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Fuzzy Control and Pertinence Functions

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Abstract : This paper presents an approach to fuzzy control, with the use of new pertinence functions, applied in the case of an inverted pendulum. Appropriate definitions of pertinence functions to fuzzy sets make possible the implementation of the controller with only one control rule, resulting in a smooth control surface. The fuzzy control system can be implemented with analog devices, affording a true real-time performance.

Keywords : control surface, fuzzy control, Inverted pendulum, pertinence functions
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