

97-1 大葉大學 選課版課綱

基本資訊

課程名稱	類神經模糊系統	科目序號 / 代號	1140 / EGR5215
開課系所	電機工程學系碩士班	學制 / 班級	研究所碩士班1年1班
任課教師	吳幸珍	專兼任別	專任
必選修 / 學分數	選修 / 3	畢業班 / 非畢業班	非畢業班
上課時段 / 地點	(二)678 / H726	授課語言別	英文

課程簡介

Neuro-Fuzzy is the first course to focus on soft-computing ? a concept which has direct bearing on machine intelligence. This course is to provide graduate student involved in fuzzy systems and neural-network systems with a comprehensive, well-organized, and up-to-date account of basic principles underlying the soft-computing integrated systems. Fuzzy sets and fuzzy logic are developed as a mean for representing, manipulating, and utilizing uncertain information and to provide a framework for handling uncertainties and imprecision in real world application while neural networks are developed to provide computational power, fault tolerance, and learning capability to the system.

課程大綱

- I. Fuzzy Set Theory
 1. Basics of fuzzy sets (Lin-2)
 2. Fuzzy relations (Lin-3)
 3. Fuzzy arithmetic (Lin-5)
 4. Fuzzy logic and approximate reasoning (Lin-6)
 5. Fuzzy logic control systems (Lin-7)
 6. Applications of fuzzy theory (Lin-8)
- II. Convolution
 7. Genetic algorithms (Lin-14)
- III. Neural Networks
 8. Artificial neurons, neural networks and architectures (Kumar-1,2,3)
 9. Geometry of binary threshold neurons and their networks (Kumar-4)
 10. Supervised learning I: perceptrons and LMS (Kumar-5)
 11. Supervised learning II: backpropagation and beyond (Kumar-6)
 12. Neural networks: a statistical pattern recognition perspective (Kumar-7)
 13. Radial basis function network (Kumar-8.2)
11. Final Exam.

基本能力或先修課程

無