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Neuromorphic Robot Dream

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Abstract

© 2016, Springer Science+Business Media New York.In this paper, we present the next step in our approach to neurobiologically plausible implementation of emotional reactions and behaviors for real-time autonomous robotic systems. The working metaphor we use is the “day” and the “night” phases of mammalian life. During the “day’ phase” a robotic system stores the inbound information and is controlled by a light-weight rule-based system in real time. In contrast to that, during the “night phase” information that has been stored is transferred to a supercomputing system to update the realistic neural network: emotional and behavioral strategies.

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Keywords

Affective computing, Artificial emotions, Robotics, Spiking neural networks

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