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Preface

The International Conference on Business Process Management (BPM) has established itself over 17 years as the conference where people from academia and industry discuss the latest developments in the area of business process management. This year the conference was organized in Vienna, Austria. Workshops were held on September 2, during one of the conference days and, where the main conference is meant to present finished research, the workshops are meant to discuss research that is still in progress. Each of the workshops focused on particular aspects of business process management, either a particular technical aspect or a particular application domain. These proceedings present the work that was discussed during the workshops.

Workshops were selected based on proposals that were submitted to the workshop co-chairs. The workshops co-chairs evaluated the proposals based on their fit with the conference, the expertise of the workshop organizers, and the expected potential of the workshop to attract high-quality presentations. Subsequently, the workshops themselves called for papers to present. A total of 124 papers was submitted to the workshops. 61 papers were accepted for presentation, leading to a total acceptance rate of 49%. The workshops that attracted sufficient interest from the community created a program, including, for some of them, also keynote talks, as presented in the respective sections of these proceedings. The following workshops were organized:

- The Third International Workshop on Artificial Intelligence for Business Process Management (AI4BPM)
- The Third International Workshop on Business Processes Meet Internet-of-Things (BP-Meet-IoT)
- The 15th International Workshop on Business Process Intelligence (BPI)
- The First International Workshop on Business Process Management in the era of Digital Innovation and Transformation (BPMinDIT)
- The 12th International Workshop on Social and Human Aspects of Business Process Management (BPMS2)
- The 7th International Workshop on Declarative, Decision and Hybrid approaches to processes (DEC2H)
- The Second International Workshop on Methods for Interpretation of Industrial Event Logs (MIEL)
- The First International Workshop on Process Management in Digital Production (PM-DiPro)
- The Second International Workshop on Process-Oriented Data Science for Healthcare (PODS4H)
- The 4th International Workshop on Process Querying (PQ)
- The Second International Workshop on Security and Privacy-enhanced Business Process Management (SPBP)
- The First International Workshop on the Value and Quality of Enterprise Modelling (VEnMo)

As it is customary, the BPM workshop proceedings are post-proceedings meaning that the authors were given the opportunity to revise their papers, based on feedback that they received at the workshops. This book of proceedings contain the revised papers. It also contains a report on a panel that was organized at the conference, during which the major trends and controversies in the field of business process management were discussed.

We are confident that this process of selection, presentation, and revision has led to interesting new insights and research ideas in the field of business process management, and led to compelling discussions and exchange of ideas during the conference. We hope that you – as a reader – will enjoy reading these proceedings and that they inspire your own work.

We would like to take this opportunity to acknowledge the people who helped create these proceedings: Jan Mendling, for carefully managing the conference as a whole, including the workshops; Claudio Di Ciccio, for providing us with useful advice and helpful information about the practical creation of the proceedings; the chairs of the individual workshops and the panel for managing these parts of the program; and of course the people who contributed with their work to these proceedings.

October 2019

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The Panel Discussion at BPM 2019 (Panel Discussion)

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Abstract. One of the traditional components of the BPM conference is the panel discussion. This report describes the set-up of the 2019 edition, in which we changed procedures somewhat, and summarizes the main insights it generated on basis of the questions discussed. These insights may bear on the development of the discipline as a whole and the conference series specifically.

Keywords: BPM · Panel · Grand challenges · Ethics · Process mining

1 Set-up

A conference focusing on "Business Process Management" (BPM) should look to walk its own talk from time to time. We tried to innovate the processes associated with setting up and running a panel, a traditional component of many academic conferences including the BPM conference series. Because BPM research is situated within information systems scholarship, we looked toward implementing "digital innovations".

For the first time in the history of the conference series, both the composition of the panel and the discussion questions were crowd-sourced. Through mailing lists and postings on social media, we had our community pit nominations for panel members, and nominate topics and questions they would like to see discussed at the panel. In processing this input, we took account of potential biases in the data to compose a representative and knowledgeable panel. The selected panel members were, in alphabetical order:

1. Prof. Avi Gal, Technion – Israel Institute of Technology,
2. Prof. Jan Mendling, Vienna University of Economics and Business,
3. Prof. Stefanie Rinderle Ma, University of Vienna, and
4. Prof. Barbara Weber, University of St. Gallen.

From the wide range of candidate questions we received, we coded the general themes that became evident from the questions and then short-listed the most popular ones. From these, we created a mix of four themes that we considered to be of broad interest to the entire community, to look backward as well as forward in time, and to

spark some controversy – hence, excitement among the conference participants. The themes we created ultimately were the following:

Grand Challenges. What are the grand challenges for the BPM community? What direction should our research endeavors take? What is necessary to thrive as a community?
Process Mining. Have we overly invested in research on process mining in the past years at the expense of other topics? Have we missed opportunities because of this focus? Or should we even further deepen and extend our work on process mining?
Success Stories. Are we focused too much on the dissemination of success stories? Should we not be more receptive of learning about failure in BPM research? How could we foster such an attitude?
Ethics. Is there a lack of attention for the ethical implications of the work we generate? How does our work affect the people within the organizations we work with or their wider network? Whose responsibility is it to think through the ethical implications of our work?

The panel discussion was programmed towards the end of the last conference day. It took place on Thursday September 5, 2019, just before the closing session of the conference. After a discussion of the listed themes, the panelists answered questions from the audience. In what follows, we summarize the discussions that ensued about the themes above.

2 Discussion

2.1 Grand Challenges

The panel recognizes that BPM, as a discipline, can connect to many different fields, but that we are often nog clearly recognized by other communities for what we are good at. There is a task for all of us to bring others to our field, while at the same time also reaching out ourselves to other events and outlets for our work. One specific advice for young researchers is also to work research groups with a focus different from BPM, even if only possible for short periods of time.

As to directions for future steps, the panel suggested that we could take a more empirical angle in our work, trying to identify genuine issues that organizations are facing. It would also be good to lessen the tendency of repeatedly fine-tuning existing algorithms and approaches, and instead to be bolder and identify new perspectives on processes. One particular direction noted could be the study the role of people within business processes and how to make them perform better.

2.2 Process Mining

The panel emphasized how process mining has been a big impetus for BPM and has inspired many young, talented people to become active in the discipline. Moreover, the topic also resonates well with industry, which has strengthened our links with practice. This does not mean that there are no other relevant topics. While the human perspective in processes was already mentioned, there seems to be also much potential for

exploratory approaches, process design methods, and studies on the link with entrepreneurship.

Another interesting perspective would be "to do new things" by building on the success of process mining. How could process mining become meaningful in IoT (Internet of Things) settings? Is it possible to bring in the management perspective in process mining?

2.3 Success Stories

The panel discussed whether the difference between the engineering/formal sciences on the one hand and the social sciences on the other hand could be behind the apparent difference in appreciation of 'failure' in different communities. While engineers are mostly interested in making things better, social scientists have an interest in explaining the 'how' and 'why' of the way things are and why they are not what they could be. At this point, it seems that in our community scholars are reluctant to send in work that does not show improvement over the state of the art, perhaps because the focus on demonstrating progress is deeply engrained in our authoring and reviewing culture. Yet, the panel was quite clear in that there is much to learn from failure and that failure is, indeed, part of science and theorizing. Even a report on a poorly performing algorithm could make sense if it includes a deep discussion on the reasons that would cause it to perform poorly. Obviously, the panel did not want to give a *carte blanche* to bad science: You have to read related work, design well, report properly, etc. The final insight was that something which is far worse than failing is *faking*: never fake your research.

2.4 Ethics

The community seems to mature with respect to data usage and the appropriate handling of privacy issues, but this is only part of the broader issues we should be aware of. It would be a good idea if we, as researchers, would more consciously reflect on the ethical implications of our work. Of course, researchers themselves cannot completely see through what will be the potential uses of the things they design. A lively discussion took place on the merit (or lack thereof) of a mandatory paragraph in each research paper on the ethical implications of the reported work. A final point made was that we also need to sort out as a community what our ethical standards are for research ethics issues such as acknowledgement and re-use of work or data, for example concerning research deposited in open repositories such as arXiv.

After the discussion of these themes, the panel members interacted with the audience, that raised some additional questions. An idea that was suggested was the further development of process mining into a fully developed research method and to bring it to non-traditional application scenarios. A point of caution that came up was that some of our work may actually be motivated by the convenience of available data sets, rather than other considerations. A final reflection concerned the issue whether BPM should evolve from a data science to a decision science.

A full recording of the panel discussion can be found here: https://www.wu.ac.at/wutv/show/clip/bpm2019-closing.

3 Conclusion

In our opinion, the crowd-sourced approach to organizing the panel worked out well. We felt that the topics that were brought in indeed interested the audience and led people to interact with the panel. The panel members in their turn provided fresh insights, as well as a fair share of amusement. To us, the themes discussed seem to point to a further maturing and growth of the BPM community, both with respect to its coverage of research topics and its critical reflection on the way we carry out our research. In that sense, the panel at BPM 2019 turned out to be a proper vehicle to share points of view within the community not commonly discussed during the research tracks of the conference series.

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