SOFT COMPUTING

MCA 4002

TOPIC: Basics of Soft Computing

Dr. Pushpa Mamoria
Sr. Lecturer

Department of Computer Application
UIET, CSJM University, Kanpur

Introduction

- The idea of soft computing was initiated in 1981 when Lotfi A.
 Zadeh published his first paper on soft data analysis "What is Soft Computing", Soft Computing. Springer-Verlag Germany/USA 1997.]
- Zadeh, defined Soft Computing into one multidisciplinary system as the fusion of the fields of Fuzzy Logic, Neuro-Computing, Evolutionary and Genetic Computing, and Probabilistic Computing.

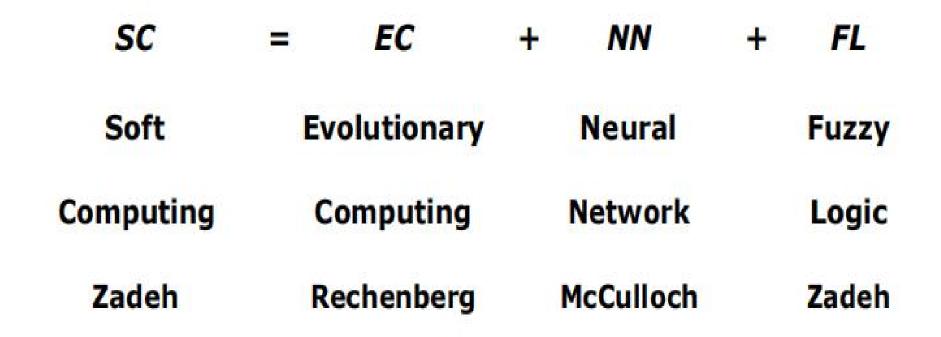
Introduction

• Soft Computing is the fusion of methodologies designed to model and enable solutions to real world problems, which are not modeled or too difficult to model mathematically.

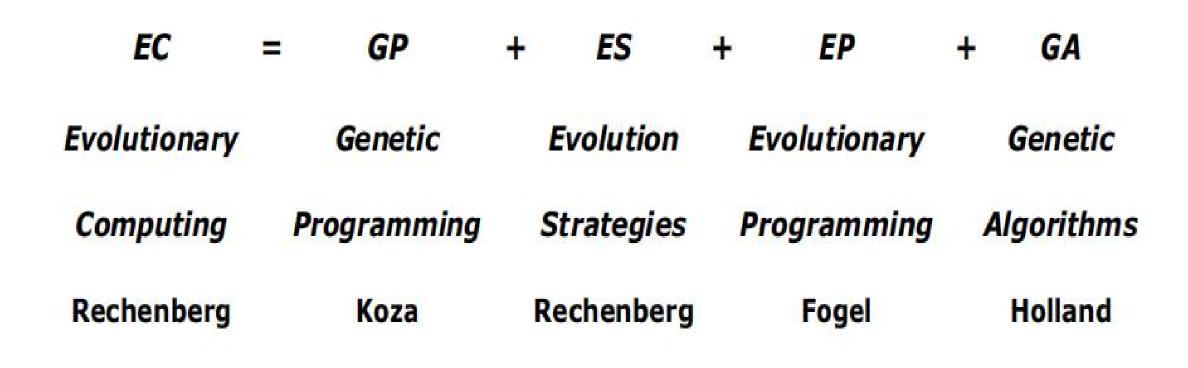
Introduction

• The aim of Soft Computing is to exploit the tolerance for imprecision, uncertainty, approximate reasoning, and partial truth in order to achieve close resemblance with human like decision making.

The Soft Computing – development history



The Soft Computing – development history



REFERENCES:

- 1. N. K. Sinha and M. M. Gupta, Soft Computing & Intelligent Systems: Theory & Applications-Academic Press /Elsevier. 2009.
- 2. Simon Haykin, Neural Network- A Comprehensive Foundation- Prentice Hall International, Inc.
- 3. R. Eberhart and Y. Shi, Computational Intellignce: Concepts to Implementation, Morgan Kaufman/Elsevier, 2007.
- 4. Ross T.J., Fuzzy Logic with Engineering Applications- McGraw Hill.
- 5. Principle of Soft Computing, By Dr. Prashant Kumar Patra, Bhuvneshwar.
- 6. Soft Computing, By Prof Debasis Samanta, NPTEL online course.