BPM NEWSLETTER Issue 2/ 2020 October 2020

EDITORIAL

The world has changed since the publication of the previous BPM newsletter in February this year. Due to the crisis imposed by the coronavirus, BPM 2020 could only be organized virtually, so we missed personal communication and wonderful Seville in late summer.

Still, we celebrated a memorable conference, packed with exciting scientific content and loads of social, virtual interactions! The Seville team made that happen through a wide range of

virtual formats. Mindfulness sessions prepared us for the day, excellent presentations challenged us scientifically, and virtual social interactions connected us. Thanks again to Manuel, Adela, Antonio, and Cristina for providing us a true BPM 2020 experience!

The BPM Steering Committee has decided to establish a new body called BPM Association. It will combine the community activities that the Steering Committee has been providing over the years with new flagship acti-

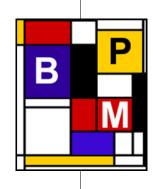
vities under a single umbrella. In this newsletter you find more information about the BPMA, membership benefits, how to become a member, and our offerings for 2021.

It is now a very good time to look forward to BPM 2021 in Rome, especially to prepare a Workshop proposal for BPM 2021, which traditionally is the first deadline in a few weeks from now, on December 1, 2020.

Best regards, and take care, Mathias Weske



The Eternal City of Rome, where BPM 2021 will take place in September next year



1st BPM 2003 Eindhoven 2nd BPM 2004 Potsdam 3rd BPM 2005 Nancy 4th RPM 2006 Vienna 5th BPM 2007 Brisbane 6th BPM 2008 Milan 7th RPM 2009 Lllm 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

PAGE 2 BPM NEWSLETTER

INVITATION TO JOIN THE BPM ASSOCIATION

As announced at BPM 2020, the Steering Committee of the BPM Conference Series has decided to establish a BPM Association. Its goal is strengthening education, research, and development in all aspects of business process management as well as increasing the impact of business process management on organizations, industry, and society.

The BPM Association builds on the activities conducted by the BPM Steering Committee for almost two decades. These include organization of annual BPM conferences and a broad range of community activities including Best BPM Dissertation Award and the bi-annual BPM Newsletter, which you are reading now.

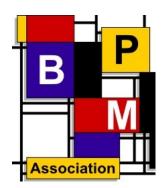
With the planned gradual development of the BPM Association, these activities will be complemented over the next years. In 2021 the BPM Association will organize a lecture series, delivered by thought leaders in the field. We envisage that this activity will provide a forum for BPM research, practitioner and industrial communities to share knowledge and expose synergies.

The full benefit of the BPM Association is available for its members. Membership for individuals is free of charge. To apply for membership, please fill the form at https://bpm-conference.org/bpma/. You will receive additional information on the gradual development of the BPM Association in due time.

Let me note that the BPM Association will substitute the bpm-conference mailing list that has been used for many years for, among other things, communicating the BPM Newsletter.

Please help strengthenig our community and join the BPM Association!

Mathias Weske, for the BPM Steering Committee



Please provide us with your contact information:	
Salutation	Select one ▼
Academic Title	Select one 🔻
First Name *	
Last Name *	
Email Address *	8
The email address we use to send you information about the BPM Association Please tell us more about yourself:	
Organization	Organization
Position	Position
Working Area *	○ Academic
	O Professional
Please let us know if you work in academia or in a professional business or industry environment	
Domain of Interest *	Research and Education
	Manufacturing and Production
	O Business Administration
	○ Healthcare
	Banking and Insurance
	Other
Which other domains, if any, are you interested in?	
Other Domains	

BPM Association Registration form at https://bpm-conference.org/bpma/

PAGE 3 BPM NEWSLETTER

WELCOME TO BPM 2021 IN ROME!

In 2021 the BPM conference moves to "Roma caput mundi". Rome is the capital and largest city of Italy, and one of the largest cities in Europe. Roman antiquities, Baroque palaces, the Vatican with the St. Peter's Basilica and the Vatican Museums, Liberty quarter and 900 modern quarters (such as Esposizione Universale di Roma) give the city a unique flair well known all over the world. All this is accompanied by a fantastic weather that allows enjoying the summer until the end of September and also having swimming and beach time in Ostia, which is reachable by public transportation. Finally, conference participants can enjoy the Italian cuisine, the lifestyle of the Romans, and the cultural peculiarities of the city.

The conference will be organized by Sapienza Università di Roma, the Iargest European university by enrollments and one of the oldest in the world, founded in 1303. It consists of 11 faculties and 65 departments, has significant research programmes in many fields of engineering, sciences, biomedical sciences and humanities, and offers several Masters Programmes taught entirely in English. The Dipartimento di Ingegneria informatica, automatica e gestionale Antonio Ruberti, named after the famous engineer, politician, and European Commissioner will be home of BPM 2021.



Roman Gladiators looking forward to welcoming us in Rome at BPM 2021

The venue of the main conference will be the Auditorium Antonianum, an astonishing congress center nearby the Colosseum, and the DIAG that will host the numerous satellite events during the week as well as the workshops and the Doctoral Consortium. The two buildings are only 110 mt. apart from each other. In the unfortunate occurrence that, due to the pandemic, travelling on large scale will not be possible, a blended mode will be possible, thanks to the equipment that was recently procured in all rooms of DIAG and Auditorium Antonianum for remote teaching.

BPM 2021 will continue putting emphasis on encouraging the principles of transparency, reproducibility and replicability in research, and it will continue the track system successfully implemented in previous years. Furthermore, BPM 2021 will feature a set of exciting workshops, a session presenting the best Demos & Resources, and a diverse set of forums including the BPM Forum, Industry Forum, Blockchain Forum, and RPA Forum. Together with the keynotes, tutorials and panels, BPM 2021 will offer a rich, enthralling program.

Social events will be a very important part of BPM 2021 as well. Besides enjoying the fantastic September weather in Rome, you will learn more about the history of the Romans and the Popes during the social dinner, and enjoy a real Trattoria-based welcome reception as well as a dancing party in the heart of the Roman "movida" – always accompanied by the Roman gladiators!

We are very much looking forward to your contribution and hope to see you in Rome next September! Find more information at the conference website: https://bpm2021.diag.uniroma1.it/

Massimo Mecella (BPM 2021 General Chair)



WHY NOT ORGANIZE A WORKSHOP AT BPM 2021?

Workshops are a gathering place for attendees with shared interests to meet for a focused and interactive discussion. They are an opportunity to move a field forward and build a community. In this spirit, BPM 2021 is soliciting proposals for one-day or half-day high-quality workshops to be held before the main conference.

BPM workshops address basic research, applied research, and emerging application areas in the context of BPM. Each workshop should generate ideas that will give the BPM community a fresh, way of thinking about the topic or that suggest promising directions for future work. They also provide opportunities for BPM researchers to exchange and discuss ideas at an early stage, before they have matured to warrant conference or journal publications. Note that BPM workshops should not be small-scale paper presentation sessions, but focus on community building and shared knowledge creation on specific sub-areas of BPM research.

If you aim to prepare a workshop proposal for BPM 2021, please consider that a typical BPM workshop is expected to attract around 20 participants and at least 10 submissions. The workshop proposers should have a strong



affinity with the proposed workshop topic and be well connected with experts on that topic. Proposals that meet the aforementioned criteria will be evaluated by the general workshop chairs, with the target to accept between 6 to 8 workshops covering a broad spectrum of the BPM research discipline.

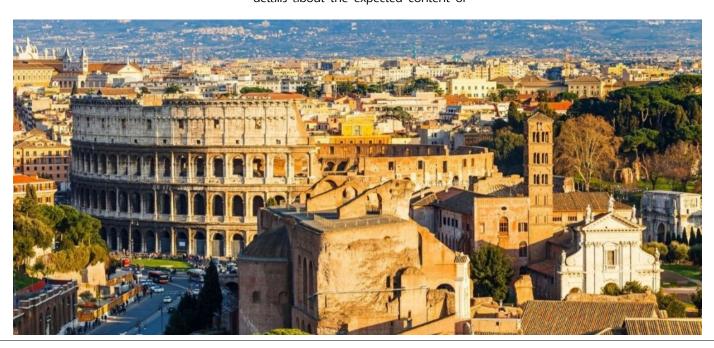
Workshop proposals must be submitted as a PDF document to bpm2021-workshops@diag.uniroma1.it. Further details about the expected content of

workshop proposals can be found at https://bpm2021.diag.uniroma1.it/callfor-workshops/

We are looking forward to your workshop proposals and hope to see you in Rome!

Deadline: 1 December, 2020

Andrea Marrella, Barbara Weber (BPM 2021 General Workshop Chairs)



PAGE 5 BPM NEWSLETTER

BPM 2020 — GENERAL CHAIRS' REPORT & THANKS

It has been a great pleasure to organize this year's edition of the BPM conference. Due to the COVID-19 pandemic, BPM 2020, originally planned to be held in Sevilla, Spain, was converted to a fully virtual conference maintaining the original dates and schedule as closely as possible.

Although interactions could not be the same as in a physical conference and participants could not experience wonderful Sevilla, the virtual conference was a great success. BPM 2020 reached people that could not have attended the BPM conference otherwise. We hope it could bring to its record-breaking 1,500 attendees a bit of the fantastic experience of a BPM conference. Content-wise, despite the difficulties caused by the COVID-19 pandemic, BPM 2020 featured an amazing program that included outstanding keynotes by Avigdor Gal, Rama Akkiraju and Jan vom Brocke that provided new perspectives in process mining, showed how to infuse AI into business processes, and introduced the field of process science, respectively.

This program could be followed in the 39 online sessions that included both live presentations and Q&A. 65 hours of video recordings of these sessions are available online to watch (and rewatch) whenever you want. Furthermore, all papers had a pre-recorded presentation that was available before the conference. To this date, the prerecordings and the recorded sessions together have been watched more than 5,000 times by viewers from all continents for a total time watched of 30 days!

BPM 2020 also had online social activities. Participants could see corners of Sevilla that not even Sevillians know thanks to the fantastic videos created by Adela del Río and Hajo Reijers. These videos were played in the start of each session of the research track. We started each day with a short mindfulness session guided by Beatriz Bernárdez. We had two great mentoring sessions by Dirk Fahland and Irene Vanderfeesten. Finally, we had two wonderful virtual social events to discuss BPM for future and to remember previous BPM conference editions in the BPM throwback bar.

Organizing BPM 2020 would not have been possible without the support of many people, companies and institutions. We would like to express our sincere gratitude to our sponsors Signavio, Celonis, DCR Solutions, Aura Quantic and Papyrus Software; and our partners Springer, the University of Sevilla, Informatics Engineering Research Institute (I3US) and the Unit of Excellence SCORE Lab. We are also very grateful to reviewers, authors, who did a great effort by making the pre-recorded videos for each paper, and the conference chairs and the organization team, who sacrificed a tremendous amount of time to overcome the challenges of switching from a physical to an online conference.

Finally, we thank the BPM steering committee for selecting Sevilla as conference venue in 2020 and their continuous support during the organization of the conference, and to this fantastic BPM community that have made this conference a success.

Manuel Resinas and Antonio Ruiz-Cortés (General Chairs of BPM 2020)





















The people who made it happen: BPM 2020 General Chairs and Organation Team

ISSUE 2/ 2020 PAGE 6

BPM 2020 PC CHAIRS' REFLECTIONS

The year 2020 will be remembered as the time when many business processes were turned upside down as a result of the COVID-19 pandemic. The process of organizing conferences was one of them. The BPM conference was no exception: BPM 2020 was the first edition in the BPM conference series to be held online.

The World Health Organization declared COVID-19 a global pandemic on 12 March 2020, just days before the deadline for paper submissions. As the world entered into lock-down, the BPM research community displayed exemplary resilience. Despite the disruptions, the conference received 138 full paper submissions, which is comparable to the number of submissions on a regular year.

We are thankful to the PC members and external reviewers who gifted their valuable time during the lockdowns to provide detailed feedback to the authors. The quality of the reviews was very high. Many PC members went beyond duty, among them the winners of the best reviewer awards: Xixi Lu, Nick van Beest and Massimiliano de Leoni.

As in previous editions, the BPM 2020 conference was structured into three tracks, corresponding to the three traditional communities of the conference series: the foundations track (computer science), the engineering track (information systems engineering), and the management track (information systems management). Out of the 138 submissions, 32 came into the foundations track, 50 into the engineering track and 56 into the management track. After a thorough review process, we accepted 27 papers to the main conference (7-10-10 across the three tracks). Moreover, 19 submissions appeared in the BPM Forum, published in a separate volume.

Alongside already well-established topics such as process modeling, process mining, process redesign and BPM maturity, we witnessed a notable increase in submissions related to predictive pro-



BPM 2020 Opening Sessions—General Chairs opened, Steering Committee Chair welcomed, PC Chairs reported on the BPM 2020 reviewing process

cess monitoring and Robotic Process Automation (RPA), in line with ongoing industry developments. We also saw several topics being addressed across all tracks. We saw, for example, papers on process mining, predictive monitoring, and RPA in multiple tracks, as well as hybrid (multi-track) sessions. This trend demonstrates that the BPM research community has embraced the three-track system.

The conference also made a step towards embracing the principles of Open Science, including reproducibility and replicability. The evaluation form for research papers included an item asking reviewers if the artifacts (prototypes, interview protocols, questionnaires) and the datasets used in or produced by the empirical evaluation reported in the paper, are available in a suitable form. We are thankful to the authors for embracing these principles as reflected by fact that more than 60% of the presented papers have (permanent) links to artifacts, e.g. in open science repositories such as Zenodo or Figshare. We hope that the conference will continue embracing Open Science in the years to come.

The BPM'2020 PC Chairs

Dirk Fahland, Chiara Ghidini, Jörg Becker, Marlon Dumas

Reviewing process in numbers

138 submissions

- · 32 Foundations
- 50 Engineering
- 56 Management

125 papers reviewed

- · 28 Foundations
- 45 Engineering
- 52 Management

27+19 papers accepted

- 7 Foundations
- 10 Engineering
- 10 Management
- 19 Forum Papers

PAGE 7

BPM NEWSLETTER

BPM 2020 BEST PAPER AND DISSERTATION AWARD

Following the conference's tradition, the BPM'2020 Program Committee (PC) granted a Best Paper Award and a Best Student Paper Award to two papers of the research track. The awardees were selected by the PC Chairs based on the reviews and recommendations of the PC members. For each track, the track's chair identified the top-2 papers. The resulting pool of papers were discussed collectively by all PC chairs.

Following these discussions, the PC chairs unanimously agreed to grant the Best Paper Award to Lukas-Valentin Herm, Christian Janiesch, Alexander Helm, Florian Imgrund, Kevin Fuchs, Adrian Hofmann and Axel Winkelmann, for their paper "A Consolidated Framework for Implementing Robotic Process Automation Projects".

This Track III (management) paper reports on a design science study aimed at developing a framework for the initiation of RPA projects. The PC chairs recognized manifold qualities in this study. First, the study is extensive: It condenses insights from 23 case studies. Second, the study follows a rigorous research method and the findings are analyzed in a multi-faceted manner. Third, the study draws a number of conclusions that provide actionable guidance to practitioners on a very timely topic. And last but not least, in line with the conference's push towards open science, the

paper contains pointers to an extensive body of supplementary materials to facilitate replicability.

Meanwhile, the Best Student Paper Award went to Jelmer J. Koorn, Xixi Lu, Henrik Leopold and Hajo A. Reijers, for their Track II (engineering) paper "Looking for Meaning: Discovering Action-Response-Effect Patterns in Business Processes". This paper presents an investigation into techniques to support the discovery of action-response patterns in business processes.

The PC chairs appreciated that this paper puts forward a new type of problem, data, and use case within the BPM community. The paper introduces concepts that take process analysis beyond the control-flow perspective. From a technical viewpoint, the paper combines algorithmic development with statistical techniques to good effect. The careful evaluation is carried out in a methodologically sound manner and the results are transposable to practice as illustrated in the paper.

Congratulations to the awardees!

Dirk Fahland, Chiara Ghidini, Jörg Becker, Marlon Dumas (PC Chairs)



I am grateful and honoured for this exceptional validation of the research of me and my colleagues at @businf_uhasselt that we received at the @BPMConf! Thanks to all who played their role in the quality of my PhD, not in the least my promotor @BenoitDepaire #uhasselt



The Best BPM Dissertation Award 2020 goes to Gert Janssenswillen for his thesis "Unearthing the Real Process Behind the Event Data: The Case for Increased Process Realism". A special thanks goes to Ralf Gerstner from Springer who supports this award with a cheque of 1,000 EUR and the opportunity to publish the thesis in the LNBIP series. The Runner-Up was presented to Adriano Augusto for his thesis "Accurate and Efficient Discovery of Process Models from Event Logs".

Jan Mendling (BPM Dissertation Award Chair of Review Jury)



18th International Conference on

Business Process Management

Seville, Spain 13-18 Sept 2020



Best Paper Award 2020

Lukas-Valentin Herm, Christian Janiesch, Alexander Helm, Florian Imgrund, Kevin Fuchs, Adrian Hofmann and Axel Winkelmann:

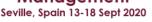
A Consolidated Framework for Implementing Robotic Process Automation Projects

Dirk Fahland, Chiara Ghidini, Jörg Becker, Marlon Dumas (BPM Program Committee Chairs)



18th International Conference on

Business Process Management





Best Student Paper Award 2020

for

Jelmer J. Koorn, Xixi Lu, Henrik Leopold and Hajo A. Reijers:

Looking for Meaning: Discovering Action-Response-Effect Patterns in Business Processes

> Dirk Fahland, Chiara Ghidini, Jörg Becker, Marlon Dumas (BPM Program Committee Chairs)

PAGE 8 BPM NEWSLETTER

BPM 2020 DEMOS AND RESOURCES REPORT

This year, the traditional demo track got rebranded as the "Demos and Resources" track. It was not just a change in the name but a step towards the broadening of the scope of the traditional exposition of new research prototypes at BPM. Not only tools were welcomed but also resources, such as ontologies and data collections, that are relevant to the BPM community. We received 19 submissions, out of which 13 were selected for presentation. They targeted innovative topics, such as chatbots in declarative process modeling, process clustering, privacy-preserving process mining, regulatory mining, and robotic process automation.

This track, with its long tradition at the BPM conference, offers an opportunity for the conference participants to visit different demos, with lively presentations and discussions. We had the goal to transfer the interactive atmosphere into the virtual setting of this year's online edition of the conference. We organized several demo sessions; the audience could flexibly decide which session to visit based on their preferences. As a consequence, some of us had to host two sessions at the same

time, in an attempt to leave the audience awestruck at our prowess in mastering Zoom.

With the invaluable help of four fabulous secret reviewers inspecting all the live sessions, we selected the BPM 2020 Demos & Resources Award

winner: "Robidium: Automated Synthesis of Robotic Process Automation Scripts from UI Logs" by Volodymyr Leno, Stanislav Deviatykh, Artem Polyvyanyy, Marcello La Rosa, Marlon Dumas, and Fabrizio Maggi. Robidium provides an end-to-end solution for robotic process automation – a topic that is gaining momentum and with a high potential to release users from an utterly terrible routine

. U

Best Demo & Resources Award 2020

for

Volodymyr Leno, Stanislav Deviatykh, Artem Polyvyanyy, Marcello La Rosa, Marlon Dumas, Fabrizio Maria Maggi: Robidium: Automated Synthesis of Robotic Process Automation Scripts from UI Logs

> Claudio di Ciccio, Marco Commuzi, Luise Pufahl (BPM Demo & Resources Chairs)

> > work! That was a tough decision to make, though, since many other truly high-quality tools were in the pool of potential winners. All contributions are available at http://ceur-ws.org/Vol-2673/

Marco Comuzzi, Claudio Di Ciccio, and Luise Pufahl (BPM 2020 Demo Chairs)



Let's hope it works: A bit of positive tension while preparing for the BPM 2020 demo presentations

PAGE 9 BPM NEWSLETTER

INTRODUCING NEW SC MEMBER HAJO REIJERS

Hajo Reijers is a professor at Utrecht University. This is a rather short position title compared to the winding road that took him there. Prior to joining academia, Hajo held various positions in industry including that of consultant at Accenture and manager at Deloitte. In 1997, he became PhD student at TU/e in Eindhoven, where he climbed the academic ladder up to professorship. His early research work focused on business process redesign, a topic that he has continued to study throughout his career. At Eindhoven, he also learned about process mining: he was involved in one of the first industrial applications of process mining, together with Wil van der Aalst and others.



As of today, Hajo is still working at TU/e for a day per week. "In Eindhoven I am considered part of the furniture: I have been around for over 30 years." However, he spends most of his time at Utrecht University, the largest university of The Netherlands. Since 2019, he is leading the Business Process Management & Analytics group there. Xixi Lu, Inge van de Weerd, and Jan Martijn van der Werf are also members of this group, among others. We took the opportunity to ask Hajo what is keeping him busy in Utrecht. Below is his response.

I am certainly busy with many different things, but I do enjoy that sensation. Our group tries to cover the broad range of what business informatics is about. On the one hand, we work on

Steering Committee



Prof. Dr. Mathias Weske (chair) HPI, University of Potsdam Potsdam, Germany E-mail: Mathias.Weske@hpi.de



Prof. Dr. Boualem Benatallah University of New South Wales Sydney, Australia E-mail: boualem@cse.unsw.EDU.AU



Prof. Dr. Shazia Sadiq University of Queensland Brisbane, Australia E-mail: shazia@itee.uq.edu.au



Prof.dr.ir. W.M.P. van der Aalst (chair from 2003-2017) RWTH Aachen Aachen, Germany E-mail: wvdaalst@pads.rwth-aachen.de



Prof. Dr. Barbara Weber University of St. Gallen St. Gallen, Switzerland Email: barbara.weber@unisg.ch



Prof. Dr. Manfred Reichert
University of Ulm
Ulm, Germany
Email: manfred.reichert@uni-ulm.de



Prof. Dr. Jörg Desel Fernuniversität Hagen Hagen, Germany E-mail: joerg.desel@fernuni-hagen.de



Prof. Dr. Marlon Dumas University of Tartu Tartu, Estonia E-mail: marlon.dumas@ut.ee



Prof. Dr. Jan Mendling
Vienna University of Economics and Business
Vienna, Austria
Email: jan.mendling@wu.ac.at



Prof. Dr. Stefanie Rinderle-Ma University of Vienna Vienna, Austria Email: Stefanie.rinderle-ma@univie.ac.at



Prof. Dr. Michael Rosemann Queensland University of Technology Brisbane, Australia Email: m.rosemann@qut.edu.au

Hajo joined the BPM SC, pls check at https://bpm-conference.org/organization/

technical topics, where we draw from computer and data science. A good example is the work by Xixi Lu. She recently presented at ICPM 2020 a promising approach for hierarchical process mining. On the other hand, we study management topics. The work of Inge van de Weerd and Iris Beerepoot illustrates this line well: how do people 'work around' procedures and what can organizations learn from such practices to improve their processes? This is an attractive mix. Our management-oriented research builds on our technical expertise; conversely, management questions inspire our technical work. It is the process perspective that unites us.

I am glad to see that the process perspective is gaining much traction. I found the recent keynote at BPM 2020 by Jan vom Brocke on Process Science inspiring in that sense: he argued that processoriented research ties together other perspectives. I am also very fond of the way our discipline moves into looking for meaning within processes. Marlon Dumas referred to this as Causal Process Mining in one of his recent blogs. The work by Jelmer Koorn in my group, which he presented at BPM 2020, is a good example of this: he did not only look at the order in which things happen, but also at the antecedents of such behavior.

With our group, I wish to contribute to broadening the application of process thinking, as well as deepening the insights we can get by using a process lens.

Marlon Dumas (People Column Editor)

ISSUE 2/ 2020 PAGE 10

INTERVIEW WITH AVIGDOR GAL

This interview was conducted through an email conversation between Mathias Weske and Avigdor Gal.

Hi Avi, thanks for taking the time for the interview with the BPM Newsletter. I know you have a background in databases and event processing; could you please share with us your scientific journey to BPM, process mining and big data?

Thanks for the interview. It's a pleasure being here. I was trained as a database researcher and have been working on aspects of uncertainty in data integration for many years. As I advanced in my academic career, I ventured into other related areas as well, including event processing (a research area that evolved from active databases, which was a topic of my dissertation) and AI (which was a natural choice given my interest in uncertainty modeling).

My journey, as that of many professors, was guided by my talented students. My first encounter with the BPM community was in 2005, 10 years after graduation. Together with PhD student Mati Golani we have investigated an automatic mechanism for exception handling in business processes, yielding multiple BPM and BPI papers. With Maya Lincoln we have presented several ideas at BPM that enable querying BPM models to assist in better design of new models.

During BPM'2010 I met an intelligent curious PhD student by the name of Matthias Weidlich, with whom I've started working on extending methods from schema matching to process matching. With Matthias as a postdoc (thanks, Mathias Weske for that :) and a fresh PhD student, Arik Senderovich, we ventured to analyze inter-case relationship with scarce resources, leading to our work on queue mining, which was supported by Arik's co-supervisor Avishai Mandelbaum. This work was reported in several nice conference and journal publications. Our joint work with Arik led to a best paper award in BPM'2017; Arik also received the community recognition when awarded the best dissertation award.

While I was busy researching in the



disciplines of event processing, databases, AI, and process mining, Big Data happened. I was lucky to have my hands in all of these research fields since they represent different steps in the big data life cycle. While event processing relates more to data gathering, data integration is more about data management, and process mining is about data analytics, and as discussed in my keynote, also data explainability.

I very well remember the students that you mentioned, since they all presented at BPM conferences. It is great to cross the boundaries between communities, but it is not the easiest way to go. Since business processes are based on events, why didn't complex event processing get more traction in the BPM community? Should the BPM community try to be more open towards other communities?

Crossing boundaries between communities is tough. Each community has its

own ways of performing and reporting research results.

Specifically for the CEP community, I believe the incentives for the research are different. The CEP community, with origins in the database and distributed systems communities, is focused more on performance than semantics. The BPM community has the need to understand events. What do they mean in the context of the process? How can they affect and be affected by events and activities? While there is part of the CEP community that is interested in event semantics, it is not a main theme in the DEBS conference series.

Any community should be open for adopting new themes and new directions in research. Process mining has adopted machine learning practices and techniques. BPM that for many years was closed to the business community has opened up in the last couple of years due to the constructive changes the steering committee applied. I do believe, however, that the challenge of the BPM community is less in the openness to other communities but rather in making an impact on other communities.

In your BPM 2020 Keynote, you stressed the role of the human-in-the-loop to bring process mining results into practice. How do you see the role of models in this context? Will process models be based on process mining results in the future, rather than on interviews and other traditional process elicitation and process improvement efforts?

I believe this is a valid and timely question. The role of humans in the presence of machine learning is changing and with it I envision a shift in the way traditional BPM is performed. In the old world, humans were superior to machines and their input served as the final decision, overriding any recommendation an algorithm may have produced. Recent studies in data integration show that human biases interfere with achieving optimal solutions to problems

PAGE 11

BPM NEWSLETTER

and that advanced machine learning techniques can identify human biases and correct them to improve the overall performance. The way I see it, we should see a similar development in the relationships between process models and process mining. While humans will continue to design process models, algorithmic solutions will observe the data, use discovery models to automatically generate alternative models that will be tested using conformance checking techniques against human models (and biases) to determine the best model for a task.

You mean algorithmic solutions will determine the best model? Are we talking robotic process improvement?

Not exactly. My claim is that algorithms will take the role of supervising the input given by both human experts and other algorithms to determine which is better, possibly more correct. Imagine a world were human experts design a process, which is unduly long simply because the expert is biased against following some path. Data gathered from relevant experience show that such a path leads to a better outcome or a shorter processing. I envision a world where experience from data will compete with experience from humans to get the best of both worlds.

Robotic process improvement is definitely a challenge worth tackling, as long as it goes



beyond the concept of automating standard processes. RPI should consider that the standard way of performing a process was biased by a human expert and should be improved, very much the same way we perform process mining: discovery followed by enhancement.

In your BPM keynote, we learned that you are fond of fables, and more so, of lions. Why's that?

I am a data scientist. It turns out I was one all my life but was able to give it a name only recently. I enjoy a good narrative and strive to identify one with the datasets I analyze. Michelangelo said that "Every block of stone has a statue inside it and it is the task of the sculptor to discover it".

For me, every dataset has a story inside it and it is the task of the data scientist to discover it. The path from a good story to fables is hence a short one and all I needed was to follow the yellow brick road (with the lion:)

Thanks for the interview Avi, I truly enjoyed our conversation.

Interview by Mathias Weske



Impressions of Technion in Haifa where Avigdor Gal is a professor in the Faculty of Industrial Engineering & Management

IN MEMORIAM FLORIAN DANIEL

Florian Daniel passed away from a sudden illness on 27 April 2020, at the age of 42. He has been, is, and will be, a role model for our scientific community, thanks to his uncommon trait of combining high technical skills with a passionate, brilliant character and a special, human touch.

Florian was born in Silandro in South Tyrol (Italy) and went to Milan for his MEng in Computer Engineering and PhD in Information Technology at Politecnico di Milano. After spending some years at the Department of Electronics, Information, and Bioengineering (DEIB) there, he moved to the University of Trento as a Research Fellow. He had a tremendous network of research collaborations and was a visiting researcher in a number of institutions, including UNSW Sydney, HP Labs Palo Alto, and PUCRS Porto Alegre. In 2016 he moved back to DEIB, first as an Assistant and then as an Associate Professor.

He was a very active researcher, with an impressive publication track that impacted a number of scientific communities, including data science, web engineering, and BPM. He served as PC Chair of BPM 2013, as Workshop Chair of BPM 2011 and 2018, and as PC and senior PC member in a number of editions of the conference.

Of particular importance within BPM was his research on the interplay of processes, user interfaces, and humans. What impresses me most is that this attention to the human factor was

recurring not only in his research contributions, but even more distinctively in his research life, and in particular in his daily supervision and teaching activity. He was considered by students and collaborators as a true mentor, vigorously pushing the boundaries of research and providing continuous support in their personal growth.



I had the pleasure of meeting Florian several times and discuss with him about science, academia, and life. If you are interested in reading some memories and anecdotes about Florian, check the "in memoriam" contained in the preface of the BPM 2020 proceedings. You can also read the web page that his colleagues from Politecnico di Milano dedicated to him: https://www.deib.polimi.it/ita/personale/dettagli/165694

We will miss you, Florian.

Marco Montali

PAGE 13 BPM NEWSLETTER

ACTIVITIES OF THE COMMUNITY

BPMAI process model collection at zenodo.org: The BPM Academic Initiative (BPMAI) collection comprises tens of thousands of models, of various process modeling languages, and size. Models of the collection are available in several revisions, which opens a new perspective in researching the way people model. Since April 2020, this model collection is accessible at zenodo.org using https://doi.org/10.5281/

https://doi.org/10.5281/ zenodo.3758705

A new volume of the **Business Process Management Cases** edited by Jan vom Brocke, Jan Mendling and Michael Rosemann will be published soon in early 2021. The book covers 22 fresh BPM Cases in the three categories: Process Technology and Automation, Process Analysis and Monitoring, and Governance and Strategic Alignment. Additionally, the editors introduce the BPM Billboard as a novel tool for planning and scoping BPM projects and programs. For more info see http://bpmcases.com/.

The Internet of Things meets BPM: The BPM community has a record of reaching out to other communities. This

is not surprising, since our discipline is considerably affected by developments in organizations and technology. In the latest development, the impact of Internet of Things technology on business process management is investigated. Rooted in a Dagstuhl Seminar "Fresh Approaches to Business Process Modeling" (see picture below), colleagues teamed up to write a manifesto "The Internet of Things meets BPM". The paper is published in the October 2020 issue of IEEE Systems, Man, & Cybernetics magazine. This is another splendid example of a successful Dagstuhl Seminar that leads to a tangible scientific result. Hopefully the work leads to more exciting developments in the areas of IoT and BPM.

Second Edition of the International Conference on Process Mining Big Success: The second edition of the International Conference on Process Mining (ICPM 2020) attracted around 2000 participants showing the growing interest in process mining. Following the successful ICPM 2019 conference in Aachen with 500 participants, ICPM 2020 had to switch to an online format due to

Covid-19. The meeting was organized by the University of Padua and the IEEE Task Force on Process Mining (www.tf-pm.org). Massimiliano de Leoni and his colleagues did a great job organizing the conference under challenging circumstances. The 6-day program consisted of a main research track, an industry day, six workshops, a doctoral consortium, a panel, several contests, and demonstrations. Keynotes were given by Thomas Seidl (LMU Munich) and Lars Reinkemeyer (Siemens). The main topics addressed in the research track were process discovery, conformance checking, clustering, predictions, data quality, rule mining, and operational support. The industry day illustrated the uptake of process mining in industry. The panel organized by Marcello La Rosa and Marc Kerremans with contributions from Celonis, UiPath, Software AG, ABBYY, Lana, EY, Siemens, Minit, HSPI, StereoLOGIC, mylnvenio, and Signavio discussed the future of process mining. Although the conference was virtual, there was a lot of interaction in all sessions. ICPM 2021 will take place early November 2021 in Eindhoven. See https:// icpmconference.org/ for more information on this conference series, including recordings of the ICPM 2020 presentations.

Summer School on Process Mining (Dagstuhl, July 2021): The first Summer School on Process Mining organized by the IEEE Task Force on Process Mining (www.tf-pm.org) will take place in Dagstuhl (Germany) from July 4th until July 9th, 2021. The course will be given by the leading experts in the field. Wil van der Aalst and Josep Carmona are the course directors. For more information about the school see http://www.processmining-summer-school.org/.



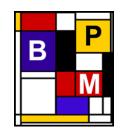
Good vibes at Dagstuhl Seminar 16191

PUBLISHED BY THE S

Wil van der Aalst, Boualem Benatallah, Jörg Desel, Marlon Dumas, Jan Mendling, Manfred Reichert, Hajo Reijers, Stefanie Rinderle-Ma, Michael Rosemann, Shazia Sadiq, Barbara Weber and Mathias Weske (chair).

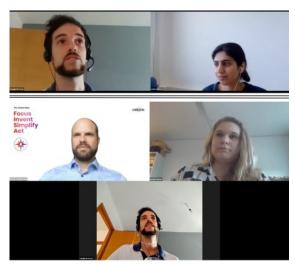


http://bpm-conference.org



This newsletter is an activity of the BPM conference series. The goal is to further strengthen the BPM community. Input for the next newsletter is welcome (e.g. activities related to the BPM conference, interviews, contests, new datasets, tools, etc.); please contact mathias.weske@hpi.de

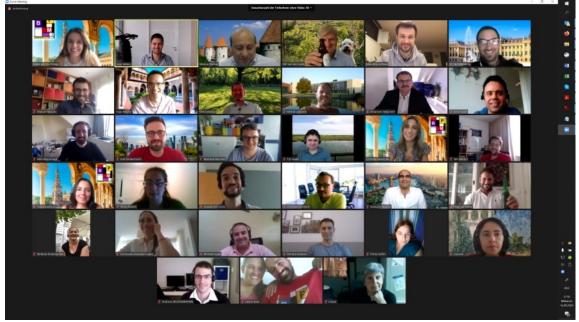
IMPRESSIONS OF A VIRTUAL BPM 2020



Claudio chairing two sessions at once — try it physically!



Manuel, Adela and Hajo planning the Seville Videos in July 2020—an excellent excuse for magnificent Spanish food!



BPM Throwback Bar threw us back to previous BPM conferences— both in time and space!