SPONSORSHIP

(a) For applicants from AICTE approved institutions

Prof./Dr./Mr./Ms. _____

_____

is an employee of our institute and his/her application is hereby sponsored. The applicant will be permitted to attend the workshop on "*Genetic Algorithms for Engineering Optimization*" at IIT Guwahati to be held from 29th – 31st December 2014, if selected.

Date:

Signature of sponsoring authority

Designation:

Official Seal:

(b) For applicants from other Government and

Private organizations

DD No.:

Date:

Bank:

Amount:

Signature of the applicant:

The duly completed application should be mailed to:
Dr. Deepak Sharma
Department of Mechanical Engineering
Indian Institute of Technology Guwahati
Guwahati – 781039, Assam, India
Tel.: 0361-2582661
Fax: 0361-2582699
Email: dsharma@iitg.ac.in

ELIGIBILITY

The course is open to faculty members of engineering colleges and polytechnics approved by AICTE. **No course fee** is charged for participants sponsored by AICTE approved institutions. However, a caution deposit of Rs.1000/- has to be sent by the provisionally selected participants, which will be returned when participant joins for the course. Participants from other Government and private organizations are also eligible, provided they meet their TA and DA and pay a course fee of Rs. 2500/- and Rs. 5000/- respectively. All payments must be made in the form of a DD drawn on any Nationalized Bank and in the favor of **QIP, IIT Guwahati**, payable at **Guwahati**.

FINANCIAL ASSISTANCE

Limited number of participants from the AICTE recognized institutions will be eligible for III AC to and fro railway fare* (via shortest route from the place of work). Only the candidates attending the full course will be eligible for T.A. and D.A. *Tatkal reservation charges will not be reimbursed.

BOARDING AND LODGING

Boarding and lodging facilities will be provided for the selected candidates from AICTE approved institutions in the institute guesthouse or hostel (based on availability). However, lodging facility can be arranged for others (subject to availability) on payment basis.

IMPORTANT DATES

The last date for receipt of duly filled applications is **30th November 2014**. Intimation of selection of candidature will be provided through e-mail by **15th December 2014**. Interested candidates may send an advance copy of the completed application by **fax/email** to avoid procedural/postal delay. For announcement and updates, visit *www.iitg.ernet.in/dsharma*

QIP Workshop
on

Genetic Algorithms
for
Engineering Optimization

29th – 31st December 2014

Coordinator: Dr. Deepak Sharma

Organized by:
Department of Mechanical Engineering,
Indian Institute of Technology Guwahati
Guwahati-781039
Assam, India
Website: www.iitg.ernet.in/dsharma

OBJECTIVES

Genetic algorithms (popularly known as GAs) have now gained immense popularity in real-world engineering search and optimization problems all over the world. GAs are computerized search and optimization methods that work very similar to the principles of natural evolution. Some of the GA applications include mechanical component design, structure design, process design, planning, job shop scheduling, VLSI design, control systems, electrical power systems, pattern recognition, operations research, and machine learning. The objective of this workshop is to introduce a number of popular optimization methods used in design, emphasize the importance of optimization in engineering activities, introduce the working principles of GAs, and present GA applications/case studies from a wide variety of engineering problems. Adequate hands-on exposure on computer simulations and relevant software (computer-based) will be provided so that upon completion of the course the participants can use GAs in their teaching, research and other day-to-day activities.

COURSE CONTENT

- Introduction to Optimal Design
- Need of Optimization in Design
- Introduction to Numerical Optimization Methods
- Genetic Algorithms, Particle Swarm Optimization, Differential Evolution, Simulated Annealing etc.
- Advanced GA Techniques (multi-objective optimization, scheduling, global optimization)
- Engineering Case Studies using GAs
- Tutorials/Laboratory Exercises

Relevant papers and software will be provided to each participant for a better understanding and future reference to most of the above topics. Adequate time will be spent to discuss solution procedure of specific problems of interests to the participants.

SPEAKERS

Faculty members of IIT Guwahati and guest faculty members from other premier Institution/Organization will deliver lecture.

COURSE MATERIAL

Each registered participant will be provided with a set of comprehensive lecture notes.

VENUE

The workshop will be arranged in the Conference Hall, IIT Guwahati.

ABOUT IIT GUWAHATI

The campus of IIT Guwahati is spread over 285 hectares of land on the north bank of River Brahmaputra at around 20 km from the Guwahati city. With the majestic Brahmaputra on one side, and with hills and vast open spaces on others, the campus provides an ideal setting for advanced learning and research. Guwahati city is gateway to beautiful North-Eastern region of the country and linked with all major cities by rail, road and air. The scenic panorama of the valley, the remarkable architecture, the local points of art and culture have made the city to one of the most popular destinations in the country. The temperature in the city during the period of workshop varies from 10-20°C.

QIP Workshop on

"Genetic Algorithms for Engineering Optimization"

29th – 31st December 2014

Application form

1. Name (BLOCK LETTERS):

2. Designation & pay scale:

3. Organization:

4. Date of birth:

5. Address for communication:

   Pin Code: Phone:

   Fax:

   E-mail:

6. Academic qualification (please tick)

   (a) B. Tech.   (b) M. Tech.   (c)Ph.D.

7. Specialization:

8. Experience (in years):

   (a) Teaching (b) Industrial (c) Research

9. Amount of TA requirement as per entitlement mentioned in the brochure (only for AICTE approved colleges) Rs:

10. Gender: (a) Male (b) Female

Please register me for the workshop "Genetic Algorithms for Engineering Optimization" to be held at IIT Guwahati during 29-31st December 2014.

Place:
Date: Signature of the applicant