

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

.....

Date : Signature

Short Term Courses

On

Evolutionary Computing and Advanced DSP

**A. Evolutionary Computing
Techniques with Engineering
Applications**

June 11-16, 2007

**B. Advanced topics in DSP with
applications to Communication
and Instrumentation**

June 18- 23, 2007

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 name in imparting effective 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. These courses cover important state of the art technologies employed in various telecommunication sector, process industries and defence organizations. These course include tutorials, hands on sessions and demonstrations. The students of B. Tech. and M. Tech., professionals will be immensely benefited in attending the proposed short term programs. 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. Evolutionary Computing Techniques with Engg. Applications

1. Evolutionary Computation 2. Artificial Neural Network (ANN)
3. Genetic Algorithm (GA) 4. Ant Colony Optimization (ACO)
5. Bacterial Foraging Optimization (BFO) 6. Particle Swarm Optimization (PSO) 7. Application to System Identification
8. Application to Channel Equalization 9. Application to Finance & Economics 10. Application to Intelligent Instrumentation

B. Advanced Topics in DSP with Applications to Communication and Instrumentation

1. Filter Design 2. Adaptive Filters (FIR & IIR) 3. Spectrum Analysis 4. Adaptive system identification 5. Adaptive channel equalization 6. Adaptive Line enhancers 7. Acoustic Noise canceller 8. RLS and different types of LMS algorithm 9. Intelligent Sensors 10. DWT, DCT and DHT 11. Subband filtering 12. Higher Order Statistics 13. Block adaptive filtering

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 each course is 40 hours (Theory : 25hrs. and Simulation practice : 15hrs.)

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 a course/courses should be sent to

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

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

Registration Fee

	Each Course (A or B)	Both Courses (A and B)
Engineers/Scientist from industry/R&D labs.	: Rs. 8, 000/-	Rs. 12, 000
Faculty from Engg. Colleges/ University/Technical Institutions	: Rs. 5, 000/-	Rs. 8, 500/-
Students(B. Tech./M. Tech. / Ph. D.)	: Rs. 3, 000/-	Rs. 4500/-

Number of participants for each course is limited to 30.

Important Dates

Last date of receipt of application : **05/06/2007**

Confirmation of selection by email : **07/06/2007**

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

Prof. G. Panda, FNAE, FNASc.

Coordinator

Head, Dept. of Electronics & Communication Engg.,
National Institute of Technology

Rourkela – 769 008, Orissa

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