



## Computing

<http://www.springer.com/607>

## Call for Papers

Special Issue on  
**Business Process Intelligence**

### Guest Editors

**Andrea Burattin**, Technical University of Denmark, [andbur@dtu.dk](mailto:andbur@dtu.dk) – corresponding guest editor

**Jochen De Weerd**, KU Leuven, Belgium, [jochen.deweerd@kuleuven.be](mailto:jochen.deweerd@kuleuven.be)

**Boudewijn van Dongen**, TU Eindhoven, The Netherlands, [b.f.v.dongen@tue.nl](mailto:b.f.v.dongen@tue.nl)

**Jan Claes**, Ghent University, Belgium, [jan.claes@ugent.be](mailto:jan.claes@ugent.be)

**Wil van der Aalst**, RWTH Aachen University, Germany, [wvdaalst@pads.rwth-aachen.de](mailto:wvdaalst@pads.rwth-aachen.de)

### Goal

Business Process Intelligence (BPI) refers to the development of data- and process-mining techniques to support Business Process Management (BPM). BPI is an area that spans process mining, process discovery, conformance checking, predictive analytics and many other techniques that combine process science and data science. The uptake of process mining shows that BPI is of increasing relevance for industry and research. In practice, BPI is embodied in tools for managing process execution by offering several features such as analysis, prediction, monitoring, control, and optimization.

The aim of this Special Issue (SI) is to collect contributions concerning the current state of research and sharing practical experiences. Ideally, this SI will bring together contributions from practitioners and researchers from different communities such as business process management, information systems, business administration, software engineering, artificial intelligence, process mining, and data mining that describe and report analyses of business processes and process-aware information systems.

A selection of papers from the BPI workshop will be invited to submit an extended version of their paper. Moreover, the call is open to anyone for their submission, and the topics of interest include:

**Development of data-driven analysis techniques at design time and/or runtime:**

- Mining of business processes from event logs
- Mining of non-process aware systems / event streams
- Multi-perspective process mining
- Statistical analysis in the business process management lifecycle
- Predictive analytics
- Recommender systems
- Decision mining
- Conformance / compliance analysis
- Root cause analysis for process deviations
- Visualization of process mining results
- Machine-learning and business processes
- Measurement of business process models and business process modeling
- Information retrieval related to business process management
- Similarity related to processes and cases
- Integration of processes and process models
- Mathematical optimization of business processes
- Simulation of business processes

**Managerial aspects of business process intelligence techniques:**

- Process mining methodologies
- Business value of process intelligence
- Process intelligence strategy implications
- Make vs. buy decisions in process intelligence
- Strategy frameworks for process intelligence
- Organizational culture and process intelligence
- Governance of process intelligence

**Applications of BPI techniques and case studies in:**

- Performance measurement of business processes
- Business process reengineering
- Business process quality
- Emergent workflows
- Process discovery
- Conformance and risk management for business processes
- Operations management and Six Sigma
- Data warehousing
- Static and dynamic optimization
- Self-management
- Monitoring of business processes
- Resource allocation in business processes
- Prediction
- Dynamic composition of business processes

## Tentative Schedule

Submission Due:	1 <sup>st</sup> December 2019
First Review Notification:	15 <sup>th</sup> February 2020
Revision Due:	1 <sup>st</sup> May 2020
Second Review Notification:	15 <sup>th</sup> July 2020
Publication date:	expected in spring 2021

## Submission Guidelines

Papers should be formatted according to the *Computing* journal instructions for authors at: <http://www.springer.com/607>. Springer has LaTeX templates: see “Instructions for Authors / Text” at <http://www.springer.com/607>. No templates for Word. Either LaTeX OR Word is accepted.

### Manuscript length

Please note, the special issue’s page limit is different from *Computing* regular paper submissions. Papers that exceed the length of 20 pages may not be considered for review and publication.

Submissions of “extended versions” of already published works (e.g., conference/workshop papers) should be significantly extended with a relevant part of novel contribution (at least 30% new work). A “Summary of Differences” between the submitted paper to this special issue and the former one must be included.

### Submission instruction

The article will be submitted in the usual way via the online submission site at (<http://www.springer.com/607>).

When submitting a manuscript for this special issue, authors should take care to select ‘Business Process Intelligence’ as the Manuscript Type.