Editorial Message:
Special Track on Organizational Engineering

José Tribolet  
Instituto Superior Técnico,  
Technical University of Lisbon.  
Av. Rovisco Pais,  
1049-001 Lisboa, Portugal  
Jose.Tribolet@dei.ist.utl.pt

Robert Winter  
Institute of Information Management,  
University of St. Gallen,  
Mueller-Friedberg-Str 8,  
9000 St. Gallen, Switzerland  
Robert.Winter@unisg.ch

Artur Caetano  
Instituto Superior Técnico,  
Technical University of Lisbon  
Av. Rovisco Pais,  
1049-001 Lisboa, Portugal  
Artur.Caetano@dei.ist.utl.pt

1. THE TRACK ON ORGANIZATIONAL ENGINEERING

Dominated by the behavioral science approach for a long time, information systems research increasingly acknowledges design science as a complementary approach. The systematic design (“engineering”) of artifacts is not restricted to information systems components. Being the conceptual foundations for information systems requirements, artifacts on the strategic and organizational level have to be engineered as well.

Organizational engineering aims at researching concepts, methods and technology in order to understand, model, develop and analyze all important aspects of changing businesses. As a whole, it focuses on understanding the relationships and dependencies between business strategy, business processes and the supporting information systems. It encompasses several multi-disciplinary topics, ranging from modeling business goals, modeling business processes, formalizing enterprise ontologies, representing information system services to identifying best practices and business patterns. Of these topics, business process modeling is probably the one which has received most attention from researchers and practitioners in the last few years since it targets one of this area’s core concepts. Business process modeling has been widely used for multiple purposes, such as facilitating human understanding and communication, supporting process improvement through business processes analysis and simulation, supporting business process re-engineering, automating the execution of business processes and supporting the analysis and design of process-oriented software implementations.

The importance of this multi-disciplinary area has been increasing with the widespread usage of the Internet, electronic commerce and technologies such as web services, which enable business processes to be executed and orchestrated using computer technology not only inside an organization but also across organizational boundaries. These technologies allow to integrate enterprise applications and to automate business processes, thereby allowing the organization to adapt to a changing environment and to realize a real return on investment due to a reduced integration and development cost. However, for this goal to be successfully achieved, technological concepts, such as web services and information system architecture, and business concepts, such as strategic positioning and organizational design, must be tightly integrated and understood and its complex relationships fully explored.

The focus of this track is on the application of both well-known and original techniques to the organizational engineering area. Special attention is dedicated to approaches which deal with relating both business and technological aspects of an organization and to service orientation as an emerging design paradigm. The Organizational Engineering track provides an opportunity for researchers, academics or practitioners interested in organizational modeling, methodologies and tools to present their problems, exchange their ideas and discuss open issues and future directions.

This is the second edition of the Organizational Engineering track at the ACM Symposium on Applied Computing. There were 22 submitted papers from the European Union, Asia and Australia. Each paper was reviewed by a minimum of 3 reviewers. According to the reviewer’s evaluations and the ACM SAC guidelines, it was only possibly to accept 8 full papers and 1 poster, resulting in a 36% acceptance ratio. In this process, a number of quality papers had to be rejected. The most popular topics were organizational modeling, business process modeling, methodologies and conceptual frameworks and business support systems modeling.

Further information on the Organizational Engineering track can be found at http://ceo.inesc.pt/sac2005/

2. ABOUT THE PAPERS

The OE track is divided into two separate sessions each containing four papers, as described below.

In Session 1, Christian Braun, Felix Wortmann, Martin Hafner and Robert Winter discuss how method construction can be used to support the design of methods in organizational engineering. Steven Bleistein, Karl Cox and June Verner present an integrated approach to requirements engineering for organizational information technology to help ensure information technology and business strategy alignment. Artur Caetano, António Rito Silva and José Tribolet describe how role modeling addresses separation of concerns in business process modeling in order to increase business object understandability and reusability. Finally, S. Colucci, T. Di Noia, E. Di Sciascio, F. M. Domini, G. Piscitelli, and S. Coppo present an approach to the semantic-based composition of teams based on individuals skill profiles and task descriptions using description logics.

In Session 2, Roel Wieringa and Jaap Gordijn propose an approach to the design of coordination processes that relies on modeling the value exchanges between the business participants. Andreas Schaad, Pascal Spadone and Helmut Weichsel describe the workflow and system representations referring to a case-study on an e-Government system, focusing on its organizational security and control properties. Joachim Schelp and Alexander Schwinn describe an extension of the Business Engineering framework for application integration
purposes. The Business Engineering framework addresses the transformation requirements of companies facing change in their business environment. The last paper of this year’s Organizational Engineering track, authored by Lerina Aversano, Thierry Bodhuin and Maria Tortorella, describes a strategy for detecting misalignment between software systems and supported business processes when a change is executed that exploits quality parameters and impact analysis techniques.

3. ACKNOWLEDGMENTS

Without the collaboration and support of many people this track would not have been possible. The chairmen are grateful to everyone who served in the Program Committee, namely:

- Andreas Schaad - SAP Labs France, France
- Beate List - Vienna University of Technology, Austria
- Brian Subirana - Massachusetts Institute of Technology, USA
- Luís Carriço - LaSIGE, University of Lisbon, Portugal
- Maria Tortorella - University of Sannio, Italy
- Nuno Guimaraes - FCUL University of Lisbon, Portugal
- Pedro Antunes - FCUL, Portugal
- Pedro Sousa - Link Consulting, Portugal
- Sandy Tyndale-Byscose - Open-IT, UK

We are also grateful to:

- André Vasconcelos - IST, Technical University of Lisbon, Portugal
- António Lucas Soares - FEUP/INESC Porto, Portugal
- Branko Pecar - University of Gloucestershire, UK
- Carla Ferreira - IST, Technical University of Lisbon, Portugal
- Carla Pereira - EST-IPCB, Portugal
- David Aveiro - IST, Technical University of Lisbon, Portugal
- Evangelia Kavakli - University of the Aegean, Greece
- Frank Goethals - K.U.Leuven - SAP leerstoel, Belgium
- Jan van Bon - Inform-IT, Netherlands
- Jorge Cardoso - University of Madeira, Portugal
- Jose Esteves - Universidad Politecnica de Catalunya, Spain
- Luís Carriço - LaSIGE, University of Lisbon, Portugal
- Marielba Zacarias - Algarve University, Portugal
- Miguel Mira da Silva – IST, Portugal
- Mizuho Iwaihara - Kyoto University, Japan
- Nikolaos Panayiotou - Technical University of Athens, Greece
- Nuno Castela - EST-IPCB, Portugal
- Pedro Sousa - Link Consulting, Portugal
- Paolo Ciancarini - Univ Bologna, Italia
- Patrícia Macedo – CEO/INESC, Portugal
- Panos Kardasis - Deloitte & Touche Consulting, Greece
- Patricia Macedo – CEO/INESC, Portugal
- Pedro Sinogas - IST, Technical University of Lisbon, Portugal
- Pedro Vieira - INESC-ID, Portugal
- Sérgio Fernandes - INESC-ID, Portugal
- Stavros Ponis - Technical University of Athens, Greece

Our thanks to the program committee, the reviewers and, particularly, to all the authors who submitted their papers to the OE track.

4. TRACK CHAIRS

Prof. Dr. José Tribolet is a full professor of Computer Engineering and Information Technology at Instituto Superior Técnico, Technical University of Lisbon, Portugal. He obtained his PhD in Electrical and Computer Engineering from the Massachusetts Institute of Technology, USA. In 1998 he was a visiting fellow at the Center for Coordination Sciences in MIT’s Sloan School of Management and participated in the project "Inventing the Organizations of the XXI Century" with Professor Thomas Malone. He leads the Organizational Engineering Center at the Institute for Systems and Computer Engineering (INESC), a private sector, contract-based research organization, which he has founded in 1980. He currently plays an active role in the organizational engineering area, being involved in several research and consultancy projects concerning organizational engineering. His main research interests are organizational modeling, business process engineering and information systems architecture.

Prof. Dr. Robert Winter is director of the Institute of Information Management, University of St. Gallen (HSG), Switzerland, and academic director of HSG's Executive MBA program in Business Engineering. He received Master degrees in business administration and business education as well as a doctorate in social sciences from Goethe University, Frankfurt, Germany. After eleven years as a researcher and deputy chair in information systems, he was appointed full professor of information management at HSG in 1996. His research interests include business engineering methods and models, information systems architectures / architecture management, and integration technologies / integration management (particularly data warehousing and enterprise application integration).

MSc. Artur Caetano is Information Systems lecturer at Instituto Superior Técnico, Technical University of Lisbon, Portugal and a PhD candidate at the same university on the topic of business process modeling. He holds a Master degree in Computer Engineering and Information Systems from Technical University of Lisbon, Portugal. He has worked in several international projects concerning business process modeling and enterprise-distributed object computing. His research interests include business process modeling, separation of concerns mechanisms, information system architectures and object-oriented patterns.