Finite Markov Chain and Fuzzy Models in Management and Education

Overview

There used to be a tradition in science and engineering of turning to probability theory when one is faced with a problem in which uncertainty plays a significant role. This transition was justified when there were no alternative tools for dealing with the uncertainty. Today this is no longer the case. Fuzzy logic, which is based on fuzzy sets theory introduced by Zadeh in 1965, provides a rich and meaningful addition to standard logic that opens the door to construction of mathematical solutions of computational problems which are stated in a natural language. In contrast, standard probability theory does not have this capability, a fact which is one of its principal limitations. The applications which may be generated from or adapted to fuzzy logic are wide-ranging and provide the opportunity for modelling under conditions which are inherently imprecisely defined, despite the concerns of classical logicians. Many systems may be modelled, simulated and even replicated with the help of fuzzy logic, not the least of which is human reasoning itself.

On the other hand, concerning the probability theory, Markov chains offer ideal conditions for the study and mathematical modelling of a certain kind of phenomena depending upon random variables. The basic concepts of the corresponding theory were introduced by Markov in 1907 on coding literary texts. Since then the Markov chain theory was developed by a number of leading mathematicians such as Kolmogorov, Feller etc, but only from the 60's the importance of this theory to the natural, social and most of the other applied sciences has been recognized.

Modules	**A: Finite Markov Chains : October 3 - October 4, 2016** **B: Fuzzy Sets and Logic : October 5 - October 7, 2016** **Number of participants for the course will be limited to thirty.**
You Should Attend If…	▪ You are Executives, engineers and researchers from manufacturing, service and government organizations including R&D laboratories. ▪ You are students at all levels (BTech/MSc/MTech/PhD) or Faculty from reputed academic institutions and technical institutions.
Fees	The participation fees for taking the course is as follows: **Participants from abroad : US $200** **Industry/ Research Organizations: Rs.6000** **Academic Institutions: Rs.4000** **Students/Scholars: Rs.1000** The above fee includes all instructional materials, computer use for tutorials, 24 hours free internet facility. Accommodation will be arranged twin sharing basis on payment basis.

The Faculty

Prof. Michael Gr. Voskoglou is currently an Emeritus Professor of Mathematical Sciences at the School of Technological Applications of the Graduate Technological Educational Institute (T. E. I.) of Western Greece, where he served as a Full Professor from1987 to 2010. His research interests include Algebra, Fuzzy Logic, Markov Chains, Artificial Intelligence and Mathematics Education.

Course Co-ordinator

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