GUIDA
AI CORSI UNIVERSITARI DEL
VECCHIO ORDINAMENTO DIDATTICO IN
INFORMATICA
A CREMA

INFORMAZIONI GENERALI
SCADENZE
MANIFESTI DEGLI STUDI
PROGRAMMI DEGLI INSEGNAMENTI

anno accademico 2001/2002
SCOPO DELL’INSEGNAMENTO

This course introduces main directions of research in advanced Artificial Intelligence (AI). We will study the models and methods developed in AI for design of intelligent systems. We will consider also AI application in information processing systems and in intelligent robotics.

PROGRAMMA DELL’INSEGNAMENTO

1. Introduction to Artificial Intelligence (AI).
   ▪ Main directions of research in AI. Two levels of intelligence in intelligent systems. AI application to intelligent robotics.
2. Soft computing as the tool for simulation of a low level intelligent behavior in an intelligent system.
   ▪ Main components of soft computing: fuzzy sets, Genetic Algorithms (GA) and neural networks.
   ▪ Examples of application.
5. GA and fuzzy controllers. Examples of application.
6. Intelligent behavior with high level intelligence.
   ▪ Intelligent decision making, task level planning, natural communication.
7. Knowledge engineering: representation, processing and acquisition models.
   ▪ Languages for knowledge representation (frames, productions, prolog-like, etc.)
   ▪ Models of human-like reasoning. Example of application.
9. Communication models. Human-computer interaction: from simple dialog to intelligent interface and to virtual reality.
10. Natural Language (NL) communication and processing. Different levels of NL understanding.
    ▪ Approaches to linguistic processors design.
11. Cognitive graphics and AI. Model “Text <-> Picture”.
    ▪ Example of application of cognitive graphics and NL in a robotic system.
13. Living systems models. Learning, self-organization and adaptation.

BIBLIOGRAFIA CONSIGLIATA


PREREQUISITI

L’insegnamento viene tenuto in lingua inglese.
Si richiede pertanto la capacità di comprendere l’inglese tecnico scritto e parlato.