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论文与报告

模糊小脑模型神经网络

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摘要
提出输入层具有一定隶属度的模糊小脑模型神经网络(Fuzzy CMAC),它比小脑模型CMAC(Cerebellar Model Articulation Controller)能更真实地描述客观世界.给出n维 Fuzzy CMAC算法,仿真结果表明Fuzzy CMAC比小脑模型CMAC具有如下优点:学习收敛速度快得多,可以学习模糊规则.Fuzzy CMAC比CMAC优越,使CMAC成为Fuzzy CMAC 的特例.

关键词 模糊小脑模型 模糊小脑模型算法 小脑模型 小脑模型算法

分类号

Fuzzy CMAC Neural Network

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Abstract
A Fuzzy Cerebellar Model Articulation Controller (FCMAC) is proposed in this paper. A fuzzy membership function μ(k) is introduced into the FCMAC's input layer. The FCMAC can describe thd world more really than the CMAC can. The FCMAC algorithms for n dimensional problem are given. Simulation results show that the FCMAC has a faster convergence speed than CMAC. The FCMAC can also learn fuzzy reasoning rules (for fuzzy control). In a word, the FCMAC is a better neural network than CMAC, and it makes CMAC as the special case of FCMAC.

Key words Fuzzy cerebellar model articulation controller(Fuzzy CMAC) Fuzzy CMAC algorithm cerebellar mode articulation controller(CMAC) CMAC algorithm

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