About the Instructor

Dr. Behrouz Homayoun Far, PhD, is an Associate Professor at the Department of Electrical and Computing Engineering, University of Calgary. He teaches courses in software reliability and testing, software metrics, agent-based software systems and object-oriented analysis and design. Dr. Far has previously been employed by the Japanese Science and Technology Agency (1990-1992) and Japanese Ministry of Education, Culture, Sports, Science and Technology (1992-2001) and has consulted for several companies in Japan and Canada.

Lecture Series on Software Systems for The Future (3) Organizer and Coordinator: Dr. B. H. Far
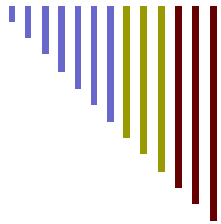
Contact Information

Dr. Behrouz Homayoun Far
Faculty of Engineering
University of Calgary
2500 University Drive N.W.
Calgary, Alberta   T2N 1N4
CANADA
Phone: +1 (403) 210-5411
Fax: +1 (403) 282-6855
Email: far@acm.org
Http://www.enel.ucalgary.ca/People/far

Software Measurement & Metrics

Lecture Series on Software Systems for The Future (3)

Software Measurement & Metrics

Measurement is no longer a myth but a reality in modern software systems.

How to build a measurement system for a particular task?

How to achieve better software quality using software metrics?

How to improve development process using software metrics?

How to predict budget and resources in early stages of development using software metrics?

These are only a few questions that can be answered by Software Reliability Engineering.

How software metrics can influence decisions at various phases of the software life cycle?

How to measure and improve software development process and product?

Course Description:

This course is a step by step introduction to the software metrics. It includes foundations of measurement theory, models of software engineering measurement, software products metrics, software process metrics and measuring management. The course is composed of the following basic modules:

Measurement theory (basics of measurement theory, goal-based framework for software measurement, GQM analysis)

Software product and process measurements (measuring internal product attributes: size and structure, measuring external product attributes: quality, measuring cost and effort, measuring software reliability, software test metrics, object-oriented metrics)

Workshops for GQM analysis and measuring effort using COCOMOII tool are designed to reinforce the presented material.

Course Objectives:

After taking this course, the participants

- will have an understanding of the software metrics terminology and the process of software measurement
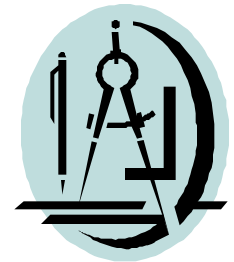
- will have learned techniques to design a measurement system for a given business goal

- will know how to improve process and products during the various stages of the software development life cycle using software metrics

Course Duration:
2 days

Course Pre-requisites:
Principles of software engineering and introduction to project management.

Course Audience:
Senior and project managers; software developers; those who want to know how to use measurement to predict and improve software process and product.

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