

### BPM2017 15th International Conference on Business Process Management

September 10-15, 2017

Barcelona, Spain



UNIVERSITAT POLITÈCNICA DE CATALUNYA BARCELONATECH

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## **ABOUT THE CONFERENCE BPM**

BPM 2017 is the 15th conference in a series that provides the most prestigious forum for researchers and practitioners in the field of Business Process Management (BPM).

Over the past decade, the conference has built its reputation by showcasing leading-edge research of the highest quality together with talks, tutorials and discussions by the most renown thought leaders and innovators in the field. The BPM conference series embraces the diversity and richness of the BPM field and serves as a melting pot for experts from a mix of disciplines including Computer Science, Information Systems Management, Services Science and Technology Management.

BPM 2017, hosted by the Universitat Politècnica de Catalunya, will take place in Barcelona, the capital of Catalonia, a Mediterranean and cosmopolitan city with Roman remains, medieval quarters and the most beautiful examples of 20th century Modernism and avant-garde.

### Previous BPM Conferences

#### BPM 2016 in Rio de Janeiro, Brazil

- PC Co-Chairs: Marcello La Rosa, Peter Loos, Oscar Pastor
- General Chair: Flávia Maria Santoro

#### BPM 2015 in Innsbruck, Austria

- PC Co-Chairs: Hamid Motahari, Jan Recker, Barbara Weber, Matthias Weidlich
- General Chair: Barbara Weber

#### BPM 2014 in Eindhoven, The Netherlands (relocated from Haifa, Israel)

- PC Co-Chairs: Shazia Sadiq, Pnina Soffer, Hagen Völzer
- General Co-Chairs: Avigdor Gal, Mor Peleg

#### BPM 2013 in Beijing, China

- PC Co-Chairs: Florian Daniel, Jianmin Wang, Barbara Weber
- General Chair: Jianmin Wang

#### BPM 2012 in Tallinn, Estonia

- PC Co-Chairs: Alistair Barros, Avigdor Gal, Ekkart Kindler
- General Chair: Marlon Dumas

#### BPM 2011 in Clermont-Ferrand, France

- PC Co-Chairs: Stefanie Rinderle-Ma, Farouk Toumani, Karsten Wolf
- General Chairs: Farouk Toumani, Mohand-Said Hacid

#### BPM 2010 in Hoboken (NJ), USA PC

- Co-Chairs: Richard Hull, Jan Mendling, Stefan Tai
- General Chair: Michael zur Mühlen

#### BPM 2009 in Ulm, Germany

- PC Co-Chairs: Umeshwar Dayal, Johann Eder, Hajo Reijers
- General Chairs: Peter Dadam, Manfred Reichert

#### BPM 2008 in Milan, Italy

- PC Co-Chairs: Marlon Dumas, Manfred Reichert, Ming-Chien Shan
- General Chair: Barbara Pernici

#### BPM 2007 in Brisbane, Australia

- PC Co-Chairs: Gustavo Alonso, Peter Dadam, Michael Rosemann
- General Chairs: Marlon Dumas, Michael Rosemann

#### BPM 2006 in Vienna, Austria

- PC Co-Chairs: Schahram Dustdar, José Luiz Fiadeiro, Amit P. Sheth
- General Chair: Schahram Dustdar

#### BPM 2005 in Nancy, France

- PC Co-Chairs: Wil M. P. van der Aalst, Boualem Benatallah, Fabio Casati
- General Chair: Claude Godart

#### BPM 2004 in Potsdam, Germany

- PC Co-Chairs: Jörg Desel, Barbara Pernici, Mathias Weske
- General Chair: Mathias Weske

#### BPM 2003 in Eindhoven, The Netherlands

- PC Co-Chairs: Wil M. P. van der Aalst, Arthur H. M. ter Hofstede, Mathias Weske
- General Chair: Wil M.P. van der Aalst

### **MESSAGE FROM THE GENERAL CHAIR**



#### Welcome to the 15th International Conference on Business Process Management (BPM 2017) in Barcelona!

It is a great pleasure to welcome the BPM community to Spain for the first time. I believe this event brings a unique opportunity in both directions: on the one hand, it supports the long-lasting tradition of BPM in Spain. On the other hand, it facilitates Spanish organizations to reach the BPM community around the world. Learn, exchange, collaborate, think,... these should be the leading verbs in the following 5 days!

I would like to express my gratitude to the BPM Steering Committee for selecting Barcelona as the host city of BPM 2017, and their continuous support in the last year. The Universitat Politècnica de Catalunya and the Computer Science Department have supported this event from minute one, facilitating many of the organization and logistic issues that have appeared till today.

The organization of an event like BPM encompasses the effort of many individuals. These efforts are not always of the same strength, but are equally important in order to guarantee a successful conference. The next paragraphs are devoted to acknowledge these individuals.

First, I would like to start thanking all the people involved in tasks for the local organization: Rafaela Bortolini, Eva Cebolla, Robert Clarisó, Bernat Coma, Montse Estañol, Lídia López, Lucas Machado, Alberto Moreno, Lucía Méndez de Ortiz, Nikos Mylonakis, Xavier Oriol, J. A. Pastor, David Sanchez, Félix Sánchez, Giorgio Stampa, Farbod Taymouri, Ernest Teniente, Alex Vidal and Alexandra Yamaui. Is their support what really makes the difference!

Second, I am indebted to Gregor Engels and Akhil Kumar, which together with me served as program chairs of the conference. Their complementing perspectives and dedication have been crucial to reach a great technical program. The work of Alexander Teetz as proceedings editor facilitated a swift interaction with Springer.

The work of Andrea Burattin and Jorge Munoz-Gama as web and social chairs was amazing, making the web of the event to be always up-to-date, and using the social networks to announce the latest news of the conference. Likewise, the work on publishing the conference done by Jordi Cabot, Marco Montali, and Marcos Sepúlveda as publicity chairs was crucial to promote the event and spread the different calls on many communities.

The search for sponsors is not always an easy task; however, Carlos Fernandez-Llatas, Pedro Álvarez and Rubén Mondéjar did their best to get the current collection of organizations that kindly sponsors this conference. Well done!

Also, I would like to mention the professional and devoted work of the chairs of the different tracks that compound the event: Ernest Teniente and Matthias Weidlich (Workshop Chairs), Joaquin Ezpeleta, Dirk Fahland and Barbara Weber (Tutorial and Panel Chairs), Marco Brambilla, Thomas Hildebrandt, Victor Muntés and Darius Silingas (Industry Chairs), Robert Clarisó and Henrik Leopold (Demo Chairs), Antonio Ruiz Cortés and Mathias Weske (Doctoral Consortium Chairs) and Manuel Lama, Alberto Manuel and Antonio Valle (Co-Located Events Chairs). The high quality of the event is due to their dedication.

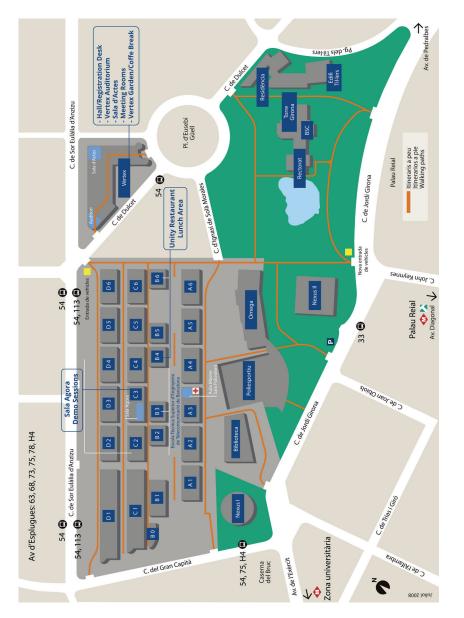
I would also like to extend my appreciation to all workshop organizers, reviewers, authors and speakers without whom it would not have been possible to shape such an outstanding technical program.

The sponsors of this event are: Signavio (Platinum), Celonis (Gold), IBM (Gold), Diputació de Tarragona (Silver), MyInvenio (Bronze), DCR (Bronze), Bizagi (Bronze), CA Technologies (Bronze), MySphera (Demo) and Springer. Without their support the excellence and success of BPM 2017 would not have been possible.

Finally, I would like to thank all of you coming from the five continents for making the trip to Barcelona. In Barcelona, you will find all you are looking for: a cosmopolitan city that leads the digital transformation in Spain, a cultural metropolis with astonishing museums and a unique gastronomy and many more. I strongly recommend to take a walk, either near the sea, or up in the mountain, or in any of the nice neighbourhoods that form the city. Enjoy the conference, and enjoy Barcelona!

Josep Carmona General Chair, BPM 2017

### SITE PLAN CONFERENCE VENUE



### **CONFERENCE VENUE**

#### Universitat Politècnica de Catalunya

UPC Nord Campus (c/ Jordi Girona, 1-3, 08034 Barcelona)

Nord Campus can be easily reached by Metro ( L3-"Palau Reial" / L9S - "Zona Universitària" ), by Tram (T1/T2/T3 – "Palau Reial"), or by Bus.



#### Rooms

Vertex building is the main location of the conference, and it hosts almost all the activities (except lunches in B4 building, demo sessions in C3 building).

#### Auditorium (Vertex Building)

Conference keynotes, regular sessions and panels take place in the Vertex Auditorium with capacity for 477 people. The hall together with the terrace and gardens host the exhibition (tool vendors) and coffee breaks.



#### Sala d'Actes (Vertex Building)

Industry Track sessions and tutorials are planned to take place in Vertex Sala d'Actes with capacity for 160 people.



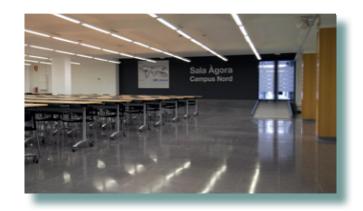
#### **Meeting Rooms (Vertex Building)**

Vertex building has different Meeting Rooms with a capacity from 40 to 100 people that host Doctoral Consortium on Sunday, the Workshops, the BPM Forum sessions and some tutorials.



#### Sala Agora (C3 Building – Ground Floor)

Sala Agora is located in C3 building (not Vertex) and can be accessed through telecommunications square. Agora hosts the demo session.



#### Lunch

#### **Unity Restaurant (B4 Building – First Floor)**

The lunches are served in the Unity Restaurant (First Floor) in the B4 Building.



## **GENERAL INFORMATION**

#### **Registration Desk**

Our helpful staff is always available at the registration desk in the Hall (Vertex Building). During the whole conference, please do not hesitate to ask us, if you need assistance.

#### **Conference Badge**

A conference badge is handed over to you as soon as you have registered at the registration desk (see information above). Please keep the badge visible all the time during the conference, workshops, and social events.

#### **Internet Connection**



Network: XSF-UPC User: xsf.convidat Password: 2017Investigacio



Available EDUROAM Network

#### **Conference App: Whova**



Updated programme available at Whova Event App.

Download it from Google Play (Android) or Apple Store (iOS).

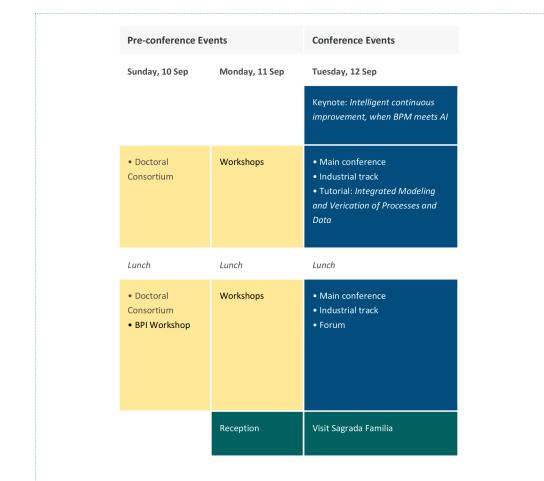
#### Twitter



You are encouraged to send tweets using the hashtag **#bpm2017**. Via **@BPMConf** practical information and status updates are shared, and questions from the public are answered.



### **PROGRAM AT A GLANCE**



Legend:

- pre-conference events;
- conference events;
- post-conference events;
- social events.

		Post-conference
Wednesday, 13 Sep	Thursday, 14 Sep	Friday, 15 Sep
Keynote: BPM: Reflections on a Broad Discipline	Keynote: A Leaders Guide to Understanding New Business Models in the Digital Economy	
<ul> <li>Main conference</li> <li>Tutorial: Design theories in business process management research</li> </ul>	<ul> <li>Main conference</li> <li>Forum</li> <li>Panel: AI, Machine Learning,</li> <li>Blockchain – will machines eat the human factor in BPM?</li> </ul>	BPM Conference España
Lunch	Lunch	Lunch
Main conference	Main conference	BPM Conference
• Forum • Demos	<ul> <li>Tutorial: Conformance Checking: What does your process do when you are not watching?</li> <li>Tutorial: Incremental and interactive process model repair based on behavioral alignments</li> </ul>	España

### **KEYNOTES**

Alan W. Brown Business School at University of Surrey

"A Leaders Guide to Understanding New Business Models in the Digital Economy"



#### Abstract

Many organizations have been preoccupied in recent years with their repeated efforts to upgrade to digital technologies, digital media, and digital delivery channels. However, digital transformation has also opened the opportunity for organizations to question major assumptions about their business model – the users being served, the experiences offered to them, and the most efficient ways to deliver those experiences in a co-ordinated, consistent and cost-effective way. Consequently, real world thinking and experiences in business model innovation have changed significantly over the past few years. How can business model innovation can keep pace with changing business needs? This session explores business model innovation in digital transformation and presents a few simple frameworks and models that can be used to help explain core concepts of business model innovation, and techniques that help accelerate business model experimentation.

#### Bio

Alan W. Brown is Professor of Entrepreneurship and Innovation at the University of Surrey's Business School. Alan's research is focused on the relationship between technology innovation and business innovation in today's rapidly-evolving digital economy. He has over 25 years of experience in commercial high tech companies leading R&D teams, building leading-edge solutions, and driving innovation in software product delivery. He is the founder and director of the Surrey 'Centre for the Digital Economy' (CoDE). Alan has a PhD in Computer Science, and has published numerous books and papers on software engineering, systems design, and business transformation. His most recent co-authored book is "Digitizing Government: Understanding and implementing new digital business models".

#### **KEYNOTES**

Miguel Valdés Bonitasoft CEO and co-founder

"Intelligent continuous improvement, when BPM meets AI"



#### Abstract

Artificial Intelligence (AI) technologies are evolving faster than ever thanks to the maturity of cloud computing, BigData and the accessibility of predictive and machine learning algorithms and frameworks. But, is BPM software ready to embrace AI?

Through continued modernisation BPM platforms goes beyond traditional process automation and optimisation use cases to play a key role in digital transformation in organisations of all sizes. Modern BPM applications requirements include advanced end user interfaces (UIs), access to big volumes of business data and real time updates of those processes, UIs and data. AI will be the next major wave of innovation in BPM.

In this session we will discuss the challenges and opportunities involved in the shift towards the use of AI technologies in BPM. We will particularly cover uses cases in which AI enables intelligent continuous improvement of business processes and BPM applications. We will also discuss about pros and cons of different AI technologies when it relates to BPM.

#### Bio

Miguel leads Bonitasoft mission: to democratize Business Process Management (BPM), bringing powerful and affordable BPM to organizations and projects of all sizes. Bonitasoft builds a BPM-based application platform to create customized business applications without the cost and rigidity of long, unpredictable custom development cycles. As the world's fastest-growing BPM provider, Bonitasoft has thousands of customers and an open source community of more than 120,000 members. Prior to Bonitasoft, Miguel led R&D, pre-sales and support for the BPM division of Bull Information Systems, a major European systems provider. Miguel is a recognized thought-leader in business process management and passionate about open source community building.

#### **KEYNOTES**

#### Mathias Weske Hasso-Plattner-Institut at the University of Potsdam

"Reflections on a Broad Discipline"



#### Abstract

BPM is a broad discipline. Topics addressed in business process management range from formal methods in computer science to behavioural science methods in management. These distant points in the spectrum are connected by information systems engineering methods. Computer science, information systems engineering, and management share business processes as a common interest, as a joint research area. There are few disciplines that share this breadth. Under a joint BPM umbrella, not only different research topics are addressed, but also different research methods and evaluation criteria are employed. In the first part of this talk, the breadth of the BPM discipline is illustrated by highlighting research results from its sub-fields and discussing their respective research objectives. In the second part, the implications of these observations on the BPM conference are discussed. The goal of our conference series has always been to provide a forum for all aspects of BPM research. Despite this claim the centre of gravity has been initially in computer science and, more recently, in information systems engineering. To further develop the conference and to match in the conference structure the breadth of the BPM discipline, the Steering Committee proposes a novel structure of BPM conferences. By this structure we hope to broaden the BPM community and, ultimately, to be a forum for all aspects of the broad business process management discipline.

#### Bio

Professor Dr. Mathias Weske is chair of the business process technology research group at Hasso Plattner Institute of IT Systems Engineering at the University of Potsdam, Germany. The research group aims at addressing real-world problems in business process management with formal approaches and engineering useful prototypes. His research focuses on the engineering of process oriented information systems, decision management, and event handling. In addition to running the BPM Academic Initiative bpmai.org, the BPT research group has a track record in engineered prototypes with a significant impact on research and practice, including projects like Oryx and jBPT. In 2009 he co-founded Berlin-based software company Signavio. Dr. Weske is author of the first textbook on business process management and he held the first massive open online course on the topic in 2013. With Matthias Kunze, he published a textbook on behavioural models. He on the Editorial Board of Springer's Distributed and Parallel Databases journal and a founding member of the steering committee of the BPM conference series.

### **TUTORIALS**

**Tutorial 1: Integrated Modeling and Verication of Processes and** Data

Tuesday, 12 September, 11:00- 12:30 Meeting Room VS217

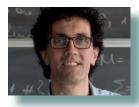
#### Abstract

The need of combining static (i.e., data-related) and dynamic (i.e., process-related) aspects has been increasingly recognized as a key requirement towards the design, verification, and understanding of business processes. In recent years, this has created a strong impact on both the data management and BPM communities, which traditionally have focused on the two aspects separately.

In this tutorial we report on recent developments on the integrated modeling and verification of systems in which processes and data are treated as equally important. The tutorial is structured in three parts.

The first part focuses on modeling, and considers both data-centric approaches, and traditional process-centric approaches enriched with data. The second part addresses the problem of verification, which is much harder than in a pure control-flow setting, and needs specific forms of control of the interplay of data and process to guarantee decidability. In the last part, we overview methodological guidelines that realize these requested forms of control.

#### **Speakers**



**Diego Calvanese** is a full professor at the Research Centre for Knowledge and Data (KRDB), Faculty of Computer Science, Free University of Bozen-Bolzano. His research interests include formalisms for knowledge representation and reasoning, ontology based data acces and integration, description logics, Semantic Web, graph data management, data-aware process verification, and service modeling and

synthesis. He has been nominated Fellow of the European Association for Artificial Intelligence (EurAI, formerly ECCAI) in 2015.



**Marco Montali** is senior researcher at the Research Centre for Knowledge and Data (KRDB), Faculty of Computer Science, Free University of Bozen-Bolzano. He devises techniques grounded in artificial intelligence, formal methods, knowledge representation and reasoning, for the intelligent management of dynamic systems operating over data, with particular emphasis on business processes and

multiagent systems. In 2015, he received an Italian award for his seminal research on the cross-fertilization between BPM and artificial intelligence. He is member of the IEEE Task Force on Process Mining.

#### Tutorial: Design theories in business process management research

Wednesday 13th, 11h -12:30h Sala d'Actes, Vertex

#### Abstract

In recent years, the ability to analyze large amounts of data has called into doubt the need for scientific theories. A simple response to this is that predictive theories based on correlations in big data, are scientific theories too. A more substantial response is that, even though correlation is sufficient for prediction, it is not sufficient for the explanation of effects in terms of causes, mechanisms or reasons. Whenever we want to understand the phenomena we study, we should look for causes, mechanisms, or reasons, which means that we should build scientific theories. In this tutorial I provide a bird's eye view on how to produce a clear and defensible theoretical contribution. I focus on design theories and start with a brief introduction of the role of theories in the design cycle. I will then review the structure of design theories, and identify the different kinds of steps that researchers follow to reason from data to theories: descriptive, statistical, abductive and analogic inference. In conclusion I will explain how these inferences must be related to research goals and research setup. The tutorial will be illustrated by examples from information systems, software engineering and other engineering disciplines.

#### Speaker



**Roel Wieringa** occupies the chair of Information Systems at the Department of Computer Science at the University of Twente, The Netherlands. His research interests include requirements engineering, enterprise architecture, and design scien ce research methodology for information systems and software engineering. He has written three books, Requirements Engineering: Frameworks for Understanding (Wiley, 1996), Design Methods for Reactive

Systems: Yourdon, Statemate and the UML (Morgan Kaufmann, 2003), and Design Science Methodology for Information Systems and Software Engineering (Springer, 2014).

Tutorial: Conformance Checking: What does your process do when you are not watching?

Thursday 14th, 14h - 15:30h Sala d'Actes, Vertex

#### Abstract

Today's organizations are challenged to make their processes more efficient and effective; costs and response times need to be reduced in all of today's industries. Process models are used to guide people, discuss process alternatives, and to automate parts of critical business processes. Often these process models are not enforced and people can deviate from them. Such flexibility is often desirable, but still it is good to analyze differences between modeled and observed behavior. This illustrates the relevance of conformance checking. Conformance checking techniques take an event log and a process model and compare the observed traces with the traces possible according to the model.

This tutorial will illustrate the importance of conformance checking, in general, and the advantages of alignment-based conformance checking with respect to other techniques. Alignments are powerful artifacts to detect nonconformity between the observed behavior as recorded in the event log and the prescribed behavior as represented by process models.

Thanks to alignments, it is not only possible to detect which observed executions are not compliant but also process analysts can exactly pinpoint which deviations occurred and where in the execution.

#### **Speakers**



**Massimiliano de Leoni:** He is an Assistant Professor of Computer Science at Eindhoven University of Technology, the Netherlands. He obtained a Ph.D. in Computer Science and Engineering at SAPIENZA - University of Rome, Italy, in the field of "Adaptation in Business Process Management". He was a guest research fellow at Queensland University of Technology, SAPIENZA University of Rome, University of Naples and Vienna University of Economics and Business. He is constantly publishing papers for the major conference venues in Business Process Management and Information Systems, such as the CAiSE and BPM conferences, and for high-reputation journals in these fields, such as Decision Support Systems, Information Systems and Expert Systems with Application. He is member of the IEEE Task Force on Process Mining. His research interests are in the area of Process-aware Information Systems, Data Science and Business Process Management, predominantly focusing on multi-perspective process mining, process-aware decision support systems and process mining in the large.



**Boudewijn van Dongen:** He is an associate professor at the Computer Science department at Eindhoven University of Technology, Eindhoven, The Netherlands. He received his Ph.D. at the Industrial Engineering department of the same university in 2007. Currently, he is a member of the Architecture of Information Systems group which investigates methods, techniques and tools for the design

and analysis of process-aware information systems. His research focus is on Process Mining and specifically on conformance checking and since 2003, he has been a key player in the development of the process mining tool ProM. Furthermore, he is a member of the IEEE Task Force on Process Mining and he published extensively in the process mining area, both in international conferences and journals (e.g., DKE, EIS, IS, CAISE, ATPN, BPM, ER, EDOC). He served in several program committees, among others for IEEE EDOC 2007, 2008, 2009, 2010, BPI 2007 - 2016. Since 2011 he organizes the yearly BPI Challenge, where real-life data is published for researchers and practitioners to show their capabilities in the process mining area.



Jorge Munoz-Gama: Born in Barcelona, he is an Assistant Professor at the Pontificia Universidad Católica de Chile (UC). Author of the book Conformance Checking and Diagnosis in Process Mining (Springer 2016), he received his Ph.D. on Computer Science from the Universitat Politècnica de Catalunya, and his thesis was awarded IEEE Best Process Mining Dissertation Award 2015. He is member of the IEEE

Task Force on Process Mining. His research interests include Process-Oriented Data Science and Process Mining specially applied to Education and Healthcare.

# Tutorial: Incremental and interactive process model repair based on behavioral alignments

#### Thursday 14th, 16h - 17h Sala d'Actes, Vertex

#### Abstract

Often the observed behavior of a business process differs from the normative behavior captured in its corresponding model. Existing differences can arise from workarounds devised by the workers or regulatory changes not transferred to the model. Process mining and, in particular, conformance checking aims to analyze the observed behavior captured in an event log and to find the differences to the model. Existing conformance checking techniques are the foundation for process model repair -- the differences detected by a conformance checker are reconciled in the model, i.e. the repaired model better fits the log.

Through this tutorial, we look into existing process model repair techniques. We focus solely on control-flow information, and broadly categorize the repair techniques into two groups: automatic, and interactive and incremental. While automatic approaches do not require any input from the user, interactive and incremental approaches are used as support tools for the users, who decide what repairs to apply. This tutorial discusses the strengths and weaknesses of both approaches. Furthermore, this tutorial encompasses a brief overview on the conformance checking techniques used as the foundations for the presented process model repair techniques. In particular, it focuses on two conformance checkers, one based on trace alignments and one based on behavioral alignments. However, only a short introduction about the trace alignment-based conformance checker is presented in this tutorial since the tutorial "Conformance Checking: What does your process do when you are not watching?" is fully devoted to this topic.

#### Speaker



Abel Armas Cervantes is a postdoctoral research fellow within the BPM research group at the Queensland University of Technology, Brisbane, Australia. He obtained his PhD in Computer Science and MSc in software engineering within the Software Engineering group at the University of Tartu, Tartu, Estonia. His research interests include models for concurrent systems, analysis techniques for business process models, process mining, and social network analysis.

### PANEL

AI, Machine Learning, Blockchain – will machines eat the human factor in BPM?

Thursday 14th, 10:40h - 12:10h Auditori, Vertex

A central objective of business processes and information systems – so far – is supporting people in coordinating their work and handling and tracing information. The systems hold and provide information to workers, schedule, coordinate, and orchestrate specific pieces of work, support decisions in how to proceed by providing overview and details to human decisions, or automating simple decisions in the presence of complete information.

Against this backdrop, the growing maturity in machine learning and block chains has been enabling technologies for new applications that have not been possible before

Blockchain introduces a machine-readable and verifiable record of transactions, giving machines a trustworthy, verified data source for all involved parties, thereby enabling verification and decisions by algorithms not possible earlier because the input data necessary for the decision was not available at the required level of trust and completeness. Al and Machine Learning techniques made significant improvements in classification and prediction allowing to replace human processing by machines at faster speed and higher reliability. Well-trained deep neural networks can incorporate numerous nuanced factors into a decision that matches or exceeds the capabilities of skilled workers. As many of these techniques are now reaching their "hype cycle peak", awareness in industry is growing rapidly, giving rise to the question how they will impact balance of human and technical factors in business process and information systems.

During this panel, we will look at this question from different angles, discuss the potentials new technologies can have on a variety of use cases, which factors limit their adoption in practice, and which methodological challenges arise in a domain where techniques and trends once established remain standard for decades.

#### **Panelists**

- Jan Mendling (chair)
- Ingo Weber, Data61, CSIRO, Australia
- Gero Decker, Signavio, Germany
- Hajo Reijers, VU Amsterdam, NL
- Rick Hull, IBM, USA

## **DETAILED PROGRAM**

### Sunday, September 10, 2017

08:00-09:00	Registration	Vertex Building		
09:00-10:30	Doctoral Consortium	VS208		
09:00-09:45	Process Performance Impr Systems	ovement in Material Handling		
	Hilda Fabiola Bernard			
09:45-10:30	Improving the Performanc Processes	e Management in Business		
	Bedilia Estrada-Torres			
10:30-11:00	Coffee Break	Vertex Garden		
11:00-12:30	Doctoral Consortium	VS208		
11:00-11:45	A Unified Framework for Modeling Processes and Data			
	Francesca Zerbato			
11:45-12:30	Real-time business process model tailoring: the effects of personality and reading strategy on process model understandability			
	Sven Vermeulen			
12.30-14:00	Lunch	Unity Restaurant		
14:00-15:30	BPI	VS217		
14:00-14:45	A Framework for Online Co	onformance Checking		
	Andrea Burattin, Josep Carmo	ona		
14:45-15:30	Recurrent Process Mining	with Live Event Data		
	Alifah Syamsiyah, Boudewijn	F. van Dongen, Wil M.P. van der Aalst		

14:00-15:30	Doctoral Consortium	Vs208		
14:00-14:30	Inconsistency Measurement in Business Process Modeling			
	Carl Corea			
14:30-15:00	Modeling and verifying data-aware processes			
	Andrey Rivkin			
15:00-15:30	Process Variants Discovery			
	Fabian Rojas Blum			
15: 30-16:00	Coffe break	Vertex Garden		
16:00-17:30	BPI	VS217		
16:00-16:45	Reducing Event Variability in Lo	ogs by Clustering of Word		
	Embeddings			
David Sanchez-Charles, Josep Carmona, Victor Muntés-Mu Marc Solé				
16:45-17:30	Automatic Root Cause Identific Alignments	ation Using Most Probable		
	Marie Koorneef, Andreas Solti, He	enrik Leopold, Hajo A. Reijers		

\* Parallel session hours indicated in green colour

Variability Patterns for Analyzing Flexible Processes

Kathrin Kirchner, Ralf Laue

10:00 - 10:30

Monday,	September	11, 2017
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08:00 - 09:00	Registration	Vertex Building				
09:00 - 10:30	BPI	VS217	09:00 - 10:30	Cross-cutting Aspects	of BPM (BPMGOV & ReMa) VS214	
09:00 - 9:45	using Conditional Behavioural Probabilities Mohammadreza Fani Sani, Sebastiaan J. van Zelst,		09:00 - 9:30	<b>Criteria</b> Michael Arias, Jorge Munoz-Gama, Marcos Sepúlveda		
09:45 - 10:30	<ul> <li>Wil M.P. van der Aalst</li> <li>Can We Find Better Process Models? Process Model</li> <li>Improvement via Motif-based Graph Adaptation</li> <li>Alexander Seeliger, Michael Stein, Max Mühlhäuser</li> </ul>		09:30 - 10:00 10:00 - 10:30	<b>User Behavior</b> Anna Kalenkova, A.A. A	es: Comparing Real and Expected geev, I.A. Lomazova, W.M.P. van der Aalst ent interorganizational relationships	
09:00 - 10:30	10:30 BPMS2 VS213			through shared goals for anti-corruption in Brazil Bruna Dirr, Claudia Cappelli		
09:00 - 9:15	Welcome Introduct Rainer Schmidt	tion	09:00 - 10:30	BPAI	V5208	
09:15 - 9:30	09:15 - 9:30 Impact of Social Software on Modelling Cost Michael Möhring			What Automated Planning can do for Business Process Management		
09:30 - 10:00	30 - 10:00 Lightweight Process Support with Spreadsheet-Driven Processes: A Case Study in the Finance Domain Michael Stach, Rüdiger Pryss, Maximilian Schnitzlein, Tim Mohring, Martin Jurisch, Manfred Reichert		09:00 - 10:30	Andrea Marrella BP-Meet-IoT	VS206a	
10:00 - 10:30				BPM and IoT: a Dream Barbara Weber	Team?	
09:00 - 10:30	REBPM	VS215	09:00 - 10:30	QD-PA	VS210	
09:00 - 9:15	5 Introduction to the Workshop Banu Aysolmaz		09:05 - 9:25	Redo Log Process Mining in Real Life: Data Challenges & Opportunities Eduardo Gonzalez Lopez de Murillas, G.E. Hoogendoorn, H.A. Re		
09:15 - 9:30	Banu Aysolmaz		09:30 - 9:50	From Relational Datab Quality Impact	pase to Event Log: Decisions with	
09:30 - 10:00			09:55 - 10:15	Mieke Jans, Pnina Soffer Design-time analysis o Yotam Evron, Pnina Soff	of data inaccuracy awareness at runtime	

10:30 - 11:00	Coffee Break	Vertex Garden	12:00 - 12:30		eption Deck technique for eliciting N through business process models	
11:00 - 12:30	BPI PD Contest / BPI Challenge	VS217		Manuel Pastrana, Hugo C Luis Merchan	rdonez, Armando Ordonez, Lucineia Thom,	
11:00 - 12:30	BPMS2	VS213	11:00 - 12:30	Cross-cutting Aspects	of BPM VS214	
11:00 - 11:30	Triggers in ITIL	eesses: Evaluation of Interfaces and Decca Rehse, Peter Fettke, Richard Lenz	11:00 - 11:30	(SABPM & Discussion) Towards Guidelines of Modeling for ecology-aware Process Design		
11:30 - 12:00	Processes for Socio-Techni	f Human-based Services in Business ical Systems en-Dung Nguyen, Schahram Dustdar	11:30 - 11:50	Patrick Lübbecke, Peter Loos Sustainability Performance Measurement: A Possible Classification of Models and Indicators		
12:00 - 12:30	Towards a Solution Space Techniques Maryam Razavian, Irene Vand	for BPM Issues based on Debiasing erfeesten, Oktay Turetken	11:00 - 12:30	Dries Couckuyt, Amy Van	Looy, Manu De Backer VS208	
11:00 - 12:30	PQ/IWPE/Taproviz	VS218	11:00 - 11:30	Structural Feature Sele Markku Hinkka, Teemu Le	e <mark>ction for Event Logs</mark> ehto, Keijo Heljanko, Alexander Jung	
11:00 - 11:30		ness Verification of Process Models , Michel A. Westenberg, Henricus M. W. st	11:30 - 12:00			
11:30 - 12:00	AO-BPM 2.0: Aspect Orien Luiz Paulo Carvalho, Claudia C	ted Business Process Modeling appelli, Flávia Maria Santoro		Jana Koehler, Etienne Fux, Florian A. Herzog, Dario Lötsch Waelti, Roland Imoberdorf, Dirk Budke		
12:00 - 12:30	Processes using BPMN	Physical Risks in Manufacturing derfeesten, Jonnro Erasmus, Kostas Rhiin, Dirk Fahland	12:00 - 12:30	<b>Towards an Entropy-based Analysis of Log Variability</b> Christoffer Olling Back, Søren Debois, Tijs Slaats		
	,,,,,,,		11:00 - 12:30	BP-Meet-IoT	VS206a	
11:00 - 12:30	REBPM	VS215	11:00 - 11:30	in Manufacturing	Process Elicitation of Worker Activities	
11:00 - 11:30	A Pattern-Based Question Requirements from BPMN Bernhard Turban, Johannes S	Models	11:30 - 12:00	Discovering process m sensors	Ponpathirkoottam, Peter Fettke, Peter Loos odels of activities of daily living from	
11:30 - 12:00		nts Engineering for Robotic Test Driven Develoent and Screen Robert Mertens	12:00 - 12:30		ia Diamantini, Domenico Potena BPM-based approach for smart spaces no Mecella, Daniele Sora	

12:30 - 14:00	Lunch Unity	Unity Restaurant	14:00 - 15:30	DeHMiMoP	VS219
14:00 - 15:30	BPI	VS217	14:00 - 14:15	Opening	
14:00 - 14:45	Dropout prediction	in MOOCs: a comparison between	14:15 - 15:00	Keynote speech	
	<b>process and sequen</b> e Galina Deeva, Johanne Weerdt	c <b>e mining</b> s De Smedt, Pieter De Koninck, Jochen De	15:00 - 15:30	Data-Centric Extractic Models from BPMN P Francesca Zerbato, Matl	
4:45 - 15:30		the Black Swan: An Empirical Analysis of			
	the Influence of Unc Mined Process Mode	bserved Behavior on the Quality of	14:00 - 15:30	REBPM	VS215
		ana-Rebecca Rehse, Peter Fettke, Peter Loos	14:00 - 14:15	Summary of the morr	ning sessions
				Banu Aysolmaz	-
14:00 - 15:30	BPMS2	VS213	14:15 - 14:45		er Process Harmonization in the ogies, Capabilities and Acceptance
14:00 - 14:30		evices to Integrate Consumers into		Irene Schoenreiter	
		<b>the Case of Amazon Dash-Button</b> Jara Keller, Rainer Schmidt, Lara Pietzsch, Leila Jer, Karsten Kilian	14:45 - 15:30	with the participants)	ture on BPM, RE and agility (together and identifying aspects of further
14:30 - 15:00		proving User Engagement in Social BPM nammad Ehson Rangiha		research Banu Aysolmaz	
15:00 - 15:30	A Systematic Literat for Business Process	ure Review of the Use of Social Media Management	14:00 - 15:30	BPAI	VS208
	Jana Prodanova, Amy	Van Looy	14:00 - 14:30	-	on with Business Artifacts and Social
14:00 - 15:30	PQ/IWPE/Taproviz	V5218		Engagements Matteo Baldoni, Cristina Micalizio	Baroglio, Federico Capuzzimati, Roberto
14:00 - 14:30		Querying Business Process Business nd Business Data Models	14:30 - 15:00	-	nets with data for trace completion
	Maria Teresa Gomez-Lo	opez, Antonia M. Reina Quintero, Luisa Parody,		Riccardo De Masellis, Ch Sergio Tessaris	iara Di Francescomarino, Chiara Ghidini,
	Jose Miguel Pérez Alva	arez, Manfred Reichert	15:00 – 15:30	e	ness processes: framework and
14:30 - 15:00		or Modeling Collaborative Business		applications	
		Interaction Protocols ge Roa, María Laura Caliusco, Pablo Villarreal		Marco Comuzi	
15:00 - 15:30	An Extensible BPMN Luise Pufahl, Tsun Yin V	l Process Simulator			
	,				

14 <b>:</b> 00 - 15 <b>:</b> 30	BP-Meet-IoT	VS206a	16:00 - 17:30	REBPM	VS215	
14:00 - 14:20	<b>From BPM to IoT</b> Sylvain Cherrier, Sylvain C	herrier, Varun Deshpande		Agile Process harmor situations etc. Banu Aysolmaz	nization in ecosystems, pre/post merger	
14:20 - 15:30	Panel: «BP meet IoT: n Massimo Mecella	ew wine in old bottles?»				
			16:00 - 17:30	BPAI	VS208	
14:00 - 15:30	СВРМ	VS216	16:00 - 16:20		el of a business process: the use case	
14:00 - 15:05	Al Foundations for Cog Giuseppe De Giacomo	gnitive BPM		<b>of a hospital emerge</b> Emilio Sulis, Antonio Di L		
15:05 - 15:30		What's in for Business Process oration of Use Case Ideas	16:20 - 16:40		nposition of Business Process Models rtof Kluza, Mateusz Slazynski, Antoni Ligeza	
		hannes Seyfried, Simon Stelzl, Michael zur				
14:00 - 15:30	SPBP	VS210	17:00 - 17:20	<ul> <li>Abduction for generating synthetic traces</li> </ul>		
14:00 - 15:30 Blockchains for Business Process Management - Challenges and Opportunities				Ciampolini, Daniela Loreti, Paola Mello		
	Jan Mendling		16:00 - 17:40	СВРМ	VS216	
15:30 - 16:00	Coffee Break	Vertex Garden	16:00 - 16:25	Cognitive Business Process Management. State-of-the-Art and an Initial Realisation based on KR and Planning Massimo Mecella		
16:00 - 17:30	BPI	VS217	16:25 - 16:50	BPM for the masses: empowering participants of Cognitive		
	Annual IEEE Task Force	e on Process Mining Meeting		<b>Business Processes</b> Aleksander Slominski, A	Aleksander Slominski, Vinod Muthusamy	
16:00 - 17:30	DeHMiMoP	VS219	16:50 - 17:15		Cognitive Neuroscience to Investigate Driven Process Chains on Process Model	
16:00 - 16:30	Discovering business rules in knowledge-intensive processes through decision mining: experimental study			<b>Comprehension</b> Tim Mohring, Michael Z	Zimoch, Tim Mohring, Rüdiger Pryss, ed Schlee, Manfred Reichert	
16:30 - 17:00	Challenges in Refactor	ti, Fernanda Araujo Baiao, Flávia Maria Santoro ing Processes to Include Decision	17:15 - 17:40	Knowledge-intensive Processes: a research framework Flávia Maria Santoro		
	<b>Modelling</b> Faruk Hasic, Lesly Devado De Smedt, Jan Vanthiene	ler, Maxim Dochez, Jonas Hanot, Johannes n				
17:00 - 17:30	-	rch into hybrid and declarative s Process Management				

16:00 - 17:30	SPBP	VS210	Tuesday, Septe	ay, September 12, 2017		
16:00 - 16:45	Lifecycle Model	nagement: An Abstract Personal Data Majed Alshammari, Andrew Simpson	08:00 - 09:00	Registration	Vertex Building	
16:45 - 17:30		Security Costs Evaluation Process by Using	09:00 - 09:20	Opening	Vertex Auditorium	
	Data Automatically Captured from BPMN and EPC Models Dmitrij Olifer, Nikolaj Goranin, Justinas Janulevicius, Arnas Kaceniauskas, Antanas Cenys		09:20 - 10:30	Keynote Intelligent continuous ir when BPM meets Al	Vertex Auditorium nprovement,	
				Chair <b>: Akhil Kumar,</b> Penn St	ate University	
19:00 - 21:00	Welcome Recepti	on		Miguel Valdés, Bonitasoft		
	Barcelona Biomeo	lical Research Park				
			10:30 - 11:00	Coffee Break	Vertex Garden	
		* Parallel session hours indicated in green colour	11:00 - 12:30	BPM Session 1:	Vertex Auditorium	
			Process Modelling Chair: Jan Mendling, Vienno	a University of Economics and Business		
			11:00 - 11:30	Improved Performance	esentation of Event Logs for Modelling in Business Processes ias Weidlich and Avigdor Gal	
			11:30 - 12:00	<b>Synthesizing Petri nets</b> t Robin Bergenthum	from Hasse diagrams	
			12:00 - 12:30	Notation	nced Business Process Model and as Matulevicius and Dan Bogdanov	
			11:00 - 12:30	Industry Track 1:	Sala d'Actes	
				Mining & Big Data & Op Chair: Barbara Weber, Tech	<b>timisation</b> nnical University of Denmark	
			11:05 - 11:25 11:25 - 11:45	approach for process m Marian Lux, Stefanie Rin	s when implementing a best practice ining in a tourist information system derle-Ma rocess Prediction based on Big Data	
				Analytics	Emrich, Björn Stahmer, Peter Fettke,	

	Organizations Through A Metaheuristic Task Allocation Algorithm Rahul Paul, R. P. Jagadeesh Chandra Bose, Stephan K Chalup, Gurulingesh Raravi			
12:05 - 12:25	<b>Declarative process models in government-centric IT</b> Lasse Nørgaard Hende, Jesper Birk Andreasen, Frans Saxbecl Larsen, Morten Marquard, Søren Debois			
00 - 12:30	Tutorial 1: VS217			
	Integrated Modeling and Verification of Processes and Data Marco Montali, Research Centre for Knowledge and Data (KRDB)			
	<b>Diego Calvanese,</b> Research Centre for Knowledge and Data (KRDB)			
:30 - 14:00	Lunch Unity Restaurant			
:00 - 15:30	BPM Session 2: Process mining I Vertex Auditorium			
	Chair: Barbara Weber, Technical University of Denmark			
14:00 - 14:30	Learning Hybrid Process Models From Events: Process Discovery Without Faking Confidence			
	Wil M.P. van der Aalst, Riccardo De Masellis, Chiara Di Francescomarino, Chiara Ghidini			
14:30 - 15:00	Path-Colored Flow diagrams: increasing Business Process Insights by visualizing event logs Koen Daenen			
15:00 - 15:30	Multi Instance Anomaly Detection in Business Process Executions Kristof Böhmer and Stefanie Rinderle-Ma			
4:00 - 15:30	Industry Track 2: Management Sala d'Actes			
	Chair: Thomas Hildebrandt, IT University of Copenhagen			
14:05 - 14:25	Decision Management in the Insurance Industry: Standards and Tools			
	Kimon Batoulis, Alexey Nesterenko, Günther Repitsch, Mathias Weske			

Improving Operational Performance in Service Delivery

14:25 - 14:45 14:45 - 15:05 15:05 - 15:25	Context-aware enterprise modeling towards agile models development Julia Bilinkis, Nikolay Kazantsev An Applied Method for Selecting a Business Process Management Tool in Enterprise Software Project Mehmet Mustafa Gursul The Project Start Review Group R.J. Macasaet				
15:30 - 16:00	Coffee Break	Vertex Garden			
16:00 - 18:00	BPM Session 3:	Vertex Auditorium			
	Assorted BPM topics Chair: Pnina Soffer, Univers	sity of Haifa			
16:00 - 16:30	AB-BPM: Performance-driven Instance Routing for Business Process Improvement Suhrid Satyal, Ingo Weber, Helen Paik, Claudio Di Ciccio				
16:30 - 17:00	and Jan Mendling Optimized Execution of Business Processes on Blockchain Luciano García-Bañuelos, Alex Ponomarev, Marlon Dumas and Ingo Weber				
17:00 - 17:30	Efficient migration-aware algorithms for elastic BPMaaS				
17:30 - 18:00	Guillaume Rosinosky, Samir Youcef and François Charoy Uncovering the Hidden Co-Evolution in the Work History of				
	<b>Software Projects</b> Saimir Bala, Kate Revoredo, João Carlos De A. R. Gonçalves, Fernanda Araujo Baiao, Jan Mendling and Flavia Santoro				
16:00 - 17:00	BPM Forum 1: Models a	nd Metrics VS217			
	Chair: Chiara Ghidini, FBK-i	rst			
16:00 - 16:20	Elements for Tailoring a BPM Maturity Model to Simplify its Use Marie-Therese Christiansson and Amy Van Looy				
16:20 - 16:40		•			
16:40 - 17:00	A Template for Sharing Empirical Business Process Metrics Daniel Lübke, Ana Ivanchikj and Cesare Pautasso				

11:45 - 12:05

16:00 - 17:30	Industry Track 3:	Sala d'Actes	
	<b>Agility and Declarative models</b> Chair: <b>Søren Debois,</b> IT University of Copenhagen		
16:05 - 16:25	Engineering Management throu Industry: The Case of FNSS Pinar Bakal, Zeynep Ozturk, Ari B	0	
16:25 - 16:45	Business Process Context for Me Nenad Ivezic, Miroslav Ljubicic, M Boonserm Kulvatunyou, Scott Ni	Aarija Jankovic,	
16:45 - 17:05	Electronic Office : Zero-code Pro in the Google Cloud Anantharamaiah Prabhakar	cess Automation	
17:05 - 17:25	Digitalising the General Data Pro with Dynamic Condition Respon Emil Heuck, Thomas Hildebrandt Morten Marquard, Håkon Norma Barbara Weber	<b>se Graphs</b> , Rasmus Kiærulff Lerche,	

### Wednesday, Septermber 13, 2017

08:00 - 9:00	Registration	Vertex Building		
09:00 - 10:10	Keynote:	Vertex Auditorium		
	BPM: Reflections on a Broad Discipline			
	Chair: Wil van der Aalst, Technical University of Eindhoven			
	Mathias Weske, HPI, Univ	ersity of Potsdam		
10:10 - 10:40	Coffee Break	Vertex Garden		
10:40 - 11:00	Demo Teasers 1	Vertex Auditorium		
11:00 - 12:30	BPM Session 4:	Vertex Auditorium		
	Decisions and understanding			
	Chair: Manfred Reichert, University of Ulm			
11:00 - 11:30	Towards a Holistic Discovery of Decisions in Process-Aware Information Systems Johannes De Smedt, Faruk Hasić, Seppe Vanden Broucke and Jan Vanthienen			
11:30 - 12:00	Effect of Linked Rules on Business Process Model Understanding Wei Wang, Marta Indulska, Shazia Sadiq and Barbara Weber			
12:00 - 12:30	On the Performance Overhead of BPMN Modeling Practices Ana Ivanchikj, Vincenzo Ferme and Cesare Pautasso			
11:00 - 12:30	Tutorial 2: Design theories in busin Roel Wieringa, Universit	Sala d'Actes ess process management research y of Twente		
12:30 - 13:40	Lunch	Unity Restaurant		
13:40 - 14:00	Demo Teasers 2	Vertex Auditorium		

Sala Agora

Chairs: Robert Clarisó (UOC) and Henrik Leopold (VU)

14:00 - 15:30	BPM Session 5:	Vertex Auditorium			
	<b>Process knowledge</b> Chair <b>: Hajo Reijers,</b> Vrije Universiteit Amsterdam				
14:00 - 14:30	Weak, Strong and Dynamic Controllability of Access-Controlled Workflows under Conditional Uncertainty Matteo Zavatteri, Carlo Combi, Roberto Posenato and Luca Viganò				
14:30 - 15:00	An Eye into the Future: Leveraging A-Priori Knowledge in Predictive Business Process Monitoring Chiara Di Francescomarino, Chiara Ghidini, Fabrizio Maria Maggi, Giulio Petrucci and Anton Yeshchenko				
15:00 - 15:30	Communication P Pedro Henrique Pi	edge-Intensive Processes Focused on the erspective ccoli Richetti, João Carlos De A. R. da Araujo Baiao and Flavia Santoro			
14:00 - 15:30	BPM Forum 2: Mining and compl Chair: Matthias Weig	VS217 iance dlich, Humboldt-Universität zu Berlin			
14:00 - 14:20	Process Mining	n <mark>eration of Log Pre-processing Methods for</mark> ohammadsadegh Torabi, Ernesto Damiani			
14:20 - 14:40	A Taxonomy of Compliance Processes for Business Process Compliance Tobias Seyffarth, Stephan Kühnel and Stefan Sackmann				
14:40 - 15:00	Improving Pattern Detection in Healthcare Process Mining using Interval-based Event Selection Method Amirah Alharbi, Andy Bulpitt and Owen Johnson				
15:00 - 15:20	<b>Soundness of Decision-Aware Business Processes</b> Kimon Batoulis and Mathias Weske				
15:30 - 16:00	Coffee Break	Vertex Garden			

•	Online Conformance Checking for Petri Nets and Event Streams Andrea Burattin
•	PALIA-ER: Bringing Question Driven Process Mining Closer to the
	Emergency Room
	Eric Rojas, Carlos Fernández-Llatas, Vicente Traver, Jorge Munoz-Gama, Marcos Sepúlveda, Valeria Herskovic and Daniel Capurro
•	The Process Checklist Generator: Establishing Paper-based Process
	<b>Support</b> Marcel Bankau, Michaela Baumann, Michael Heinrich Baumann, Stefan Schönig and Stefan Jablonski
•	Replay using Recomposition: Alignment-Based Conformance Check- ing in the Large
	Wai Lam Jonathan Lee, H.M.W. Verbeek, Jorge Munoz-Gama, Wil M.P. van der Aalst and Marcos Sepúlveda
•	DPIL Navigator 2.0: Multi-Perspective Declarative Process Execution
	Stefan Schönig, Lars Ackermann and Stefan Jablonski
•	Improving Interactivity in Multidimensional Process Mining: The Interactive PMCube Explorer Tool
	Thomas Vogelgesang
•	NLP4BPM – Natural Language Processing Tools for Business Process Management
	Josep Sanchez-Ferreres, Luis Delicado, Josep Carmona and Lluís Padró
•	Design it like Darwin 2.0 – An Evolutionary Algorithm for Automatic Process Redesign
	Jonas Manderscheid, Maximilian Röglinger, Tobias Ruby and Johannes Seyfried
•	Predictive Analysis of BPM tasks with autoCEP
	Raef Mousheimish, Yehia Taher and Karine Zeitouni
•	Heuristic Mining Revamped: An Interactive, Data-aware, and Confor- mance-aware Miner
	Felix Mannhardt, Massimiliano de Leoni and Hajo A. Reijers
•	CJM-ex: Goal-oriented Exploration of Customer Journey Maps using Event Logs and Data Analytics
	Gaël Bernard and Periklis Andritsos
•	<b>SPOT: Simulation and Evaluation of Real Time Locating System Data</b> Andreas Solti, Manuel Raffel, Manuel Stochlinski and Jan Mendling
•	Testing Event-driven Applications with Automatically Generated Events
	Maximilian Völker, Sankalita Mandal and Marcin Hewelt

16:00 - 17:20

Demo Session

A Model-Driven Framework for Domain Specific Process Design and Nirdizati: A Web-Based Tool for Predictive Process Monitoring • ٠ Ilya Verenich, Kerwin Jorbina, Andrii Rozumnyi, Chiara Di Francesco-Governance Adrian Mos, Mario Cortes-Cornax, Jose Miguel Pérez Alvarez and María marino, Marlon Dumas, Fabrizio Maria Maggi, Marcello La Rosa, Chiara Teresa Gómez López Ghidini and Simon Raboczi A Tool for Checking Soundness of Decision-Aware Business Processes ٠ ProcessProfiler3D: A Tool for Visualising Performance Differences ٠ Kimon Batoulis and Mathias Weske **Between Process Cohorts and Process Instances** APD tool: Mining Anomalous Patterns from Event Logs Erik Poppe, Moe Wynn, Arthur Ter Hofstede, Ross Brown, Azzurra Pini ٠ Laura Genga, Mahdi Alizadeh, Domenico Potena, Claudia Diamantini and and Wil van der Aalst **Checking Business Process Modeling Guidelines in Apromore** Nicola Zannone ٠ A Tool for Aligning Event Logs and Prescriptive Process Models Fabrizio Fornari, Stefania Gnesi, Marcello La Rosa, Andrea Polini, Barba-٠ through Automated Planning ra Re and Giorgio Oronzo Spagnolo Massimiliano de Leoni and Andrea Marrella Automated compliance verification of business processes in Apro-٠ mArtifact: an Artifact-driven Process Monitoring Platform more • Luciano Baresi, Claudio Di Ciccio, Jan Mendling, Giovanni Meroni and Heerko Groefsema, Nick van Beest and Abel Armas Cervantes Pierluigi Plebani Incremental and Interactive Business Process Model Repair in Apro-٠ WoPeD - A "Proof-of-Concept" Platform for Experimental BPM more ٠ **Research Projects** Abel Armas Cervantes, Nick van Beest, Marcello La Rosa, Marlon Dumas Thomas Freytag, Philip Allgaier, Andrea Burattin and Andreas Danek-Buand Simon Raboczi lius The onprom Toolchain for Extracting Business Process Logs using ٠ Demonstrating Context-aware Process Injection with the CaPI Tool **Ontology-based Data Access** • Klaus Kammerer, Nicolas Mundbrod and Manfred Reichert Diego Calvanese, Tahir Emre Kalayci, Marco Montali and Ario Santoso The Proactive Insights Engine: Process Mining meets Artificial Intelli-٠ gence and Machine Learning Fabian Q. Veit, Manuel Haug, Jan Philipp Thomsen and Jerome Gey-Castellers (Human Towers) 17:20 - 18:00 **Telecos Square** er-Klingeberg bupaR: Business Process Analysis in R ٠ Gert Janssenswillen and Benoît Depaire **Conference Dinner** 20:00 - 23:00 Distributed Multi-Perspective Declare Discovery • Christian Sturm, Stefan Schönig and Claudio Di Ciccio El Xalet de Montjuïc Demonstrating Flexible Support for Knowledge-Intensive Processes • with proCollab Nicolas Mundbrod and Manfred Reichert A Modeling Tool for PHILharmonicFlows Objectsand Lifecycle Pro-• cesses Sebastian Steinau, Kevin Andrews and Manfred Reichert EDU-ProM: ProM for the Classroom . Yossi Dahari, Avigdor Gal and Arik Senderovich **Extensible BPMN Process Simulator** ٠ Luise Pufahl and Mathias Weske Caterpillar: A Blockchain-Based Business Process Management Sys-• tem Orlenys López-Pintado, Luciano García-Bañuelos, Marlon Dumas and

Ingo Weber

Thursday, September 14, 2017		14:00 - 15:30	BPM Session 6: Process mining II	Vertex Auditorium	
08:30 - 09:00	Registration	Vertex Building		Chair: Ingo Weber, CSIRO	
09:00 - 10:10	99:00 - 10:10 Keynote: Vertex Auditorium A Leaders Guide to Understanding New Business Models in the Digital Economy Chair: Gregor Engels, University of Paderborn		14:00 - 14:30	TESSERACT: Time-drifts in Event Streams using Series of Evolving Rolling Averages of Completion Times Florian Richter and Thomas Seidl.	
	Alan W. Brown, Business School at University of Surrey		14:30 - 15:00	Intra and Inter-Case Features in Predictive Process	
10:10 - 10:40	Coffee Break	Vertex Garden		Monitoring: A Tale of Tw Arik Senderovich, Chiara Kerwin Jorbina and Fabri	Di Francescomarino, Chiara Ghidini,
10:40 - 12:10	Panel 1: Al, Machine Learning, Bl human factor in BPM?	Vertex Auditorium lockchain – will machines eat the	15:00 - 15:30	Discovering Infrequent Behavioural Patterns in Process Models	
	Panelists: Jan Mendling, Ingo Weber, Gero Decker, Hajo Reijers and Rick Hull		14:00 - 15:30	David Chapela-Campa, M	anuel Mucientes and Manuel Lama
10:40 - 12:00	BPM Forum 3: BPM Miscellany VS217 Chair: Massimiliano de Leoni, Eindhoven University of Technology			Conformance Checking: What does your process do when you are not watching?	
10:40 - 11:00	<b>BPMS-Game: Tool for Bu</b> Javier Mancebo Pavón, F	<b>usiness Process Gamification</b> Felix Oscar Garcia Rubio, Maria De Los ubia and Oscar Pedreira Fernández		Massimiliano de Leoni, Eindhoven University of Technology Boudewijn van Dongen, Eindhoven University of Technology Jorge Munoz-Gama, Pontificia Universidad Católica de Chile	
11:00 - 11:20	6 6	ess Implementation: Early	15:30 - 16:00	Coffee Break	Vertex Garden
	Sankalita Mandal, Matth	ias Weidlich and Mathias Weske	16:00 - 17:00	Tutorial 4:	Sala d'Actes
11:20 - 11:40	Processes with Smart Devices: Assessment and Improvement			Incremental and interactive process model repair based on behavioral alignments Abel Armas, Queensland University of Technology	
	Giovanni Meroni and Pie	C C			
11:40 - 12:00	A Quantitative Study of Management and Digita Amy Van Looy	the Link Between Business Process I Innovation			

12:30 - 14:00 Lunch

### **SOCIAL EVENTS**

#### Welcome reception - Barcelona Biomedical Research Park Monday, 11 September, 2017

The reception will take place at the Barcelona Biomedical Research Park (on the main terrace).



The PRBB is one of the largest hubs of biomedical research in southern Europe. The six centres located in the park conduct science of excellence in a wide diversity of fields, with a critical mass of 1,500 people hailing from 50 different

countries, an accumulated R&D budget of approximately 90 M€ per year and cuttingedge scientific equipment. This allows us to explore, in a unique building, the most relevant questions in life sciences and biomedicine today, from the molecular up to the populational perspective. The physical connection of the PRBB with the Hospital de Mar next door also provides an excellent insight into clinical reality.

The PRBB, as a scientific facility for biomedical research, complements its services with an auditorium designed for holding scientific conferences. It is located on a raised level, in the heart of the PRBB building overlooking the sea, across from Barceloneta beach, with independent access from the rest of the building.

#### Visit to Sagrada Familia Tuesday, 12 September, 2017, 19:00 Thursday, 14 September, 2017, 19:00

Discover the meaning of Gaudí's artistic universe on this guided tour of the Sagrada Familia, Barcelona's icon and the dream of the brilliant architect. On the tour, you'll discover the different façades of the basilica and visit its surprising interior, inspired by nature and consisting of vast columns that make up an astonishing stone forest. Plans and models



will reveal how Gaudí conceived his vision of 18 towers which, with some variations on the original design, are closer to completion every day as a result of the money raised from ticket sales and donations. The organization will offer the service of official guides without cost. The tickets for the visit are not included in the conference fee, and should have been reserved in advance.



#### Castells in BPM 2017 Wednesday 13 September, 2017; just after the demo session

A castell is a human tower built traditionally in festivals at many locations within Catalonia. At these festivals, several colles castelleres (group of people who do these towers) often succeed in building and dismantling a tower's structure. On 2010 castells were declared by UNESCO to be amongst the Masterpieces of the Oral and Intangible Heritage of Humanity. During the conference, just after the demo session on 13 September, a

castellers performance will take place for all the attendees at the BPM 2017. The group in charge of the performance are Arreplegats. The Arreplegats de la Zona Universitària are a colla castellera comprised exclusively of people linked to universities in Barcelona. The colla was founded in 1995 by a group of students who were also castellers and wanted to keep and practice their hobby in college.

#### **Conference Dinner - El Xalet de Montjuïc** Wednesday 13 September, 2017



The conference dinner will be hosted at El Xalet de Montjuïc, a gastronomic space that combines Mediterranean cuisine and author with the most spectacular views of Barcelona.

Buses will take the attendants to the conference dinner from the conference venue.

### BARCELONA

The city of Barcelona is the second largest city in Spain, and the capital of Catalonia, with a population of 1,7 million inhabitants and 3 million in the metropolitan area. Its cultural richness, vibrant life, and splendid location has made it one of the most visited cities in the world, with over 4 million visitors per year.

Over two thousands years old, there is not just one Barcelona, but several. The old city (Ciutat Vella) offers the visitor a wide range of routes to follow and reconstruct the history of Barcelona by starting at the Roman walls, moving to the medieval streets of the Gothic Quarter and going to the popular promenade know as La Rambla. The city expansion (Eixample), formed from 1860 to 1930, bears witness to the wealth brought about by the economic growth of the period. Barcelona is best known for its architectural treasures, featuring many unique buildings from the "Modernist" period (late 19th-early 20th centuries), seven of which have declared World Heritage Sites by UNESCO. Furthermore, in the last two decades, Barcelona has been an experimentation ground for the most innovative architectural concepts.

Barcelona is also famous for its cultural tradition. The city has over twenty museums, covering all aspects of art and culture. The best known are the National Museum of Art of Catalonia with one of the major collections of Romanesque and Gothic art, the Museum of Historic Art, the Picasso Museum, the Miró Foundation and the Tàpies Foundation. The Science Museum presents a wideranging display of scientific and technological advances. The Fòrum de les Cultures is another cultural target.

Besides some major art show rooms, most musical events take place in three large venues: the Palau de la Música Catalana, a real modernist gem, the Auditorium, and the Gran Teatre del Liceu, which is a leading opera house, reconstructed after its burning in 1994. Many stage troupes and actors in Barcelona are the best in Spain, and achieve international acclaim. A glance at the programme of cultural and entertainment events published in the Barcelona daily newspapers is the best way of finding out of what going on in the city.



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Signavio provides a professional software for modeling and analyzing business processes. The company runs local representations in Berlin, Germany, Singapore and Sunnyvale, CA, USA. From an easy start with BPM to complex BPM initiatives – Signavio is first choice.

#### The idea of Signavio

Many employees are rarely faced with the topic of business process management. Though, these employees as well as customers or business partners are particularly important for improving business processes. Thus, those people have to be involved in process design right from the start – without huge training efforts. To achieve a high level of engagement and acceptance among the employees, an intuitive and collaborative BPM tool is one of the key drivers to success. While working on the Oryx-Project at Hasso-Plattner-Institute, Potsdam, Germany we obtained a deep appreciation and understanding of the advantages of a webbased, collaborative BPM tool. Parts of the Oryx-technology and concepts developed at the Institute are today incorporated within the Signavio Process Editor.

• Learn more at <u>www.signavio.com</u>

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Many customers such as Siemens or Vodafone are already benefiting from this innovative technology. Experience a live-demo and learn how Process Mining can benefit your organization.

Learn more at <u>www.celonis.com/en</u>

NEWS: Celonis is glad to inform you that they offer free academic licenses for Celonis suite to the members of the BPM conference and the participants of the BPI challenge. For the free academic license, academics just have to register here: <u>https://academiccloud.</u> <u>celonis.com/login/register</u>

#### IBM



IBM (International Business Machines) is a multinational technology and consulting company founded in 1911. IBM manufactures and sells hardware and software, and offers infrastructure, hosting and consulting services in areas ranging from mainframe computers to nanotechnology. IBM's major operations comprise a Global Services segment, System and Technology Group, Software and a Global Financing segment.

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Diputació de Tarragona is a public organization oriented towards improving the quality of life of the people living in the province of Tarragona.

• Learn more at http://www.dipta.cat/



#### Myinvenio

myInvenio is the leading Process Mining platform offering full management of Business Process Improvement and Transformation by automatically:

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- enabling our customers to get ahead of the Digital Transformation revolution

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#### DCR

The Dynamic Condition Response graph (DCR-graph) is a BPM methodology and IT-technology. DCR has been developed in cooperation between the IT University of Copenhagen and Exformatics. DCR is a cloud-based BPM solution, which is used by companies and organizations all over the world. DCR is a method and a digital tool that makes it possible to describe and simulate workflows and business processes in a more agile way than is currently possible with traditional tools and methodologies. DCR retains the flexibility of the workflow and demonstrates how processes meet business, regulatory and compliance requirements. The digital workflows in DCR can be embedded and modified in real time in the IT systems. In 2016 the DCR solution was finalist for the recognized, global price, BPM Awards.

Learn more at http://dcrgraphs.com/

#### bizagi

Headquartered in the UK with operations across North America, Europe and Latin America, Bizagi is a global leader in digital process automation software. Bizagi helps ignite the digital transformation programs of more than 500 enterprise customers across 50 countries around the world, assisted by an international network of partners and a global community of over 500,000 process pioneers.

Learn more at http://www.bizagi.com.



#### ca technologies

What makes CA unique in our ability to help customers is more than the sum of our experience and expertise----it's how we view the world, who we are, how we live and how we work. In fulfilling our mission, it's not just what we do that matters. It's what we believe.

CA Technologies has been positioned by Gartner, Inc., in the Leaders Quadrant of the 2017 Gartner Magic Quadrant for Enterprise Agile Planning Tools. The report evaluated CA Agile Central, an enterprise-class platform purpose-built for scaling agile development practices. CA Technologies was positioned the furthest in the Leaders guadrant for Completeness of Vision.

Learn more at https://www.ca.com/

#### **Mysphera**



We are a global company headquartered in Valencia (Spain – EU) focused on transforming healthcare systems through location and process visibility leveraging smart IoT solutions. Our Vision is to empower Clinicians, Patients, and Healthcare Management with smartsensor-driven on-demand actionable information to improve patient care outcomes while increasing efficient management of resources in hospitals, senior living, and patient homes.

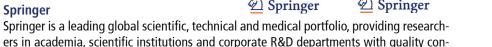
Healthcare providers win process visibility to improve efficiency, efficacy and optimization of resources in real time and thanks to data analysis.

Patients win safety in the clinical process, and relatives get more satisfaction because they are informed in real time about the patient status in the clinical process and location.

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