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High Confidence Software Reuse in Large Systems

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Preface

Software reuse depicts a great vision for the software industry. It has been widely viewed as a promising way to improve both the productivity and quality of software development. However, despite of the successes we have achieved, there are still many issues that have limited the promotion of software reuse in the real world. Therefore, software reuse has remained an important hotspot of research. ICSR is the premier international conference in the field of software reuse. It has been an important venue for presenting advances and improvements within the software reuse domain, and a powerful driving force in promoting the interaction between researchers and practitioners.

The theme of ICSR 10 was "High Confidence Software Reuse in Large Systems." A high confidence system is one that behaves in a well-understood and predictable fashion. Today's trends towards widespread use of commercial off-the-shelf (COTS) technology, increased integration, continuous evolution, and larger scale are yielding more complex software systems. So, the problem of how to build high confidence complex systems and how to reuse software with a high level of confidence has become a new attractive topic for research. Furthermore, high-level software asset reuse has been a goal for the last 20–30 years, and it can still be considered an unsolved question. Components-based development, MDA-MDE-MDD, extreme programming, and other techniques or methods are promising approaches to software reuse that still need more research.

These proceedings report on the current state of the art in software reuse. The topics covered in the proceedings include software architecture, software components, high confidence technology, domain engineering, product line approaches, service-oriented engineering, model-based approaches and several other aspects of software reuse.

May 2008

Hong Mei

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