

Registration Form

Name :

Category : Student
Academician
Engineer / Professional

(Tick which ever is applicable)

Address :

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Email:

Phone :

Registration Fee : Rs. In words Rupees
..... only.

Demand draft number/date/name of bank

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Date : Signature

Course

On

**Recent Trends in DSP
and Evolutionary
Computing:
(Application and
Implementation)**

19-05-2008 to 30-05-2008

Coordinator

**Prof. G. Panda, FNAE, FNASc.
Head, E & CE**

Organised by

**Dept. of Electronics & Communication
Engineering**



**National Institute of Technology
Rourkela – 769 008, Orissa**

www.nitrkl.ac.in

Department of E & CE

The Electronics and Communication Engg. Dept. offers two B. Tech. programs on (i) Electronics and Communication Engg. (ii) Electronics & Instrumentation Engg. In addition to two M. Tech. Programs on (i) Communication and Signal Processing (ii) VLSI Design and Embedded System. The Dept. also offers M. Tech® and Ph. D. programs in various specializations such as DSP, communication, VLSI Design, Soft Computing and Instrumentation Engg.

The Dept. has earned reputation in imparting effective technical education, research, technology development and training in these areas. The Dept. also collaborates with Industry, Academic and Professional bodies and actively engaged in a number of technology development sponsored projects.

From time to time the Dept. offers short term training programs on current and emerging topics to working professionals, faculty, student and scientist of R&D organizations. The course cover important state of the art technologies employed in various telecommunication sector, process industries and defence organizations. The students of B. Tech. and M. Tech. and professionals will be immensely benefited in attending the proposed short term program. This exposure will provide them excellent employment opportunity as well as carrying out innovative project work which is an essential part of their curricula.

Course Outline

A. Advanced Techniques of DSP

1. Adaptive Filters(FIR & IIR) 2. Adaptive system identification 3. Adaptive equalizer 4. Adaptive line Enhancer 5. Acoustic Noise canceller 6. RLS and different types of LMS algorithm 7. DCT, DHT and DWT 8. Block adaptive filtering 9. ICA 10. Sensor Networks 11. Spectrum Analysis 12. Genomic Signal Processing

B. Evolutionary Computation

1. Artificial Neural Network (ANN) 2. Genetic Algorithm (GA) 3. Ant Colony Optimization (ACO) 4. Bacterial Foraging Optimization (BFO) 5. Particle Swarm Optimization (PSO) 6. Artificial Immune Systems (AIS)

C. Application

1. Telecommunication 2. Biomedical 3. Finance and Economics 4. Intelligent Instrumentation

D. Implementation in DSP Processor as well as in FPGA

1. Programming with MATLAB 2. Programming with C 3. Implementation in DSP Kit (TMS3206713) 4. Programming with VHDL 5. Implementation in FPGA

Course Delivery

Prof. Ganapati Panda, present Head of E&CE department, who is having more than 30 years of experience in teaching and research in the field of DSP, Communication and Soft Computing will offer the courses. In addition few eminent experts will be invited to teach some topics. The simulation experiments will be conducted by his research students. Total duration of course is 80 hours (Theory : 50hrs. and Simulation practice : 30hrs.)

Eligibility for participation

1. Research personnel in R&D Organizations
2. Scientist and Engineers from Industry
3. Faculty of educational institutions
4. B. Tech./M. Tech./Ph. D. students from engineering institutions.

How to apply

Interested persons may apply in the format given herewith along with the registration fee. Payment should be made through a Demand Draft, to be drawn in favour of "**Continuing Education, NIT Rourkela**" payable at **SBI NIT Campus Branch**(Code:2109). The filled in application for course should be sent to

Prof. G. Panda , FNAE, FNASc
Course Coordinator
Head, Dept. of E&CE
National Institute of Technology
Rourkela – 769 008, Orissa

The registration form can also be downloaded from our institute web site : www.nitrkl.ac.in

Registration Fee

Engineers/Scientist from industry / R&D labs. : **Rs. 6, 000/-**
Faculty of Engg. Colleges/ University/ Institutions : **Rs. 5, 000/-**
Students(B. Tech./M. Tech. / Ph. D.) : **Rs. 4, 000/-**

Important Dates

Last date of receipt of application : **16/05/2008**
Confirmation of selection by email : **17/05/2008**

Lodging, Boarding and Traveling

Participants are required to make their own arrangements for lodging, boarding and traveling. However, on request arrangements for accommodation and fooding can be made in the Visitor's Hostel/Boys Hostel/Ladies Hostel on payment of actual charges.

Contact Details

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