

GENERATING THEOREMS FOR s -NORMS AND t -NORMS

(Teorem Penjanaan untuk Norma- s dan Norma- t)

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ABSTRACT

The s -norm and t -norm operators are generalization of the union and intersection operators respectively for fuzzy sets. Thus various alternative operators have been proposed by several authors since the introduction of fuzzy sets by Zadeh in 1965. In this paper we give generating theorems for s -norms and t -norm, namely given an s -norm we can generate a class of s -norms and t -norms, and given a t -norm we can generate a class of t -norms and s -norms. We also give bijective generating theorems for s -norms and t -norms. Given two bijective functions on $[0, 1]$ under certain conditions, from an s -norm, we generate an s -norm and a t -norm, and from a t -norm we generate a t -norm and an s -norm.

Keywords: s -norm; t -norm; generating theorem; bijective generating theorem

ABSTRAK

Pengoperasi norma- s dan norma- t masing-masingnya merupakan pengitlakan bagi pengoperasi kesatuan dan persilangan untuk set kabur. Justeru pelbagai pengoperasi alternatif telah dikemukakan oleh ramai pengarang sejak set kabur diperkenalkan oleh Zadeh pada tahun 1965. Dalam makalah ini dikemukakan teorem-teorem penjanaan untuk norma- s dan norma- t . Diberi suatu norma- s dapat dijanakan suatu kelas norma- s dan norma- t , dan diberi suatu norma- t dapat dijanakan suatu kelas norma- t dan norma- s . Dihasilkan juga teorem penjanaan bijeksi untuk norma- s dan norma- t . Diberi dua fungsi bijeksi pada $[0, 1]$ dengan syarat tertentu, daripada suatu norma- s dijana norma- s dan norma- t , dan daripada suatu norma- t pula dijana norma- t dan norma- s .

Kata kunci: norma- s ; norma- t ; teorem penjanaan; teorem penjanaan bijeksi

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