsbruck)

Session Classification: Atomic Physics and Quantum Optics

Track Classification: Atomic Physics and Quantum Optics