



मालवीय राष्ट्रीय प्रौद्योगिकी संस्थान जयपुर

MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY, JAIPUR

Jawahar Lal Nehru Marg, Jaipur- 302017, Rajasthan

www.mnit.ac.in

MNIT

8<sup>th</sup> Aug. 2017

To,

The principal  
College of Technology & Engineering, Udaipur

Subject : Two week Faculty Development Program on "Advanced Optimization Techniques" during 6th to 15th Oct. 2017. The program is funded by E&ICT Academy, MNIT Jaipur.

Dear Sir/Mam,

The E&ICT Academy, MNIT Jaipur is organizing a Two week Faculty Development Program on "Advanced Optimization Techniques" during 6th to 15th Oct. 2017.

The attractive features of this training program are :

1. Eminent speakers from reputed universities will be delivering the content :

- Prof. Ganapati Panda, FNAE, FNASc, SMIEEE, School of Electrical Sciences, IIT Bhubaneswar.
- Prof. Bijay. K. Panigrahi, Dept. of Electrical Engineering, IIT Delhi.
- Dr. Pyari Mohan Pradhan, Dept. of Electronics & Communication Engineering, IIT Roorkee.
- Dr. Nithin V. George, Dept. of Electrical Engineering, IIT Gandhinagar.
- Dr. Sitanshu S. Sahu, Dept. of Electronics & Communication Engineering, BIT Mesra, Ranchi.

2. The MNIT speakers delivering course contents are :

- Dr. Rajesh Kumar, Dept. of Electrical Engineering.
- Dr. Satyasai Jagannath Nanda, Dept. of Electronics and Communication Engineering.
- Dr. Kusum Verma, Dept. of Electrical Engineering.
- Dr. Gunjan Soni, Dept. of Mechanical Engineering.
- Dr. Rajeev Dohare, Dept. of Chemical Engineering.

3. Content coverage will be **cross-disciplinary in nature**. It will be helpful the **PhD Scholars and Faculty Members** to discuss their problems with the experts in the field.

4. The course contains **40 hours laboratory sessions** in which 20 specialized experiments will be carried out by the participants in MATLAB.

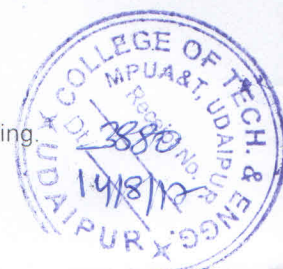
5. There will be two quiz test and a LAB viva session based on which grades are going to be awarded to the participants. The participant will get **certification and gradation from E&ICT Academy** which will be helpful to enhance his/her employability skills. The E&ICT Academy certified courses have similar value that of AICTE and UGC approved courses.

A copy of the program information brochure is enclosed herewith. Kindly do the needful to give adequate publicity to this academy training program in your campus.

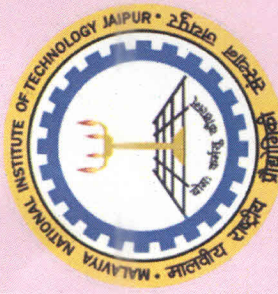
SJNanda  
Dr. Satyasai Jagannath Nanda & Dr. Rajesh Kumar

Course Coordinators of FDP on 'Advanced Optimization Techniques (AOT-2017)'

Dr. Mahesh Kotari  
TeqIP Cell  
of m. faculty member  
14.8.17  
14.8.17



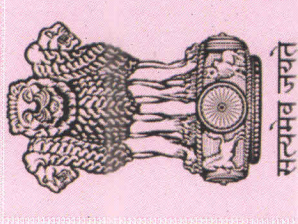
Organized by  
E & ICT Academy



Two Week Faculty  
Development Program on

FDP Programme  
Sponsored by

# Advanced Optimization Techniques (AOT-2017)



**MNIT Jaipur**

<http://www.mnit.ac.in/eict>

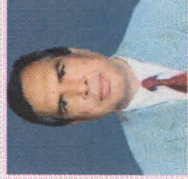
**6 Oct - 15 Oct, 2017**

**Venue: Prabha Bhawan, MNIT**

Ministry Electronics & Information Technology  
Government Of India  
[meity.gov.in/content/schemes-projects](http://meity.gov.in/content/schemes-projects)

**Prof. Udaykumar R. Yaragatti**  
Chairman, Advisory Board,  
EICT Academy & Director MNIT Jaipur  
**Prof. Viswanath Sinha**  
Academic Chair, EICT Academy  
**Prof. Vineet Sahu**  
Chief Investigator, EICT Academy

## Distinguished Speakers



**Prof. Ganapati Panda**, FNAE, FNASc.  
School of Electrical Sciences  
IIT Bhubaneswar  
<http://www.iitbbs.ac.in/profile.php/gpanda/>



**Prof. B. K. Panigrahi**,  
Dept. of Electrical Engineering  
IIT Delhi


## Course Contents (40 hours theory + 40 hours Lab)

**Module 1 : Classical Opt. techniques & intro. to 'Evolutionary Computation'**:  
Derivative based approaches, LMS Algorithm, RLS Algorithm, Introduction to  
nature Inspired algorithms and Swarm Intelligence, Genetic Algorithm,  
Differential Evolution, Bacterial Foraging Opt., Application to System  
Identification, Comm. Channel Equalization, Intelligent Instrumentation.

**Module 2: Multi-Objective Optimization** : Non-dominated Sorting Genetic  
Algorithm, Multi-Objective Particle Swarm Opt., Multi-Objective Cat Swarm  
Opt., Evaluation criterion of Algorithms.

**Module 3: Neural Network and Fuzzy Logic** : Introduction to Neural Networks,  
Multi Layer Perceptron, Functional Link ANN, Radial Basis Function,  
Introduction to Fuzzy Logic, Fuzzification and De-fuzzification, Fuzzy logic  
based models, Application to Classification, Genomic Signal Processing,  
Acoustic Noise Cancellation and Hearing Aid Design.

**Module 4 : Nature Inspired Algorithms** : Grey Wolf Optimization, Monkey

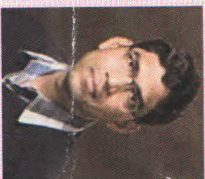


**Dr. Pyari Mohan Pradhan**  
Dept. of Electronics & Comm. Engg.  
IIT Roorkee  
[https://www.iitr.ac.in/departments/ECE/pages/people+Faculty+Pyari\\_Mohan\\_Pradhan.html](https://www.iitr.ac.in/departments/ECE/pages/people+Faculty+Pyari_Mohan_Pradhan.html)



**Dr. Nithin V. George,**  
Dept. of Electrical Engg.

IIT Gandhinagar  
<http://www.iitgn.ac.in/faculty/electrical/nithin.htm>



**Dr. Sitanshu S. Sahu,**  
Dept. of Electronics & Comm. Engg.

BIT Mesra, Ranchi  
<https://www.bitmesra.ac.in>

### MNIT Organization Committee

#### Coordinators

**Dr. Satyasai Jagannath Nanda,**  
Dept. of Elect. & Comm. Engg, MNIT Jaipur  
+91-9549654237, [sjinanda.ece@mnit.ac.in](mailto:sjinanda.ece@mnit.ac.in)

**Dr. Rajesh Kumar,** Dept. of Electrical Engg.  
+91-9549654481, [rkumar.ee@mnit.ac.in](mailto:rkumar.ee@mnit.ac.in)

#### Co-Coordinator

**Dr. Kusum Verma,** Dept. of Electrical Engg.  
**Dr. Gunjan Soni,** Dept. of Mechanical Engg.  
**Dr. Rajeev Dohare,** Dept. of Chemical Engg.

Visit us at : <http://www.mnit.ac.in/eict>

Email us at : [academy@mnit.ac.in](mailto:academy@mnit.ac.in)

and Levy flight, Binary Algorithm, Whales Optimization, and Pattern Recognition. Systems, Data Classification and Clustering, Pattern Recognition.

**Module 5 : Swarm Intelligence :** Particle Swarm Optimization and its variants, Ant Colony Optimization, Artificial Bee Colony Algorithm, Directed Bee Optimization, Termites Algorithm, TSP Problem, Power System Optimization.

**40 hours Laboratory Sessions :** It consist of twenty simulation experiments which enables the participants to know in-depth programming aspects of the theoretical concepts. Simulation will be carried out in MATLAB & Simulink.

#### Course Registration & Fee

- Registration is done online at [http://www.mnit.ac.in/eict/apply\\_now.php](http://www.mnit.ac.in/eict/apply_now.php)
- One-time registration fee of **Rs. 500/-** is to be paid by each participant attending first time. This fee is not applicable for those participants, who have already attended Academy training programme earlier.
- Along with one time registration participants from academia/ research scholars/ PhD students are required to pay a further fee of **Rs. 4000/-**.
- Along with one time registration participants from industries, UG/PG students would pay a further fee of **Rs. 8000/-**.
- Relaxation/rebate of 75% course fee** in C) and D) for SC/ST candidates.
- Lodging for a limited numbers will be provided to outstation participants at Hostels of MNIT Jaipur.
- The registration fee covers the participation in the programme, course material, breakfast and working lunch on all the days of the workshop. The travel and other expenses would have to be borne by the participants.
- Registration amount is received through online payment/NEFT/IMPS/DD.

#### Account Name-

'Electronics and ICT Academy MNIT Jaipur'

#### Account Number-

676801700483

#### Bank address-

ICICI Bank, MNIT Campus Branch, Jaipur.

#### IFSC Code-

ICIC0006768