

Semantic issues in the tuning of fuzzy systems with genetic algorithms: The case of neuromuscular blockade control *

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Abstract

In the presence of unconstrained optimization processes one cannot ensure that the resulting fuzzy system's membership functions have any semantic value in what concerns their ability to be interpretable as linguistic terms. This work presents a set of constraints aiming at obviating this difficulty without sacrificing performance. Progresses in the application of these constraints to a realistic control problem, i.e., the control of neuromuscular relaxation using continuous problem, are presented.

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