

## About Electronics & ICT Academy at PDPM IIITDM Jabalpur

The Ministry of Electronics and Information Technology, Government of India has instituted seven Electronics and ICT Academies with one academy at PDPM IIITDM Jabalpur. The primary objective of the Academy is to prepare manpower for two important missions - 'Digital India' and 'Make in India'. The Academy aims at scalable training programmes in niche areas of Electronics and ICT for the development of required knowledge base, skills and tools to unleash the talent of Indian population. In addition to the faculty development programmes on fundamental and advanced topics, the Academy conducts customized training programmes for corporate sector and research promotion workshops in emerging areas. The Academy is envisioned to become a central hub of activities on training, research, consultancy work and entrepreneurship programmes.

## About PDPM IIITDM Jabalpur

PDPM IIITDM Jabalpur was established in 2005 with a focus on education and research in IT enabled Design and Manufacturing. Since its inception, PDPM IIITDM Jabalpur has been playing a vital role in producing quality human resources for contribution in India's mission of inclusive and sustainable growth. The Institute offers undergraduate, post graduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design and PhD programmes in Mathematics, Physics and Literature. Under IIIT act, the Institute has been declared as an Institute of National Importance in January 2015. The Institute campus is being developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna Airport, Jabalpur.

## Faculty Development Programme Neuro-Fuzzy Systems and Evolutionary Optimization with Application

**Who can attend:** Programme is open to faculty from all colleges and universities, preferably from Madhya Pradesh, Chhattisgarh, and Maharashtra state. Faculty members from other states are also eligible. Industry personnel working in the allied discipline may also apply. **Limited seats are available for research scholars.**

### How to apply:

**Online:** The participants may log on to the website [ict.iiitdmj.ac.in](http://ict.iiitdmj.ac.in) and fill up the application form selecting the name of the course.

You may also send scanned copy of your completed application form to [academyiiitdmj@gmail.com](mailto:academyiiitdmj@gmail.com). Application format may be downloaded from the website (Also given in this brochure). Print out of the filled in application form duly endorsed by the forwarding authority and a demand draft of applicable amount (as given below) in favour of 'Electronics and ICT Academy, IIITDMJ' payable at Jabalpur may be sent to the address given below. No Travelling Allowance will be paid by the Academy.

### Important Dates:

**Last Date of Online Registration: December 1, 2018**

**Course Dates: December 10-15, 2018**

### Registration Fee :

Academic: Rs. 1000/- (Gen/OBC), Rs. 750/- (SC/ST)

Industry: Rs. 5000/-

(Includes lunch + tea)

### Accommodation charges (if needed):

Rs. 1000/-: Hostel on sharing basis and meals at Mess

Rs. 2000/-: Hostel single accommodation and meals at Mess

Institute Visitors Hostel may be provided on request based on availability at actual cost

## Contact us

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PDPM Indian Institute of Information Technology,  
Design and Manufacturing, Jabalpur,  
Dumna Airport Road, Jabalpur 482005  
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## Faculty Development Programme Neuro-Fuzzy Systems and Evolutionary Optimization with Application

December 10-15, 2018



Electronics and ICT Academy

*An Initiative of*

*Ministry of Electronics and Information Technology,  
Government of India*



PDPM-Indian Institute of Information  
Technology, Design and Manufacturing,  
Jabalpur, Dumna Airport Road,  
Jabalpur 482005

## Faculty Development Programme Neuro-Fuzzy Systems and Evolutionary Optimization with Application

**December 10-15, 2018**

### Course Objectives:

Artificial Intelligence is an emerging technology recently used in many industries and consumer applications such as Smartphones, networking, Public Transportation and Automation. These cutting-edge technologies relied on Artificial Neural Network, Fuzzy logics and Optimisation algorithms. This course is intended to cover key aspects of the Neuro-Fuzzy system and Nature Inspired Optimisation algorithms. The course will assist participants to enhance and develop these techniques along with hands-on experience on MATLAB & Simulink environment. By the end of the course the attendants will be able to apply these techniques on different inter-disciplinary applications to boost their research and teaching skills.

### Course contents:

#### Module 1: Introduction to MATLAB and Simulink

*MATLAB Environment, Data variable and Programming, Simulink Design and Introduction to the Control system toolbox, Fuzzy logic toolbox and Neural Network Tool box.*

#### Module 2: Artificial Neural Network and Application

*Introduction to ANN, Types of ANN architecture, ANN Classification, Deep learning, ANN Application*

#### Module 3: Fuzzy logic and Applications

*Fuzzy Logic, Types of Fuzzy Logic, Introduction to Neuro-Fuzzy, Type-2 Fuzzy model, Application of Fuzzy logic.*

#### Module 4: Evolutionary Optimization algorithm and Applications

*Gradient descent and Least square method, Genetic Algorithm, Particle Swarm Optimization, Cuckoo Search Algorithm. Fire-fly algorithm, Application of Evolutionary Optimization.*

## Resource Persons

1. Prof. Aparajita Ojha  
*Professor, PDPDM IIITDM Jabalpur*
2. Prof. Vijay Kumar Gupta  
*Professor, PDPDM IIITDM Jabalpur*
3. Dr. Nishchal Verma  
*Associate Professor, IIT Kanpur*
4. Dr. Prabin Kumar Padhy  
*Associate Professor, PDPDM IIITDM Jabalpur*
5. Dr. Sachin Kumar Jain  
*Assistant Professor, PDPDM IIITDM Jabalpur*
6. Dr. Anil Kumar  
*Assistant Professor, PDPDM IIITDM Jabalpur*
7. Dr. Irshad Ahamad Ansari  
*Assistant Professor, PDPDM IIITDM Jabalpur*

## Course Coordinator

1. Dr. Prabin Kumar Padhy  
*Associate Professor, PDPDM IIITDM Jabalpur*  
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2. Dr. Sachin Kumar Jain  
*Assistant Professor, PDPDM IIITDM Jabalpur*  
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*Ph: 0761-2794468, Fax: 0761-2794090*

## Application Form

Name of the Course / Programme: **Neuro-Fuzzy Systems and Evolutionary Optimization with Application**

Name of the Applicant (first, last): .....

.....

Gender : M / F / O      Category: GEN/SC/ST/OBC

Designation: .....

Name and Address of the Organization/Institute/College:

.....

.....

City/town:..... Email: .....

Alternate email (if any): .....

Phone Number: .....

Mobile Number: .....

Do you need accommodation? (Yes/No):

**Note: Accommodation and meal facility will be available only from the evening of December 9 to the morning of December 16, 2018.**

DD Number: ..... Date: .....

Issuing Bank: ..... payable at: .....

Signature of the Applicant

I hereby agree to relieve Mr./ Ms./ Dr.....  
..... in case she/he is selected  
to attend the programme.

Signature and Seal of the Forwarding Authority

Name .....

Designation .....