# Lecture Notes in Business Information Processing

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# Business Process Management Workshops

BPM 2009 International Workshops Ulm, Germany, September 7, 2009 Revised Papers



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#### Preface

Business process management (BPM) constitutes one of the most exciting research areas in computer science and the BPM Conference together with its workshops provides a distinct platform for presenting the latest research and showing future directions in this area. These proceedings contain the final versions of papers accepted for the workshops held in conjunction with the 7th International Conference on Business Process Management (BPM 2009). The BPM 2009 conference and workshops took place in Ulm, Germany. We received many interesting workshop proposals, eight of which were selected. Ultimately the workshops ran on September 7, 2009 featuring highly interesting keynotes, inspiring scientific presentations, and fruitful discussions. The history of five years of BPM workshops in a row proves the continued success of the workshop program.

The workshops held in 2009 included one new workshop on empirical research in business process management and seven well-established workshops.

First International Workshop on Empirical Research in Business Process Management (ER-BPM 2009). The ER-BPM 2009 workshop addressed the demand for empirical research methods such as experimental or case studies to BPM and invited fellow colleagues to investigate both the potential and the limitations of BPM methods and technologies in practice. The ER-BPM workshop aimed at closing the gap in knowledge on process management and at discussing empirical research in the space of BPM and associated phenomena.

12th International Workshop on Reference Modeling (RefMod 2009). Although conceptual models have proven to be a useful means to support information systems engineering in the past few years, creating and especially maintaining conceptual models can be quite challenging and costly. Using reference models provides promising means to reduce costs because of their explicit aim of being reused. The RefMod 2009 workshop aimed at reference modeling research, i.e., the question of how to design conceptual models in order to make them notably reusable and how to apply them efficiently without any loss of quality.

5th International Workshop on Business Process Design (BPD 2009). The BPD 2009 workshop was dedicated to the design, evaluation, and comparison of process design or process improvement techniques, tools, and methods. It aimed to provide a snapshot of the current research dedicated to process design and to comprehensively cover process enhancement approaches such as TRIZ, reference (best practice) models, process innovation, or resource-based approaches to process improvement.

Third International Workshop on Collaborative Business Processes (CBP 2009). The CBP 2009 workshop focused on collaborative business

processes and the specific challenges throughout their lifecycle including business process strategy, design, execution, and control. Specifically, collaborative business process settings provoke an extended demand for flexibility, decentralization, and interoperability. Within the CBP 2009 workshop, conceptual and technological approaches to solve those collaborative problems were presented and discussed.

5th International Workshop on Business Process Intelligence (BPI 2009). The goal of the BPD 2009 workshop was to provide a better understanding of techniques and algorithms to support a company's processes at design time and the way they are handled at runtime. It aimed at bringing together practitioners and researchers from different communities such as business process management, information systems research, business administration, software engineering, artificial intelligence, and data mining who share an interest in the analysis of business processes and process-aware information systems.

Second International Workshop on Business Process Management and Social Software (BPMS 2009). The objective of the BPMS 2009 workshop was to explore how social software and social production interact with business process management, how business process management has to change to comply with social production, and how business processes may profit from social techniques. In particular, the workshop discussed the following topics: (1) new opportunities provided by social software for BPM, (2) engineering the next generation of business processes: BPM 2.0? and (3) business process implementation support by social software.

Second International Workshop on Event-Driven Business Process Management (edBPM 2009). The main goal of the edBPM 2009 workshop was to create awareness about the role of event processing for business process management, define the challenges, and start establishing a research community around these two areas. As loosely coupled event-driven architecture for BPM provides significant benefits such as responsiveness, agility, and flexibility, the importance of this topic is growing due to the need of future service systems (part of the so-called Internet of Services) for context-awareness and reactivity, which can be achieved by introducing event-driven awareness.

Third International Workshop on Process-Oriented Information Systems in Healthcare (ProHealth 2009). The ProHealth 2009 workshop dealt with different facets of process-oriented healthcare information systems, and gave insights into the social and technological challenges, applications, and perspectives emerging for BPM in this context. Specifically, the ProHealth 2009 workshop focused on research projects which aim at closing the gap between the potential and the actual usage of IT in healthcare.

We would like to thank all the people who contributed to making the BPM 2009 workshops a success. First of all, we thank the Chairs of the workshops for defining, preparing, and conducting workshops that show how broad and exciting BPM research can be. Furthermore, we thank the reviewers of all workshops who

contributed to the quality of their workshops with their high-quality reviews and everyone who submitted papers for the different workshops. Without their effort and spirit it would have been impossible to set up such an interesting scientific program for the BPM 2009 workshops. We are specifically grateful to the local organizing team of the BPM 2009 conference and workshops who provided a professionally organized setting in Ulm. Finally, we thank the keynote speakers for complementing the scientific program with their highly interesting presentations.

September 2009

Stefanie Rinderle-Ma Shazia Sadiq Frank Leymann

### Organization

#### Workshop Organizing Committee

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### Fifth International Workshop on Business Process Design (BPD 2009)

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Selma Limam Mansar

Hajo Reijers

Carnegie Mellon University, Qatar Eindhoven University of Technology,

The Netherlands

# Fifth International Workshop on Business Process Intelligence (BPI 2009)

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The Netherlands

Jan Mendling Humboldt-Universität zu Berlin,

Germany

Barbara Weber Universität Innsbruck, Austria

#### Second International Workshop on Business Process Management and Social Software (BPMS2 2009)

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France

Rainer Schmidt Aalen University, Germany

## Third International Workshop on Collaborative Business Processes (CBP 2009)

Chengfei Liu Swinburne University of Technology,

Australia

Dirk Werth DFKI, Germany

#### X Organization

Marek Kowalkiewicz SAP Research, Australia

Xiaohui Zhao Swinburne University of Technology,

Australia

#### Second International Workshop on Event-Driven Business Process Management (edBPM 2009)

Rainer von Ammon
Opher Etzion
CITT Regensburg, Germany
IBM Research Lab in Haifa, Israel

Heiko Ludwig

IBM TJ Watson Research Center, USA

Adrian Paschke Corporate Semantic Web, Free

University Berlin, Germany and RuleML Inc., Canada

Nenad Stojanovic FZI Research Center for Information

Technologies at the University of

Karlsruhe, Germany

#### First International Workshop on Empirical Research in Business Process Management (ER-BPM 2009)

Bela Mutschler University of Applied Sciences

Ravensburg-Weingarten, Germany

Roel Wieringa University of Twente, The Netherlands Jan Recker Queensland University of Technology,

Australia

#### Third International Workshop on Process-Oriented Information Systems in Healthcare (ProHealth 2009)

Mor Peleg University of Haifa, Israel

Richard Lenz University of Erlangen and Nuremberg,

Germany

Paul de Clercq Medecs BV, Eindhoven,

The Netherlands

## 12th International Workshop on Reference Modeling (RefMod 2009)

Jörg Becker ERCIS, Münster, Germany Patrick Delfmann ERCIS, Münster, Germany

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