Track n. 13 - Big Data and Business Analytics Ecosystems

The notion of big data and its application in driving organizational decision making has attracted enormous attention over the past few years. As the label itself indicates, big data refers to large volumes of data generated and made available online and in digital media ecosystems. Associated with the notion of big data are aspects such as the diversity of data, the frequency by which it is updated, and the speed at which it grows. Big data and business analytics are also challenging existing modes of business and well-established companies. The need to harness the potential of rapidly expanding data volume, velocity, and variety, has seen a significant evolution of techniques and technologies for data storage, analysis, and visualization. Yet, there is limited understanding of how organizations need to change to embrace these technological innovations, and the business shifts they entail. Even more, the business value of big data and business analytics technologies still remain largely underexplored. As big data tools and applications spread, they will inevitably change long-standing ideas about decision making, management practices, and most importantly competitive strategy formulation. But as with any major change, the challenge of becoming a big data-driven enterprise can be enormous. Nevertheless, it's a transition that executives need to navigate through, with limited empirical knowledge to guide their decisions.

The purpose of this track is to shed some light on how big data and business analytics tools reshape business and impact society. The focus is on how organizations should deploy and exploit big data as part of their strategies, as well as how the analytic methods, tools, and techniques are best utilized for supporting business operations, and creating business and social value..

Papers that address topics on how information sources, technological infrastructure, human skills and knowledge, organizational/team structures, and management practices coalesce to achieve desired ends, are of increased interest. Furthermore, outcomes that demonstrate the organizational impact of big data and business analytics in terms of competitive performance, innovativeness, increased agility, and market capitalizing competence are encouraged. Emphasis will be placed on interdisciplinary papers that bridge the domains of organizational science, information systems strategic management, information science, marketing, and computer science. In addition, the track seeks to address the novel digital business strategies that emerge as part of these new technologies, and particularly the entrepreneurial wave and start-up business models that transpire due to these technological tools.

Despite the hype surrounding big data, the aforementioned predicaments still remain largely unexplored, severely hampering the business potential of big data and business analytics. The track aims to add in this direction and therefore welcomes quantitative, qualitative, and mixed methods papers, as well as reviews, conceptual papers, and theory development papers. Especially concerning the theory development papers, we highly encourage authors to explore how information systems, information management, and strategic management theories can be used or extended to explain big data and business analytics-related phenomena.

The track accepts both full research paper and research in progress papers.

Initial list of topics

Suggested topics include, but are not limited to big data and business analytics:

- Emerging concepts and methodologies on big data and analytics
- Big data and management
- • Application of big data to address societal challenges
- Organizational learning and innovation from big data and business analytics
- Data-driven competitive advantage
- Human resource management in the data-driven enterprise
- Big data digital business models
- Proactive strategy formulation from big data analytics
- Data and text mining for business analytics
- Big data and the dynamics of societal change

- Big data for social good
- The role of big data in social innovation
- Behavioral and Recommender Systems Analytics
- Big data and analytics to create business value
- Social media analytics for business
- E-learning analytics
- Social media and learning analytics
- Data quality improvement for business analytics
- Big data and its impact on business strategy-formulation
- Digital ecosystem big data

Type of contributions invited:

We invite full research papers, research-in-progress papers, experience-in-the-field reports and case reports. Both empirically and/or theoretically grounded.

Track Co-Chairs	
Name – Surname	Ilias O. Pappas
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Short bio	Ilias Pappas is an Associate Professor of Information Systems at the Department of Information Systems, University of Agder (UiA), Norway. interests focus on the areas of digital transformation, social innovation and social change, as well as Internet marketing and information technology adoption. Pappas has been a Guest Editor for the journals Information & Management, Technological Forecasting and Social Change, and Information Systems and e-Business Management. He has published over 70 articles in peer reviewed journals and conferences including Journal of Business Research, European Journal of Marketing, Computers in Human Behavior, Information & Management, Psychology & Marketing. He serves as the secretary of the IFIP Working Group 6.11: Communication Aspects of the E-World. Pappas is a recipient of ERCIM and Marie Skłodowska-Curie fellowships.
Name – Surname	Patrick Mikalef
Title	Associate Professor
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Short bio	Patrick Mikalef is an Associate Professor in Data Science and Information Systems at the Department of Computer Science. In the past, he has been a Marie Skłodowska-Curie post-doctoral research fellow working on the research project "Competitive Advantage for the Data-driven Enterprise" (CADENT). He received his B.Sc. in Informatics from the Ionian University, his M.Sc. in Business Informatics for Utrecht University, and his Ph.D. in IT Strategy from the Ionian University. His research interests focus the on strategic use of information systems and IT-business value in turbulent environments. He has published work in international conferences and peer-reviewed journals including the

	Journal of Business Research, British Journal of Management, Information and Management, Industrial Management & Data Systems, and Information Systems and e-Business Management.
Name – Surname	Michail N. Giannakos
Title	Associate Professor
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Short bio	Michail Giannakos is an associate professor of interaction design and learning technologies at the Department of Computer Science of NTNU. Giannakos has co-authored more than 100 manuscripts published in peer-reviewed journals and conferences (including Computers & Education, Computers in Human Behavior, Behaviour & Information Technology, BJET, ACM TOCE, CSCL, Interact, C&C, IDC, IEEE ICALT to mention few) and has served as an evaluator for the EC and the NSF. He is member on the executive board of IEEE Technical Committee on Learning Technology, and has served/serves in various organization committees (e.g., general chair, associate chair), program committees as well as editor and guest editor on highly recognized journals (e.g., IEEE Multimedia, Computers in Human Behavior, ACM TOCE). He has worked at several research projects funded by diverse sources like EC, Microsoft Research, The Research Council of Norway (RCN), US-NSF, German agency for international academic cooperation (DAAD) and Cheng Endowment; Giannakos is also a recipient of a Marie Curie/ERCIM fellowship, the Norwegian CAREER award and he is one of the outstanding academic fellows of NTNU (2017-2021).
Name – Surname	John Krogstie
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Affiliation	Norwegian University of Science and Technology (NTNU), Norway
Short bio	John Krogstie holds a PhD (1995) and a MSc (1991) in information systems from the Norwegian University of Science and Technology (NTNU), where he is currently a full professor in information systems at the IDI-department. At IDI he is Department Head. John Krogstie is the Norwegian representative and Vice-Chair for IFIP TC8 and was chair of IFIP WG 8.1 on information system design and evaluations (2010-2015). His research interests are information systems modelling, quality of models and modelling languages, eGovernment and mobile information systems. He has published around 250 refereed papers in journals, books and archival proceedings since 1991. H-index as of July 2018 is 40, G-index 62 according to Google Scholar.

Track programme committee members

- Björn Johansson, Lund University, Sweden
- Damianos Chanjiantoniou, Athens University of Economics and Business, Greece
- Dimitris Karlis, Athens University of Economics and Business, Greece
- George Lekakos, Athens University of Economics and Business, Greece
- Frantisek Sudzina, Aalborg University, Denmark
- Johan Versendaal, Hogeschool Utrecht, the Netherlands
- Letizia Jaccheri, Norwegian University of Science and Technology (NTNU), Norway

- Panos E. Kourouthanassis, Ionian University, Greece
- Pekka Abrahamsson, University of Jyväskylä
- Rogier van de Wetering, Open University of the Netherlands, the Netherlands

Submission

Submissions will be evaluated through a standard blind review process. Track chairs will ensure anonymity of the review process.
Authors are highly encouraged to seek guidance from Track Chairs prior submitting the paper. We highly encourage authors to formalize this process by sending an abstract to the Track Chairs to receive feedback and guidance. Formal submission must specify the track that they are intended for. The page limit for contributions submitted in English is equal to 12 pages (maximum). Formatting rules (LNCS Springer format) are available at this link:
http://www.springer.com/it/computer-science/lncs/conference-proceedings-guidelines

Deadline for encouraged abstract submission: April 21, 2019
Deadline for full paper submission: **May 20, 2019**