

DECLARATION BY THE CANDIDATE

The above information is true to the best of my knowledge. I agree to abide by the rules and regulations governing TEQIP. I shall attend the course for the entire duration.

Place :

Date :

Signature of the Applicant

SPONSORSHIP CERTIFICATE

Mr./Mrs./Dr.....
an employee of our Institution, is sponsored to attend the three day workshop on "Algorithms" under TEQIP conducted by the Department of Mathematics and Department of Computer Applications, National Institute of Technology(NIT), Tiruchirappalli-620 015, on 8th,9th and 10th August 2008.

Place :

Date :

Signature of the
Head of the Organisation

Office Seal



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Three-Day Workshop on

Algorithms

8th, 9th and 10th August 2008

Under

TECHNICAL EDUCATION QUALITY
IMPROVEMENT PROGRAMME (TEQIP)

Community Services

Co-ordinator

Dr. T.N. Janakiraman

Dr. (Mrs.) Hemalatha Thiagarajan

Dr. A.V. Reddy



Organized by

**Department of Mathematics and
Department of Computer Applications**

National Institute of Technology

Tiruchirappalli - 620 015.

OBJECTIVE

Algorithms – their Design and Analysis forms the foundation on which various branches of Computer Science are built. Raw computing power notwithstanding, better algorithms help us solve what were once perceived to be difficult problems. The measures of comparison for algorithms are typically the running time of the algorithm and the space utilized by it. The design of efficient algorithms is influenced by these two measures and appropriate data structures are defined to aid in the representation as well as manipulation of the data.

These are some of the concepts which are very essential for the computer scientist but which are typically perceived as difficult in the class room. This workshop focuses on the basic as well as advanced concepts in the analysis of algorithms. It will provide a good opportunity for Computer Science faculty and researchers to enhance their knowledge from some of the best researchers in this field. The goal of the workshop is to give the participants some basic tools needed to develop their own algorithms and to rate its complexity.

The workshop will cover

- **Basic Data Structures**
- **Advanced Data Structures**
 - B-Trees
 - Red Black Trees
 - Binomial and Fibonacci heaps
- **Algorithm Design Paradigms**
 - Recursion
 - Divide and Conquer
 - Greedy Methods
 - Dynamic programming
 - Back Tracking
- **Algorithm Analysis**
 - Asymptotic notation – Big O, Θ , Ω , o , notations
 - Worst case, Average case, Amortized
 - NP completeness and reducibility
 - P, NP, co-NP, NP Hard, NP Completeness
 - Problems in the above categories
 - Heuristic and Approximate Algorithms
- **Randomized Algorithms**

ELIGIBILITY

Faculty in Computer Science and related engineering fields from Engineering colleges, Arts and Science colleges and Research Institutes are eligible to attend.

TRAVEL/ACCOMMODATION

Participants will be provided with working lunch only. No TA/DA will be given. The participants have to make their own arrangements for stay during the workshop. However, if requested, accommodation may be provided in NIT Guest House/Hostel (if available) for nominal charges. The number of participants is limited to 50 only.

REGISTRATION

Application for participation in the workshop must be sent to the Coordinator as given in the attached format, along with the registration fee of Rs.500/- by D.D. drawn in favour of "The Director, NIT, Tiruchirappalli-620 015" payable at SBI, NIT Branch(Code-1617). The application can also be downloaded from our website: www.nitt.edu.

IMPORTANT DATES

Last date for receiving applications:

20th July 2008

Intimation of Acceptance: **3rd August 2008**

Address for Correspondence:

1. **Dr T.N. Janakiraman**
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2. **Dr. A.V. Reddy**
Department of Computer Applications
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3. **Dr. Hemalatha Thiagarajan**
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THREE-DAY WORKSHOP ON

Algorithms

August 8-10, 2008.

Department of Mathematics and
Department of Computer Applications
National Institute of Technology
Tiruchirappalli - 620 015.

REGISTRATION FORM

Name : _____

Age : _____ Sex : _____

Qualification : _____

Designation : _____

Institution : _____

Experience : _____

Address : _____

E-mail ID :

Phone : _____ Mobile : _____

Details of Registration Fee :

Name of the Bank :

DD No. & Date and Amount :

Signature of the participant