



**Computer Society of India, Chennai Chapter
IEEE Computer Society, Madras Chapter
Software Process Improvement Network, Chennai**

Cordially invite you for a technical presentation by

Prof. Alain Abran

**Director, Software Engineering Research Laboratory
ETS - University of Quebec, Canada**

on

**“Specification and Measurement of System
Non Functional Requirements”**

on Thursday, 24th Feb 2011 at 6.00 p.m.

**at Conference Hall, Anna University Alumni Centre, Anna
University, Guindy, Chennai – 600025**

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Programme: 6.00 p.m.: High Tea & Fellowship :: 6.30 p.m.: Presentation

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For the abstract of the presentation & the profile of Prof. Alain Abran, pl. see the next page

ABSTRACT OF THE PRESENTATION ON Specification and Measurement of System Non Functional Requirements

In the system requirements phase, the focus is often on detailing and documenting the system functional requirements and on their allocation to the software and hardware parts of the system being designed. The non-functional requirements, in contrast, are often captured only generically at a fairly high level and they do not include the levels of details necessary for the system engineers to allocate them yet as specific functionalities to be handled either by the software or the hardware, or a specific combination of both. The European ECSS series of standards for the aerospace industry includes sixteen types of non functional requirement (NFR), including maintainability, portability, reliability, etc.

The availability of generic, and detailed, reference models can facilitate the early identification and specification and their detailed allocation as specific functions to be handled by the specified allocation to hardware or software or in a specific combination of both. In the absence of such generic and detailed models, such NFR requirements are typically handled in practice much later on in the software development life cycle when at system testing time, users and developers find out that a number of system requirements have been overlooked and additional work has to be expanded to implement them.

Speaker will discuss an approach adopted for the structure of this reference NFR model, based on the generic model of software functional requirements proposed in the COSMIC – ISO 19761 model. He will provide guideline for measurement of the functional size of such system NFR requirements allocated to software and taking them into account for estimations purposes.

PROFILE OF PROF ALAIN ABRAN



Prof. Alain Abran is the Chairperson of COSMIC consortium. He is currently a professor and the director of the Software Engineering Research Laboratory at the ETS - University of Quebec, Canada. Alain Abran is an expert in his field, with two decades of experience information systems development and software engineering and advanced degrees in engineering and management. Dr. Abran has the right combination of industrial experience and academic expertise.

He is the co-inventor of COSMIC and the co-executive editor of the Guide to the Software Engineering Body of Knowledge, published by the IEEE. He is involved in standardizing software and system engineering (ISO/IEC JTC1 SC7). His recent book, *Software Metrics and Software Metrology* (Wiley IEEE Press) deals with the use of measurement to improve management practices in the context of software estimation and software quality. He is currently authoring another book to be published shortly, on COSMIC-based estimation.

He has worked extensively on software productivity, estimation models, software engineering foundations, software quality, functional size measurement, risk management, and maintenance management, both in industry and with academics.

He holds a PhD in electrical & computer engineering, and Master's degrees in management sciences and electrical engineering.