

KW-IEEE Joint Chapter of Computers/Signal Processing/Neural Networks Societies  
and  
Department of Systems Design Engineering Present:

**Prof. Mo Jamshidi**  
**The University of New Mexico, Albuquerque**

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10:30 – 11:30

**Soft Computing – Paradigm Shifts in Intelligent Control and  
Image Enhancement**

ABSTRACT

*Soft computing*, a collection of fuzzy logic, neuro-computing, genetic algorithms and genetic programming, has proven to be powerful tools for adding *autonomy* and *semi-autonomy* to many complex systems. For such systems the size of soft computing control architecture will be nearly infinite. Examples of complex systems are power networks, space robotic colonies, national air traffic control system, an integrated manufacturing plant, Hubble Telescope, etc. In this presentation soft computing paradigms like fuzzy logic, genetic algorithms, genetic programming, neurocomputing, stochastic learning automaton, etc. will first be introduced. Then the new paradigms are introduced for intelligent control systems. A set of application areas such as autonomous control and image enhancement and remote sensing will be given. Videotape presentation will be made.

**SEE BIO ATTACHED**

**Dr. Mo Jamshidi** (Fellow IEEE, Fellow ASME, Fellow AAAS, Fellow TWAS) is the Regents Professor of Electrical and Computer Engineering, the AT&T Professor of Manufacturing Engineering and founding Director of Center for Autonomous Control Engineering (ACE) at the University of New Mexico, Albuquerque, NM, USA. He is a Senior Research Advisor at US Air Force Research Laboratory, KAFB, NM. He is an advisor to US DOE on robotic automation for 9 industries of the future in USA. He is also an advisor for the NASA Headquarters. He has worked over 4 years in industry at IBM Corporation and General Motors Corporation (USA) and Siemens Automotive, France. He has over 500 technical publications including 50 books and edited volumes. Six of his books have been translated into at least one foreign language. He is the Founding Editor or co-founding editor or Editor-in-Chief of 5 journals (including Elsevier's *International Journal of Computers and Electrical Engineering Elsevier, UK, Intelligent Automation and Soft Computing, TSI Press, USA*) and one magazine (*IEEE Control Systems Magazine*). He was the series editor for ASME Press Series on Robotics and Manufacturing from 1988 to 1996 and Prentice Hall Series on Environmental and Intelligent Manufacturing Systems from 1991 to 1998.