SIKS Symposium on the Future of Business Process Management Research

VU University Amsterdam
Room HG-12A33 (Main Building)
26.06.2015

Overview

12:30-12:35	Henrik Leopold	Opening
12:35-13:05	Jan Mendling	25 Challenges for Semantic Process Modeling
13:05-13:35	Jan Recker	The Theoretical Core and Protective Belt of BPM: Reflections on BPM Research and some Ideas for the Next Wave
13:35-13:50		Break
13:55:14:25	Manfred Reichert	A Decade of Research on Next Generation Process Management Technology: Challenges and Achievements
14:25-14:55	Wil van der Aalst	Change Your History: How Can Soccer Knowledge Improve Your Business Processes?
14:55-15:00	Henrik Leopold	Closing

Registration via http://goo.gl/forms/v4G20RAEBg

The symposium precedes the inaugural speech of Hajo Reijers, which will start at 15:45 hrs in the Aula of VU University (Main Building).

25 Challenges for Semantic Process Modeling

Jan Mendling, WU Vienna

Abstract

Process modeling has become an essential part of many organizations for documenting, analyzing and redesigning their business operations and to support them with suitable information systems. In order to serve this purpose, it is important for process models to be well grounded in formal and precise semantics. While behavioral semantics of process models are well understood, there is a considerable gap of research into the semantic aspects of their text labels and natural language descriptions. The aim of this talk is to make this research gap more transparent. To this end, we clarify the role of textual content in process models and the challenges that are associated with the interpretation, analysis, and improvement of their natural language parts. More specifically, we discuss particular use cases of semantic process modeling to identify 25 challenges. For selected challenges, we identify prior research and discuss directions for addressing them.

About the Speaker

Jan Mendling is a Full Professor with the Institute for Information Business at Wirtschaftsuniversität Wien (WU Vienna), Austria. His research areas include Business Process Management, Conceptual Modelling and Enterprise Systems. He has published more than 200 research papers and articles, among others in ACM Transactions on Software Engineering and Methodology, IEEE Transaction on Software Engineering, Information Systems, Data & Knowledge Engineering, and Decision Support Systems. He is member of the editorial board of three international journals, one of the founders of the Berlin BPM Community of Practice (http://www.bpmb.de), organizer of several academic events on process management, and member of the IEEE Task Force on Process Mining. His Ph.D. thesis has won the Heinz-Zemanek-Award of the Austrian Computer Society and the German Targion-Award for dissertations in the area of strategic information management.

The Theoretical Core and Protective Belt of BPM: Reflections on BPM Research and some Ideas for the Next Wave

Jan Recker, Queensland University of Technology

Abstract

Over recent years I have studied BPM research, both as published in scientific journals and as published in the BPM conference series in particular. In these analyses I view the BPM research program as a theoretical paradigm embracing analytical, empirical, explanatory and design elements.

In this talk I share some of the findings from these analyses in terms of the identity, the quality and maturity of the BPM field. I then outline three perspectives of a BPM research agenda and offer opportunities for further research that can (a) strengthen the core of BPM, (b) generate novel theory from BPM in relevant and topical big issue domains, and (c) explore more rigorously and comprehensively the protective belt of BPM assumptions that much of the present research abides by.

About the Speaker

Jan Recker is Alexander-von-Humboldt Fellow and Full Professor for Information Systems at Queensland University of Technology, Brisbane, Australia. Since 2012 he held the Woolworths Chair of Retail Innovation. His research focuses on process design in industry, IT-enabled business transformations and organizational innovation. Jan has written over 130 books, articles and papers. His research has appeared in MISQ, JAIS, EJIS, DSS, SJIS, Information Systems, and others.

A Decade of Research on Next Generation Process Management Technology: Challenges and Achievements

Manfred Reichert, Ulm University

Abstract

This talk will report on our research towards a next generation process management technology. First, we will discuss some of the core challenges we have been tackling during the development of this technology. Second, we will give insights into selected research projects that contributed to this technology. Third, we will present fundamental achievements and discuss their relevance and benefits along characteristic process scenarios. Finally, we will show how some of our research results were successfully transferred to industrial practice.

About the Speaker

Manfred Reichert is a Full Professor of Computer Science at Ulm University, where he is also the director of the Institute of Databases and Information Systems (DBIS) and member of the Management Board of the Faculty of Engineering and Computer Science. Before joining Ulm University, Manfred was working as associate professor of Information Systems at the University of Twente in the Netherlands.

His personal research interests include business process flexibility, business process modeling, process lifecycle support, knowledge-intensive processes, mobile process support, and e-health. Manfred has published more than 50 journal papers, 18 books (as author or editor), 200 refereed conference / workshop papers, and 16 book chapters. Many of his papers are highly cited (h-index according to Google Scholar: 57) and several of them were awarded (e.g., BPM Test of Time Award 2012). Recently, he published a Springer book entitled "Enabling Flexibility in Process-aware Information Systems", in which he reflects on a decade of research of the BPM community on process flexibility issues. Manfred pioneered the work on the ADEPT process management technology and has been co-founder of the AristaFlow Ltd.

Manfred was general chair of the BPM'09 and EDOC'14 conferences and has been general chair of the BPM'15 workshops. Furthermore, he was PC co-chair of the BPM'08, CoopIS'11, and EDOC'13 conferences. Currently, he is chairman of the GI SIG EMISA (German Special Interest Group on Development Methods for Information Systems and their Application; 700 members).

Change Your History: How Can Soccer Knowledge Improve Your Business Processes?

Wil van der Aalst, Eindhoven University of Technology

Abstract

In 2014, the German national soccer team won the World Cup Championship. The German team and SAP developed and used the tool “Match Insights" to obtain a competitive advantage. The tool was used to analyze former soccer matches in detail. The idea of analyzing soccer matches to improve performance based on facts rather than misguided beliefs is not new. Already in 1950, Charles Reep created a toolkit to analyze soccer games. Reep developed a notational analysis system of soccer in an attempt to provide empirical evidence for superior playing strategies. Today, lots of detailed soccer data are collected and, recently, various innovative visualizations have been developed, for example the Wave visualization tool developed in a collaboration between TU/e and Infostrada Sports.

Performing operational processes in organizations is in many ways comparable to playing soccer matches. One organization is competing with other organizations, just as teams are competing. Within an organization, people need to feel part of the same team to be most effective. An improvement in one department may cause problems in other departments. Analyzing operational processes based on historic event data is as useful as analyzing a match after the fact. This explains the growing interest in analytics and data science for process improvement. In his talk, Wil van der Aalst will explain an analysis approach related to process mining. However, instead of discovering a process model highlighting performance or conformance problems, he proposes a more detailed analysis of the event log also showing improvements at the instance level. This is done by changing the event log, e.g., activities are reordered or resource allocations are changed to improve the process in terms of flow time or costs.

Modifying event logs to better understand process improvements can be operationalized using the following two notions: compatibility and utility. Any redesign effort at the process level should be preceded by attempts to "change histories" in event logs. By showing alternative scenarios based on real historic cases, a reality check is possible and stakeholders are stimulated to think about process improvements.

About the Speaker

Wil van der Aalst is a Full Professor of Information Systems at the Technische Universiteit Eindhoven (TU/e). He is also the Academic Supervisor of the International Laboratory of Process-Aware Information Systems of the National Research University, Higher School of Economics in Moscow. Moreover, since 2003 he has a part-time appointment at Queensland University of Technology (QUT). At TU/e he is the scientific director of the Data Science Center Eindhoven (DSC/e). His personal research interests include workflow management, process mining, Petri nets, business process management, process modeling, and process analysis. Wil van der Aalst has published more than 175 journal papers, 17 books (as author or editor), 400 refereed conference/workshop publications, and 60 book chapters. Many of his papers are highly cited (he one of the most cited computer scientists in the world and has an H-index of 118 according to Google Scholar) and his ideas have influenced researchers, software developers, and standardization committees working on process support. He has been a co-chair of many conferences including the Business Process Management conference, the International Conference on Cooperative Information Systems, the International conference on the Application and Theory of Petri Nets, and the IEEE International Conference on Services Computing. He is also editor/member of the editorial board of several journals, including Computing, Distributed and Parallel Databases, Software and Systems Modeling, the International Journal of Business Process Integration and Management, the International Journal on Enterprise Modelling and Information Systems Architectures, Computers in Industry, Business & Information Systems Engineering, IEEE Transactions on Services Computing, Lecture Notes in Business Information Processing, and Transactions on Petri Nets and Other Models of Concurrency. In 2012, he received the degree of doctor honoris causa from Hasselt University in Belgium. In 2013, he was appointed as Distinguished University Professor of TU/e and was awarded an honorary guest professorship at Tsinghua University. In 2015, he was appointed as honorary professor at the National Research University, Higher School of Economics in Moscow. He is also a member of the Royal Netherlands Academy of Arts and Sciences (Koninklijke Nederlandse Akademie van Wetenschappen), Royal Holland Society of Sciences and Humanities (Koninklijke Hollandsche Maatschappij der Wetenschappen) and the Academy of Europe (Academia Europaea).