特別講演

Fuzzy Rule Interpolation in Embedded Behaviour-based Control

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Abstract:

Fuzzy Rule Interpolation (FRI) methods are efficient structures for knowledge representation with relatively few rules. In spite of the good knowledge representation efficiency, the usually high computational demand turns the FRI methods hardly suitable for embedded real-time applications, where the short reasoning time has a high importance. On the other hand the fact of increasing computational power of nowadays available devices gives an opportunity to the FRI methods for appearance in real-time embedded applications. The goal of this presentation is to give a short introduction to the concept of the FRI methods, and having some simple examples from the area of navigation and ethological modeling, the demonstration of the benefits of adapting low computational and resource demanded FRI methods in embedded behavior-based control applications.

Keywords - fuzzy rule interpolation (FRI); low computational demand FRI; fuzzy automata; behavior-based control.

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