BPM Newsletter

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Editorial

A year with various exciting BPM developments is soon coming to an end. We enjoyed a fantastic conference in picturesque Krakow, Poland, with great hospitality and an inspiring program. Thank you very much, Edyta, Krzysztof and the whole Krakow team for welcoming us!

The team of BPM 2025 have already started working in the meantime. We are happy that the Seville team has taken over again. On this page, you can easily see that we have had Seville as a host before. Unfortunately, the conference in 2020 had to take place as an online event due to Covid, but we did not want to miss the opportunity to have the conference truly in Seville. In this newsletter you will find the reasons why.

Finally, I am happy to share that the first five articles have been published in Process Science, and many more are currently in review. The best papers from the BPM Conference as much as the ICPM Conference will be published in our journal. More inside this newsletter!

All the best,

Jan

1st BPM 2003 Eindhoven

2nd BPM 2004 Potsdam

3rd BPM 2005 Nancy

4th BPM 2006 Vienna

5th BPM 2007 Brisbane

6th BPM 2008 Milan

7th BPM 2009 Ulm

8th BPM 2010 Hoboken

9th BPM 2011 Clermont-Ferrand

10th BPM 2012 Tallinn

11th BPM 2013 Beijing

12th BPM 2014 Haifa/Eindhoven

13th BPM 2015 Innsbruck

14th BPM 2016 Rio de Janeiro

15th BPM 2017 Barcelona

16th BPM 2018 Sydney

17th BPM 2019 Vienna

18th BPM 2020 Seville

19th BPM 2021 Rome

20th BPM 2022 Münster

21st BPM 2023 Utrecht

22nd BPM 2024 Krakow

23rd BPM 2025 Seville

Welcome to BPM 2025 in Seville

In 2025, the BPM conference is going to the beautiful and historic city of Seville, from August 31 to September 5, 2025. Five years ago, the pandemic forced us to host BPM virtually, but now we're thrilled to welcome you to experience the city in person.

Seville is renowned for its rich cultural heritage, vibrant atmosphere, and remarkable UNESCO World Heritage Sites, including the stunning Alcázar palace, the awe-inspiring Seville Cathedral, and the General Archive of the Indies, where the historical records of the house of Trade with the American continent are kept.

The conference is organized by the University of Seville. Established in 1505, it is one of Spain's largest universities, serving over 70,000 students and fostering a strong culture of research and innovation. The conference venue, Hotel Meliá Sevilla, is ideally situated near Seville's famous Plaza de España and Maria Luisa Park. With its state-of-the-art conference facilities and proximity to Seville's top attractions, this modern hotel offers an ideal setting for networking, learning, and enjoying the city's vibrant atmosphere.

BPM 2025 will bring together leading minds in Business Process Management, from pioneering researchers to industry leaders. Expect a rich program that includes high-quality research, insightful keynotes, exciting workshops and tutorials, and a showcase of the best demos and resources in the field. New to the agenda are the Responsible BPM Forum and BPM Technology Forum, complementing the BPM Forum, Industry Forum, and Educators Forum.

Seville's charm extends beyond the conference room. Attendees can look forward to memorable social events, where you'll experience the enchanting blend of Mudejar, Gothic, and Renaissance architecture at the Royal Alcázar, a reception in the historic Royal Tobacco Factory, inspiration for Bizet's Carmen, and breathtaking views of the Guadalquivir River as you savor authentic Spanish cuisine.

We look forward to welcoming you to Seville for BPM 2025, where a unique blend of knowledge exchange, professional networking, and cultural exploration awaits. Join us for an unforgettable week in one of Spain's most captivating cities!

Adela del Río Ortega, Manuel Resinas
(BPM 2025 General Chairs)

Find more information at:
https://www.bpm2025seville.org

New Workshops Shaping the Future of BPM

The BPM community was again invited to submit workshop proposals to BPM 2025. Workshops at the BPM conference provide a platform for showcasing quality papers, but they also serve as settings that promote the exchange of new ideas, experiences, and emerging research on topics still gaining traction. These workshops are designed to foster active participation, generating enriching discussions on a variety of topics related to business process management.

For BPM 2025, we seeked dynamic, creative, and innovative workshops. Alongside the traditional sessions that include paper presentations, panels and expert forums, we encourage organizers to propose creative, interactive, and ground–breaking sessions that enhance participant engagement.

In this edition, we expect to have between six and eight workshops. We encouraged those interested in organizing a workshop to look for synergies with colleagues or experts in an area of interest and create a joint proposal, looking for a more enriching experience for all.

The submitted workshop proposals are currently reviewed. Watch out for the announcements of the workshops by mid-December.

We are very much looking forward to the workshops and hope to see you in Sevilla next year!

Bedilia Estrada Torres, Han van der Aa, and Inge van de Weerd

(BPM 2025 Workshop Chairs)

Looking back at BPM 2024 in Krakow

We're excited to reflect on BPM 2024, which took place in the vibrant city of Krakow, Poland. This year's conference, held from September 1 to 6 at AGH University of Krakow, brought together researchers, practitioners, and academics from around the world for six days packed with learning, connections, and discoveries in Business Process Management.

The conference kicked off on Sunday with a Doctoral Consortium, where PhD students shared their research, discussed challenges, and received guidance from experienced scholars. This session focused on mentorship and support, setting a collaborative tone for the week ahead.

Monday was all about workshops, with 10 different sessions held across five rooms. From early morning to evening, participants explored topics ranging from digital transformation, through the intersection of BPM with the Internet of Things, social and human aspects, and sustainability in process management, to formal methods in BPM. With 50 papers presented, attendees had the opportunity to explore the latest ideas and diverse perspectives in the field.

From Tuesday through Thursday, the main conference buzzed with energy, making BPM 2024 one of the largest and most engaging editions so far.

Over these three days, participants engaged in sessions covering BPM's core tracks — Foundations, Management, and Engineering — as well as specialized topics like Robotic Process Automation (RPA), Blockchain, Education, and Central and Eastern European BPM forums. The packed rooms and lively discussions reflected the enthusiasm and depth of insight shared, with three renowned keynote speakers further enhancing the program.

Professor Alexander Serebrenik spoke on diversity in software engineering, Professor Flavia Santoro raised thought-provoking questions about ethics in BPM, and Tomasz Głowacki from Żabka Group bridged academic research and practical business applications through AI-driven retail process innovations.

Beyond academia, participants enjoyed Krakow's cultural heritage, starting with a welcome dinner featuring the "Krakus" Song and Dance Ensemble and AGH's Brass Band. The gala dinner in the historic Wieliczka Salt Mine, 100 meters underground, was a highlight, where the BPM awards ceremony added a memorable touch to an unforgettable venue.

We pass the torch to next year's team with excitement for what Seville will bring! BPM 2024 ended with warm thanks to everyone who helped make it a success and left us all with fresh ideas, new friendships, and unforgettable memories from Krakow.

Edyta Brzychczy, Krzysztof Kluza

BPM 2024 General Chairs

Photos by Maciej Talar

Photos by Maciej Talar

BPM2024 Awards

Continuing the tradition of previous conferences, several prestigious awards were presented at BPM 2024, with the ceremony held during the gala dinner in the breathtaking setting of the Wieliczka Salt Mine.

BPM2024 BEST BLOCKCHAIN FORUM PAPER

Smart Contracts' Upgradability for Flexible Business Processes
Sidra Malik, Dilum Bandara, Nick Van Beest and Sherry Xu

BPM2024 BEST CEE FORUM PAPER

Adapting to Change: Employees Ambidexterity as a Driver for Operational Adaptability and Organizational Development
Mariusz Hofman, Grzegorz Grela, Paulina Orzelska and Jarosław Banaś

BPM2024 BEST DEMO & RESOURCES FORUM PAPER

Optimos: A Tool for Simulation-Driven Business Process Optimization
Orlenys López-Pintado, Jannis Rosenbaum, Jonas Berx and Marlon Dumas

BPM2024 BEST INDUSTRY FORUM PAPER

LLM4PM: A case study on using Large Language Models for Process Modeling in Enterprise Organizations
Clara Ziche and Giovanni Apruzzese

BPM2024 BEST RPA FORUM PAPER

Decision-Making in Robotic Process Automation Programming and its Influence on Robotic Process Mining
Tom Hohenadl, Bernhard Axmann and Christian Stummeyer

BPM2024 Best Reviewers

Andrey Rivkin, Techn. Univ. of Denmark
Orlenys López-Pintado, Univ. Tartu, Estonia
Irene Vanderfeesten, KU Leuven, Belgium

BPM2024 BEST STUDENT PAPER AWARD

Looking for Change: A Computer Vision Approach for Concept Drift Detection in Process Mining
Alexander Kraus and Han van der Aa

Runner up BPM2024 BEST PAPER AWARD

1. Conformance Checking of Fuzzy Logs against Declarative Temporal Specification
Ivan Donadello, Paolo Felli, Craig Innes, Fabrizio Maria Maggi and Marco Montali

2. Attention Please: What Transformer Models Really Learn for Process Prediction
Martin Käppel, Lars Ackermann, Stefan Jablonski and Simon Härtl

BPM2024 BEST PAPER AWARD

Explanatory Capabilities of Large Language Models in Prescriptive Process Monitoring
Kateryna Kubrak, Lana Botchorishvili, Fredrik Milani, Alexander Nolte, Marlon Dumas

Runner-up BEST PhD AWARD

Measuring, Analyzing and Managing Process Complexity
Maxim Vidgof, Vienna University of Economics and Business

Springer BEST PhD AWARD

Discovering Organizational Models from Event Logs for Workforce Analytics
Jing Yang, Queensland University of Technology

All award winners of BPM 2024 are listed on our website:

https://bpm2024.agh.edu.pl/conference/awards/

BPM 2024 Program in Review

BPM research is more alive and attractive than ever! This year, we received 171 papers - the highest number of submissions in the last two decades! We very much would like to thank all authors who took the time to write up their research according to the conference requirements and for selecting the BPM conference as an outlet for their work. It was wonderful to see the range of topics covering the entire spectrum of foundations (track I, 49 papers), engineering (track II, 76) and management (track III, 46). Mindful of the quality expectations of our conference, and the burden on reviewers, we desk-rejected 27 papers (15.8%).

Each of the 144 papers that made it into the subsequent process, was carefully reviewed by three international experts under the guidance of an experienced senior program committee member. It is this rigorous review, which for the first time was conducted as a double-blinded process which determines the quality of a conference. We are very grateful to the 110 reviewers and 51 senior PC members who dedicated their time and expertise to ensure that each author benefitted from their critical and well-informed feedback.

Our analyses showed that the average length of each review was more than one, single-spaced page and there were typically around eight comments per paper in the discussion of each paper's review process.

Thus, BPM 2024 also leaves a legacy by constructively guiding the future research of the many BPM research initiatives that we could not showcase in Krakow.

This thorough review process resulted in the oucome that 29 (20.1%) of these 144 papers were accepted at the main conference which were distributed as follows:

- Track I: 9 of 44 (20.5%)
- Track II: 13 of 67 (19.4%)
- Track III: 7 of 33 (21.2%)

The accepted BPM conference papers obtained their findings via various methodologies such as behavioural science (e.g., case studies), computational-intensive process science and design science (e.g., artefact development). They covered a wide range of BPM topics including process prediction, monitoring, mining and simulation, conformance checking and event log management, the BPM-related capabilities of large language models (LLMs), data breaches and inaccuracies in business processes up to the business value of RPA and employee acceptance of AI-enabled processes.

In addition to these conference papers, we accepted 21 papers (14.6%) for the BPM forum (Track I: 7; Track II: 9; Track III: 5). This also means that overall 50 papers (34.7%) were accepted and provided with the opportunity to present at BPM 2024 in Krakow. Forum papers covered diverse topics including object-centric BPM, predictability, sustainability, AI and the role of data and LLMs, design principles for RPA and the changing role of humans in fast transforming business processes.

This year's conference:forum ratio of nearly 3:2 is a deliberate move in comparison to previous years as it aligns with the aim to

further increase the relative proportion of conference papers.

A new feature at BPM 2024 was that we awarded badges (see below) in the proceedings to the conference (8) and forum (6) papers which made underlying artefacts (e.g., survey instrument, code, prototypes, data) available.

This demonstrated our clear commitment to further forstering Open Science and its embedded call for reproduceability and replicability. The Proceedings of the conference (LNCS 14940) and the forum (LNBIP 526) are available via Springer Publisher.

Each day of the conference kicked-off with a scene setting keynote. Flavia Santoro, Director of the Institute of Technology and Leadership, Sao Paulo, opened the conference with her presentation on Ethics in BPM. Her call for ethics-first, ethics-as-a-process and moral transparency provided operational advice for how we can approach responsible BPM. Alexander Serebrenik from the TU Einhoven continued this thematic focus and spoke about the human lens on BPM, e.g. how the role of bots changes with the maturity of the designer. He also reminded us that diversity in BPM includes diversity in the data we are using for our research! Finally, Thomas Glowacki from the Polish Zabka Group provided compelling insights into the requirements and capabilities of the next generation of sensor- and data-intensive processes as well as first examples of conversational BPM using retail scenarios.

For the rest of the sessions, we selected early and mid career BPM researchers across the globe as session chairs, and it was energizing to see the passion and talent with which they guided their audiences through each session.

In addition to the main conference and the Forum, there was a multitude of affiliated events including 9 workshops, five fora including a Central and Eastern Europe forum, demos and journal-first tracks, tutorials and a doctoral consortium at BPM 2024.

We were honored to take care of this year's program. Dziękuję to everyone who joined us in Krakow!

Andrea Marrella, Manuel Resinas, Mieke Jans and Michael Rosemann

(BPM 2024 program chairs)

New BPM 2025 Forums

The BPM Conference 2019 in Vienna marked the innovation of additional forums attached to the main conference with the aim of creating a space for fresh topics that define an opportunity for future editions of the conference. The then introduced **BPM Blockchain Forum** was soon followed by the **RPA Forum**. Both these forums have inspired new research directions for the BPM Conference. We believe that both topics have developed and matured such that we are confident to see them being addressed in submissions to the main conference in the years to come. We thank the many persons who served as PC Chairs, PC members, keynote speakers, and authors contributing over the years, and who made these forums a big success!

The BPM Steering Committee has discussed the **future role of the forums** and has decided to deal with forums as follows. Each year in April, the BPM Steering Committee will discuss and decide about the forms of the conference 16 months later. After three years, forum series will be discontinued unless there are good and strong arguments to keep them. For Seville, we will have the following two new forums:

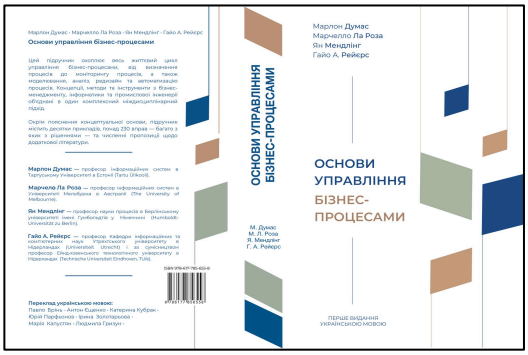
The **Responsible BPM Forum** is intended to discuss topics of responsibility along various stages in the BPM lifecycle–including responsible analysis, design and perfor–mance, affecting computational as well as managerial sides of BPM. The PC Co-Chairs are Avigdor Gal, Flavia Santoro, Thomas Grisold and Mahendrawathi ER.

The **BPM Technology Forum** invites submissions on technical and engineering aspects related to the study, design, development, and maintenance of software systems that support the modeling, simulation, analysis, enactment and monitoring of business processes, process systems in short. The PC Co-Chairs will be Mathias Weske, Dimka Karastoyanova and Remco Dijkman.

Community News

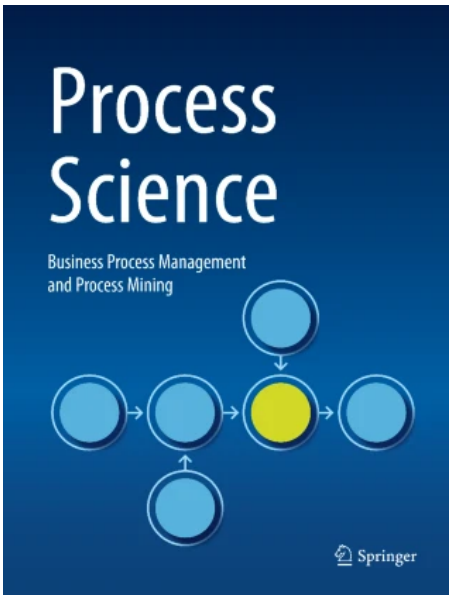
The **4th edition of the BPM book** by Mathias Weske is out! It features a new section on directly follows graphs that includes a formal introduction of event logs and traces. Current developments towards object-centric business processes are reflected by a new section on data in business processes. Fundamental aspects of declarative process modeling are addressed, and an example shows the additional behavior that declarative approaches provide with respect to traditional imperative ones. Thanks to Wil, Artem and Tijs for our discussions on DFGs, events, and declare. Special thanks to Ralf Gerstner for his excellent work during editions one to four of the book and for his continuing support of the BPM community!

The **Ukrainian translation** of the **Fundamentals of BPM** have become available! We are grateful to the translation efforts of Pavlo Brin, Anton Yeshchenko, Kateryna Kubrak, Yuriy Parfyonov, Iryna Zolotaryova, Maria Kapustyan, and Lyudmila Gryzun, as well as the support from Springer Nature, Humboldt-Universität zu Berlin, and University of Tartu.



Process Science Update

The first articles have been published in Process Science. We thank the authors and the reviewers for their diligent work. Here, we provide you with an overview of these articles. Many papers are currently in review. Soon, we will publish the best extended papers from the BPM Conference as well as the ICPM Conference.



Process science: the interdisciplinary study of socio-technical change
Jan vom Brocke, Wil van der Aalst, Nicholas Berente, Boudewijn van Dongen, Thomas Grisold, Waldemar Kremser, Jan Mendling, Brian Pentland, Maximilian Roeglinger, Michael Rosemann, Barbara Weber

Process science is the interdisciplinary study of socio-technical processes. Socio-tech–nical processes involve coherent series of changes over time, entailing actions and events that include humans and digital technologies. The ubiquitous availability of digital trace data, combined with advanced data analytics capabilities, offer new and unprecedented opportunities to study such processes through multiple data sources. Process science is concerned with describing, explaining, and intervening in socio-technical change. It is based on four key principles; it (1) puts socio-technical processes at the center of attention, (2) investigates socio-technical processes scientifically, (3) embraces perspectives of multiple disciplines, and (4) aims to create impact by actively shaping the unfolding of socio-technical processes.

Predictive process monitoring: concepts, challenges, and future research directions
Paolo Ceravolo, Marco Comuzzi, Jochen De Weerdt, Chiara Di Francescomarino, Fabrizio Maria Maggi

Predictive Process Monitoring (PPM) extends classical process mining techniques by providing predictive models that can be applied at runtime during the execution of a business process, for example, to predict the sequence of the next event(s) in a case, its outcomes, or performance-related aspects such as the remaining processing time. These predictive models go beyond process mining's inherent descriptive nature that is offered by typical process discovery, conformance checking, and model enhancement techniques. The growing interest in PPM is driven by its additional value proposition, i.e., delivering real-time information regarding the future execution of business process instances, thus allowing for better informed operational decision making and performance analysis. The rapid growth of PPM during the last ten years has left the field lacking a cohesive taxonomy and an explicit recognition of the prevailing challenges. This paper aims at closing this gap, by comprehensively defining PPM using a unified approach to the key terms and by discussing challenges and opportunities in the field. Specifically, we propose three overarching research challenges and nine research directions, which have been validated through a survey with PPM researchers.

Explainable predictive process monitoring: a user evaluation
Williams Rizzi, Marco Comuzzi, Chiara Di Francescomarino, Chiara Ghidini, Suhwan Lee, Fabrizio Maria Maggi, Alexander Nolte

Explainability is motivated by the lack of transparency of black-box machine learning approaches, which do not foster trust and

acceptance of machine learning algorithms. This also happens in the predictive process monitoring field, where predictions, obtained by applying machine learning techniques, need to be explained to users, so as to gain their trust and acceptance. In this work, we carry on a user evaluation on explanation approaches for predictive process monitoring aiming at investigating whether and how the explanations provided (i) are understandable; (ii) are useful in decision making tasks; (iii) can be further improved for process analysts with different predictive process monitoring expertise levels. The results of the user evaluation show that, although explanation plots are overall understandable and useful for decision making tasks for business process management users - with and without experience in predictive process monitoring - differences exist in the comprehension and usage of different plots, as well as in the way users with different predictive process monitoring expertise understand and use them.

Data-driven assessment of business process resilience

Alexander Kraus, Jana-Rebecca Rehse, Han van der Aa

Process resilience represents a core competence for organizations in light of an increasing number of process disruptions, such as sudden increases in case arrivals or absences in the workforce. It reflects an organization's ability to restore a process to its acceptable performance level after a disruption. In this regard, the first key step for organizations towards achieving resilience is to understand how resilient their processes actually are. Although recognized as important, few works focus on such resilience assessment in a data-driven manner, thus barring organizations from gaining the necessary insights into how much their processes are affected by disruptions and how long it takes them to recover. To address this problem, we propose an approach for automated resilience assessment, based on recorded event data. Our approach interprets relevant process characteristics, such as the average lead time or arrival rate, as time series, which capture the development of the process execution over time. Based on these time series, it uses statistical modeling, specifically a vector autoregressive model, to determine the inter-relations between those characteristics and assess how the process performance responds to a disruption, i.e., a significant and temporal change in one of the process characteristics. We validate our approach by comparing its accuracy with a what-if analysis using a simulation model and demonstrate its effectiveness by assessing the resilience of the same process to diverse disruptions across different organizations.

Robotic process automation – research impulses from the BPM 2023 panel discussion

Ralf Plattfaut, Jana-Rebecca Rehse, Caspar Jans, Matthias Schulte, Joost van Wendel de Joode

Robotic Process Automation is an established technology in organizations. In the last years, it has also received considerable attention in scholarly research with publiccations, special issues, and academic conferences dedicated to the topic. Given that Robotic Process Automation has now moved beyond the initial hype, we can ask what research should focus on in the future. To address this question, we conducted a panel discussion to discuss its current state and future development. This panel, which took place at the Robotic Process Automation forum at the Business Process Management Conference 2023, included experts from academia and industry, covering strategy consultants, implementers, and tool providers. In this report, we present insights from the panel discussions. We especially focus on three future research directions on Robotic Process Automation that emerged from the panel.