ProSim'04 - The 5th International Workshop on Software Process Simulation and Modeling

Dietmar Pfahl
Fraunhofer IESE, Germany
pfahl@iese.fhg.de

Ioana Rus
Fraunhofer Center, USA
irus@fc-md.umd.edu

David Raffo
Portland State University, USA
davidr@sba.pdx.edu

Paul Wernick
University of Hertfordshire, UK
P.D.Wernick@herts.ac.uk

1. Theme and goals

The complex challenges currently faced by software development companies must be handled in a dynamic project environment of frequently changing technologies, short-staffed projects and globally distributed development teams. Globalization is forcing companies to significantly cut costs in order to be competitive.

Amid these pressures, new software development lifecycle process alternatives have emerged from agile methods, such as extreme programming, to well-planned product line development. Open source software development is ramping up. At the same time, many projects are being contracted out, either in whole or in part. Subsequently, software may be developed in multiple locations around the world, resulting in a greater need for good communication and co-ordination. Security assurance is another issue that requires increased attention.

The goal of this workshop is to bring together academics and practitioners interested in the area of software process modeling and simulation and in important industrial issues related to cost estimation and business process design. ProSim 2004 continues the tradition set in previous workshops of serving as an international forum for presenting current research themes and applications, and for discussing various approaches to discover underlying similarities at both the applied and theoretical levels. In particular, this workshop will solicit research dealing with both the application of software process simulation research in addressing real-world problems, as well as advances being made which provide the foundation for Software Process and Software Process Simulation Modeling in the future.

2. Topics of interest

We expect position papers, research papers, and experience reports in all areas related to software process modeling and simulation, using all applicable techniques and representations, including discrete event, system dynamics, knowledge-based systems, state-based modeling, Petri-nets, and other approaches. Preference will be given to efforts that facilitate, or results that demonstrate, both modeling and simulation. An initial set of topics has been identified and includes (but is not limited to) the following:

- Processes or models dealing with globally distributed development of internal as well as contracted development teams,
- Processes or models dealing with emerging problem areas like open source development, security process issues, agile methods, value-based software engineering or Web services,
- Advances in software process simulation modeling representations and methods,
- Applications of software process modeling and simulation approaches in industry, for example to improve business processes and/or to support financial and business case analyses,
- Use of software process modeling and simulation in promoting understanding and knowledge of software engineering and business processes,
- Practical benefits, enablers, and barriers of modeling and simulation,
- Generalized and adaptable process simulation models,
- Feasibility of validating standard "plug and play" process model components, patterns or archetypes,

- Approaches/environments for supporting the integration of process representation, guidance, simulation, and execution capabilities for models of software processes,
- Cost-effective combination of simulation with empirical data collection.

3. Activities

Since 1998 ProSim has been a successful international workshop that has show-cased the leading research in the Software Process Simulation and Modeling domain. Moreover, it has become one of the regular international meetings of the Software Process community. Participants have come from Europe, Asia, South America, North America, Africa, and Australia/New Zealand. With respect to structure, the workshop is a combination of keynote and paper presentations, themed sessions, and panel discussions. Based on past experience, we anticipate a true workshop atmosphere where participants will be able to discuss topics, identify issues, propose solutions, and share and challenge new ideas.

Pre-workshop activities include posting position papers on the web, thus enabling participants to review them before the workshop. After the conference, selected papers will be peer reviewed for inclusion in a special issue of a renowned international journal.

4. Organization

The following persons have been involved in planning and running the workshop and will be involved in pre-selecting papers for a journal publication.

Workshop Organizers:

- Dietmar Pfahl, Fraunhofer IESE, Germany
- David Raffo, Portland State University, USA
- Ioana Rus, Fraunhofer Center Maryland, USA
- Paul Wernick, University of Hertfordshire, UK

Program Committee:

- James Collofello, Arizona State University, USA
- Volker Gruhn, University of Leipzig, Germany
- Marc Kellner, Software Engineering Institute, CMU, USA
- Ray Madachy, University of Southern California, Los Angeles, USA
- Leon Osterweil, University of Massachusetts, USA
- Dewayne Perry, University of Texas, Austin, USA
- Dietmar Pfahl, Fraunhofer IESE, Germany
- Antony Powell, University of York, UK
- David Raffo, Portland State University, USA
- Guenther Ruhe, University of Calgary, Canada
- Mercedes Ruiz Carreira, Escuela Superior de Ingenieria, Cadiz, Spain
- Ioana Rus, Fraunhofer Center Maryland, USA
- Walt Scacchi, University of California, Irvine, USA
- Paul Wernick, University of Hertfordshire, UK

5. Further information

More information about ProSim 2004 is available at: http://www.prosim.pdx.edu/prosim2004/index.htm

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