A neuro-dynamic framework for cognitive robotics: scene representations, behavioural sequences, and learning

From 2011-04-01 to 2015-03-31, closed project | NeuralDynamics Website

Project details

<table>
<thead>
<tr>
<th>Total cost:</th>
<th>Topic(s):</th>
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<td>EUR 4 005 670</td>
<td>ICT-2009.2.1 - Cognitive Systems and Robotics</td>
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<th>EU contribution:</th>
<th>Call for proposal:</th>
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<td>EUR 3 050 070</td>
<td>FP7-ICT-2009-6</td>
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<th>Coordinated in:</th>
<th>Funding scheme:</th>
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<tr>
<td>Germany</td>
<td>CP - Collaborative project (generic)</td>
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Description

Endowing robots with cognition is a long-standing and difficult objective. Substantial progress in cognitive science and neuroscience has led to the insight that cognition is tightly linked to the sensory and motor surfaces, and that cognition emerges during development from relatively low-level mechanisms when situated in a structured environment. Building on basic functions such as detection and selection, <a href="http://www.neuraldynamics.eu/" target="_blank">NeuralDynamics</a> will develop a set of elements of cognition and techniques for combining such elements, allowing to scale towards such cognitive capabilities as scene representation and sequence generation. The project will implement and evaluate these elements of cognition in scenarios inspired by the development of cognition in early childhood.

Objective

Endowing robots with cognition is a long-standing and difficult objective. Substantial progress in cognitive science and neuroscience has led to the insight that cognition is tightly linked to the sensory and motor surfaces, and that cognition emerges during development from relatively low-level mechanisms when situated in a structured environment. Building on basic functions such as detection and selection, we will develop a set of elements of cognition and techniques for combining such elements, allowing us to scale towards such cognitive capabilities as scene representation and sequence generation. We will implement and evaluate these elements of cognition in scenarios inspired by the development of cognition in early childhood.
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Subjects
Network technologies - Robotics

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