عنوان مقاله:

Design and implementation of type 2 fuzzy logic controller by the use of CMOS technology for fan speed control in a smart hall

محل انتشار:

سومین کنفرانس سیستم های تصمیم گیری هوشمند (سال: 1397)

تعداد صفحات اصل مقاله: 23

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خلاصه مقاله:

Fuzzy logic facilitates the capture of human thought processes based on mathematics. It can be thus the means to control various processes. The present study proposes a novel fuzzifier circuit to implement a fuzzy controller, which converts the analog input data into fuzzy data for fan speed controls in general applications. For this purpose, the study also presents a novel defuzzifier for more effective fan speed controls in Min-Max circuits or blocks. The final section includes the results of circuit simulations with the software HSPICE in the standard CMOS 0.18 um process for each block and the entire fuzzy controller system. The circuits were all designed in current-mode CMOS and simulated with a ±1.2 V, 3.7 mw power supply

کلمات کلیدی:

Fuzzy Controller, Internet of Things, Smart City, Fuzzy logic