## Registration Form Short-Term Training Programme on

MATLAB and Soft Computing in Electrical Engineering

## **December 17-31, 2004**

Last date of receipt of application:  Date of intimation of selection:						
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Designat	ion:					
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Important note: The candidate should enclose a self-

addressed envelop with postage stamp of Rs. 5/=.

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Professor Mushirul Hasan Vice Chancellor

### **General Chair**

Professor S. S. Nabi Dean, Faculty of Engineering & Technology

### Chairman

Professor Ibraheem Head, Department of Electrical Engineering

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Mrs. Shabana Mehfooz Mr. Pradeep Sagar Mr. Iqbal Ali Mr. Naimul Hasan

Please send the completed form to Dr. Zaheeruddin Course Coordinator Department of Electrical Engineering Faculty of Engineering and Technology Jamia Millia Islamia (A Central University) Jamia Nagar, New Delhi-110025 Ph: 011-26981717 ext. 2352 (O), 011-26316151 (R) Email: zaheer 2k4@rediffmail.com

Complete information is available on Jamia Website: http://jmi.nic.in/Events/Events04/Events04.htm

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# Sponsored by Indian Society for Technical Education/ All India Council for Technical Education





Course Coordinator Dr. Zaheeruddin



Organized by
Department of Electrical Engineering
Faculty of Engineering & Technology
Jamia Millia Islamia (A Central University)
New Delhi-110025

### About Institute

Jamia Millia Islamia was founded at Aligarh in United Province, India in 1920 during the Khilafat and Non-Cooperation Movement in response to Gandhiii's call to boycott government supported educational institutions. Jamia moved from Aligarh to Delhi in 1925. The Jamia was made a Central University by an Act of Parliament in 1988. Today, Jamia Millia Islamia is one of the most prominent and promising Central Universities of the country. The academic programs of the university leading to higher education degrees, diplomas and certificates are offered through six Faculties (Education, Humanities & Languages, Natural Sciences, Social Sciences, Engineering & Technology, and Law). Besides its six faculties, the Jamia has a number of centres of learning and research, like Mass Communication Research Centre (MCRC), Academy of Third World Studies (ATWS) etc.

### **About Faculty**

The Faculty of Engineering and Technology was established in the year 1985. The Faculty is presently running undergraduate regular courses in various disciplines leading to the degree of B. Tech. and B. E. in Civil, Electrical, Mechanical, Electronics & Communication, Computer Engineering, and Bachelor of Architecture. The Department of Civil, Electrical, Mechanical, Electronics & Communication, and Computer Engineering is also conducting part-time (Evening) courses leading to the degree of B. E. for the employed people having diploma certificates in respective branches.

### **About Department**

The Department of Electrical Engineering also offers M. Tech. and Ph.D. degree programs. The faculty members of the department are actively engaged in research and development in the area of Soft Computing applied to various disciplines of Electrical Engineering. Some of the faculty members have produced their research findings in various IEEE Transactions and other International Journals.

### **Faculty**

The following speakers of International repute in the areas of Soft Computing are expected to deliver their expert lectures:

- Prof. Kaoru Hirota Fuzzy Logic Tokyo Institute of Technology, Japan
- Prof. N.R. Pal Neuro-fuzzy Computing Indian Statistical Institute, Kolkata, India
- Prof. Raghu Krishna Puram Intelligent Agent IBM Research Centre, IIT Delhi, India
- Dr. D.K. Chaturvedi Neural Networks
   Dayal Bagh Educational Indititute, Agra, India
- Dr. S. N. Singh Genetic Algorithms Indian Institute of Technology, Kanpur, India
- MATLAB and its Applications
   Cranes Software International Ltd., Bangalore

### How to apply

The course is open to the Teachers of Technical Institutes and Scientists of R&D organizations. Those interested in attending the course are requested to fill the registration form enclosed and send the completed application to course coordinator.

### Please note that:

- 1. The application should be sent through proper channel with demand draft of Rs. 500/= (to be refunded who attend the course) payable to "Jamia Millia Islamia, New Delhi" as a cautionary deposit latest by 05-12-2004.
- 2. Due to limited funds, the teachers of AICTE approved Engineering Colleges will be paid II class train fare by the shortest route.
- 3. Participants from R & D Organizations and Industries have to bear their own travel expenses. In addition, they have to pay a registration fee of Rs. 5000/= to cover the cost of course material and boarding and lodging.

### Introduction

Soft Computing is a collection of methodologies that aim to exploit the tolerance for imprecision and uncertainty to achieve tractability, robustness, and low solution cost. Its principal constituents are fuzzy logic, neurocomputing, and probabilistic reasoning with the latter subsuming genetic algorithms, belief networks, chaotic systems, and parts of learning theory. In large measure, fuzzy logic, neurocomputing, and probabilistic reasoning are complementary, not competitive. A trend that is growing in visibility relates to the use of fuzzy logic in combination with neurocomputing and genetic algorithms. In many cases a problem can be solved most effectively by using fuzzy logic, neuro-computing, and genetic algorithms in combination rather than exclusively. Moe generally, fuzzy logic, neurocomputing, and genetic algorithms may be viewed as the principal constituents of soft computing.

MATLAB® is a high-performance language for technical computing. It integrates computation, visualization, and programming in an easy-to-use environment where problems and solutions are expressed in familiar mathematical notation. The name MATLAB® stands for MATrix LABoratory. MATLAB® features a family of application-specific solutions called *toolboxes*. Toolboxes are comprehensive collections of MATLAB® functions (M-files) that extend the MATLAB® environment to solve particular classes of problems. Areas in which toolboxes are available include signal processing, control systems, neural networks, fuzzy logic, simulation, and many others.

#### Course contents

An overview of the topics is as follows:

- Soft Computing
- Fuzzy Logic
- Neural Networks
- Genetic Algorithms
- MATLAB Programming
- Fuzzy and ANN Tool Boxes
- Advance Topics