

Introduction to the Fourth International Workshop on Business Process Intelligence (BPI 2008)

Business Process Intelligence (BPI) is quickly gaining interest and importance in research and industry. BPI refers to the application of various measurement and analysis techniques in the area of business process management. In practice, BPI is embodied in tools for managing process execution quality by offering several features such as analysis, prediction, monitoring, control, and optimization. The goal of this workshop is to provide a better understanding and a more appropriate support of a company's processes at design time and the way they are handled at runtime. We aim to bring together practitioners and researchers from different communities such as business process management, information systems research, business administration, software engineering, artificial intelligence, operations research, and data mining who share an interest in the analysis of business processes and process-aware information systems. The workshop aims at discussing the current state of ongoing research, sharing practical experiences, and setting research directions to meet real needs in this emerging field.

The Call for Papers for this workshop attracted 15 international submissions. Each paper was reviewed by at least three members of the program committee and the 7 best papers (5 full and 2 position papers) were selected for presentation at the workshop.

The papers presented at the workshop provided a mix of novel research ideas, practical applications of BPI as well as new tool support. The paper by *Buffett and Geng* introduces an approach to improve the identification of task labels in event logs based on Bayesian Classification. The work by *Song, Günther and van der Aalst* discusses trace clustering in process mining and presents an approach to split the log into homogeneous subsets. Motivated by the diversity of process variants, *Li, Reichert and Wombacher* introduce a mining technique that utilizes process change logs. *Chesani, Mello, Montali, Riguzzi, Sebastianis and Storari* present their work on checking compliance of execution traces to business rules based on temporal logic. The paper by *Burger and Moormann* specifies an approach for the detection of process inefficiencies based on Data Envelopment Analysis and illustrates the application in a real-world case study. The workshop also included two position papers. The work by *Buffett and Hamilton* discusses the application of abductive reasoning to workflow mining. The paper by *Huang and Kumar* presents work on new quality metrics to be used in the evaluation of process models that are generated in process mining.

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