

Call for Papers for a Special Session on Applications of Type-2 Fuzzy Logic

The IEEE International Conference on Fuzzy Systems (FUZZ IEEE 2004), 25-29 July 2004, Budapest, Hungary

The Fuzzy Logic System (FLS) is credited with being an adequate methodology for designing robust systems that are able to deliver a satisfactory performance in face of uncertainty and imprecision, as a result the FLS has become a popular approach and had many applications in various domains. However there are many sources of uncertainty facing the FLS and these uncertainties translate into uncertainties about fuzzy set membership functions.

To date most of FLS implementations are based on the traditional type-1 FLS which use precise type-1 fuzzy sets and once the type-1 membership functions have been chosen, all the uncertainty disappears, because type-1 membership functions are totally precise

Type-2 FLS is a new emerging paradigm which use type-2 fuzzy sets which are characterized by a fuzzy membership function. The membership functions of type-2 fuzzy sets are three dimensional and include a footprint of uncertainty, it is the new third-dimension of type-2 fuzzy sets and the footprint of uncertainty that provide additional degrees of freedom that make it possible to directly model and handle uncertainties.

Type-2 FLSs has already been applied in various domains like robot control, medical applications, forecasting of time-series, transport scheduling, connection admission control, signals processing and many other applications.

The aim of this special session is to provide a forum for the academic community and industry to report on the recent advances on the type-2 fuzzy logic application in the various domains. This includes but not limited to using type-2 fuzzy systems, in control, medical applications, communications, signal processing, .etc.

Session Organisers

Dr. Hani Hagrass
Department of Computer Science
University of Essex
Colchester, CO4 3SQ
UK
Phone: +44 1206 873601
Fax: +44 1206 872788
Email: hani@essex.ac.uk

Dr. Robert John
Division of Artificial Intelligence
DeMontfort University
Leicester LE1 9BH
UK
Phone: (44) 116 2078491
Fax: (44) 116 2541891
Email: rij@dmu.ac.uk