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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Department of Computer Science & Engineering, NIT, Rourkela was established in 1982. Since its inception, the Department is under dynamic progress and is able to establish the reputation for imparting quality education both at undergraduate and graduate programmes. The department has well equipped modern laboratories such as Software Engineering, Information Security & Data Communication, Image Processing & Cluster Computing and Advanced Database Engineering Labs for pursuing research keeping in view of the technological advancement.



AICTE Sponsored

National Workshop

on

RECENT TRENDS IN OBJECT-ORIENTED SOFTWARE TESTING

22nd - 24th June 2009

Dr. Durga Prasad Mohapatra
Convener

Pankaj Kumar Sa
Co-Convener



Department of Computer Science & Engg.

National Institute of Technology
Rourkela-769 008, Orissa

ABOUT THE WORKSHOP

A large number of software fails due to lack of proper testing. Testing is an important activity in the software development process. It takes maximum effort among all the phases. The objective of software testing is to identify all defects existing in the software product. However, for most practical systems, even after satisfactorily carrying out the testing phase, it is not possible to guarantee that the software is error free. This is because of the fact that the input data domain of most softwares products is very large. It is not practical to test the software exhaustively with respect to each value that the input data may assume. Even with this practical limitation of the testing process, the importance of testing should not be underestimated. It must be remembered that testing does expose many defects existing in software products. So, testing provides a practical way of reducing defects in a system & increasing the user's confidence in a developed system.

Testing traditional software is relatively easy. But testing of OOPs is very difficult. Though the O-O features such as inheritance, polymorphism, dynamic binding etc. are the greatest strengths of OO software, but they pose special difficulties in the testing process. So, one has to give special attention while testing OO softwares.

In this workshop, the issues related with testing OO softwares will be highlighted. The recent trends in testing of OO software will be presented by eminent experts. Now-a-days, the testing of OO software is based on design documents such as UML diagrams, rather than the source codes, due to several advantages. So, in this workshop, various UML diagrams and their applications to testing of O-O software will be discussed. Besides this, the participants will be given hands on in O-O software testing using **Rational Rose** and **TestComplete**.

INVITED TALKS

CONTENTS OF THE WORKSHOP

1. INTRODUCTION TO TESTING
 - Black Box Testing
 - White Box Testing
2. OBJECT-ORIENTED TESTING STRATEGIES
 - Unit Testing in the O-O Context
 - Integration Testing in the O-O Context
 - Validation Testing in the O-O Context
3. TEST CASE DESIGN FOR O-O SOFTWARE
 - Fault-Based Testing
 - Scenario-Based Testing
 - Testing Surface Structure and Deep Structure
4. TESTING METHODS APPLICABLE AT THE CLASS LEVEL
 - Random Testing for O-O Classes
 - Partition Testing at the Class Level
5. INTERCLASS TEST CASE DESIGN
 - Multiple Class Testing
 - Tests Derived from Behavior Models
5. INTRODUCTION TO UML DIAGRAMS
7. TESTING OF O-O SOFTWARE USING UML DIAGRAMS
3. TESTING USING PROGRAM SLICES
9. CASE TOOLS: RATIONAL ROSE & TEST COMPLETE.

CALL FOR PAPERS

The workshop also invites original research papers in the areas of O-O Software Engineering, Model Based Software Testing, Program Slicing and its application to Testing, Testing with Evolutionary algorithms, Aspect-Oriented Programming, etc. The papers should be sent through e-mail to durga@nitkl.ac.in on or before 31st May 2009. The authors of the selected papers will be informed through email. They will be given 20 minutes time to present their paper in the workshop. The selected papers will appear in the workshop proceedings. The papers should be submitted in IEEE format.

REGISTRATION & FEE PARTICULARS

Applications in the prescribed format and the registration fee in the form of a DD of Rs 300/- (Rupees Three hundred only) drawn in favour of "Continuing Education, NIT, Rourkela" payable at SBI, NIT Branch, Rourkela-8 (Code-2109) must reach the Convener on or before **31st May 2009**. Registration fee includes boarding, lodging and

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Registration Form

1. Name:.....
.....

2. Designation:

3. Organization:

4. Address:.....
.....

Phone:.....

E-mail:.....

5. Accommodation Required: YES/NO

6. Registration Fee Details:

Amount: Rs

DD Number:

Drawn on Branch

Place:

Date: Signature of the Applicant

Signature of Sponsoring Authority (With Seal)

Copies of this form can be made, if necessary. Please send the filled in form to the Convener on or before **31st May 2009**.

The details of the workshop & the form are also