The 3rd International Conference on Modern Management based on Big Data (MMBD2022)

August 15th-18th, 2022 (GMT+9, Seoul Time)

ONLINE-Microsoft Teams Meeting

Conference Program

Organized by Keimyung University

KEIMYUNG UNIVERSITY

MMBD 2022
CONFERENCE PROGRAM

August 15th-18th, 2022 (GMT+9, Seoul Time)

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For MMBD2022 Academic Exchange Only

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Part I Conference Schedule Summary

August 15th, 2022 (Monday)

MS Teams: http://www.academicconf.com/teamslink?confname=mmbd2022

10:00-12:00	MS Teams Online Conference Testing and Ice Breaking
15:00-17:00	MS Teams Online Conference Testing and Ice Breaking Continued

August 16th, 2022 (Tuesday)

MS Teams: http://www.academicconf.com/teamslink?confname=mmbd2022
Chaired by Prof. Lisa Lin, Keimyung University, South Korea

10:00-10:05	**Opening Remarks by General Chair** *Prof. Dr. Yoonmin Kim, Keimyung University, South Korea*
10:05-10:10	**Welcoming Remarks by TPC Co-Chair** *Prof. Dr. Md. Mamun Habib, School of Business and Entrepreneurship; Visiting Scientist, University of Texas - Arlington (UTA), USA; Adjunct Professor at Unirazak, Malaysia and UCSI, Malaysia*
10:10-11:00	**Keynote Speech 1: The Role of Big Data in the Transition to Sustainability** *Prof. Dr. Phoebe Koundouri, Athens University of Economics and Business, Greece*
11:00-11:55	**Keynote Speech 2: Management in an Artificial Intelligence Era** *Prof. Dr. Adrian David Cheok, i-University Tokyo, Malaysia*
11:55-12:25	**Poster Session**
12:25-14:30	**BREAK**
14:30-15:25	**Keynote Speech 3: Modern Big Data Management over Social Media for Fake News Identification Using Deep Mining with Bi-Directional LSTM-Recurrent Neural Network** *Prof. Dr. Tanzila Saba, Prince Sultan University, Saudi Arabia*
15:25-16:20	**Keynote Speech 4: Management and Big Data Futuritial** *Prof. Dr. Luiz A M Moutinho, Universidade da Maia, Portugal; University of Suffolk, UK*
16:20-16:35	**BREAK**
16:35-17:30	**Keynote Speech 5: Big Data & Innovation: The Importance of Culture & Leadership** *Prof. Dr. Chris Rowley, University of Oxford, UK; University of London, UK*

August 17th, 2022 (Wednesday)

MS Teams: http://www.academicconf.com/teamslink?confname=mmbd2022

9:30-12:05	**Oral Session 1: Modern Management based on Big Data (1)**
12:05-14:30	**BREAK**
14:30-17:25	**Oral Session 2: Modern Management based on Big Data (2)**

August 18th, 2022 (Thursday)

MS Teams: http://www.academicconf.com/teamslink?confname=mmbd2022

9:30-11:55	**Oral Session 3: Modern Management based on Big Data (3)**
11:55-14:30	**BREAK**
14:30-17:45	**Oral Session 4: Modern Management based on Big Data (4)**

Part II Opening & Welcoming Remarks

Opening Remarks by Conference General Chair

MMBD2022 General Chair

Prof. Dr. Yoonmin Kim,
Department of Economics and Finance, Keimyung University, South Korea;
Vice Director at Asia Center & Vice Director for FTA Specialist Education Program, Keimyung University, South Korea

Biography: Yoonmin Kim got his Ph.D. in Economics (International Money and Finance) and Political Science (International Political Economy), Claremont Graduate University, Claremont, CA, U.S.A. in May, 2013. He has been Assistant Professor in the Department of Economics and Finance, Investment Advisor for Daegu Gyeongbuk Free Economic Zone Authority (DGFEZ); Vice Director at Asia Center, Keimyung University; Vice Director for FTA Specialist Education Program, Keimyung University since Sep. 2015. Before he joined Keimyung University, he worked in Samsung Economic Research Institute during Sep. 2012 – Sep. 2015 as Research fellow in the Global Studies Department and Economic Policy Department, and Economist focused on forecasting international financial markets (exchange rate and international capital flow) and analyzing Indian & Middle Eastern economy. He has about 20 works in peer-reviewed journal papers and book chapters published in South Korea and abroad. His research fields are International Monetary & Financial Economics, International Political Economy, and Behavioral Finance; Macroeconomics and Financial Issues facing East Asia.

Welcoming Remarks by Conference TPC Co-Chair

MMBD2022 TPC Co-Chair

Prof. Dr. Md. Mamun Habib,
School of Business & Entrepreneurship (SBE), Independent University, Bangladesh
Visiting Scientist, University of Texas - Arlington (UTA), USA
Adjunct Professor at Unirazak, Malaysia and UCSI, Malaysia

Biography: Dr. Md. Mamun Habib is a Professor at School of Business & Entrepreneurship (SBE), Independent University, Bangladesh(IUB).
Habib is the Visiting Scientist at the Dept. of Industrial Engineering of University of Texas – Arlington, USA. He is also the Adjunct Professor at Unirazak, Malaysia and UCSI, Malaysia.
At present, he is supervising eleven (11) Ph.D. scholars locally and internationally and earlier four (4)

Ph.D. scholars have been graduated.

As a Ph.D examiner, he has several D. involvements with UUM, UNIRAZAK, AIMST, UNITAR, Asia e University (AeU), Malaysia; Assumption University of Thailand; Institute for Technology and Management (ITM) – University and Birla Institute of Technology (BIT)–Deemed University, India, National Institute of Technology (NIT), India, SOA University, India; University of the Assumption, Philippines, Aligarh Muslim University.

He has about 21 years' experience in the field of teaching, training, workshop, consultancy and

Habib published about 180+ research papers, including Conference Proceedings, Journal articles, and book chapters/books. Among them, more than 65 articles are WoS and Scopus Indexed.

He is the Editor-in-Chief in International Journal of Supply Chain Management (IJSCM), London, UK. He serves as the Editor-in-Chief/Lead Guest Editor/Editor/Editorial Board Member/Reviewer of more than 50 journals, particularly Elsevier (Scopus) and Thomson Reuters (Web of Science) Indexed Journals.

He delivers Keynote Speechat 75+ international conferences at various countries, particularly USA, UK, Taiwan, China, Indonesia, Malaysia, Thailand, Singapore, Turkey, Korea, India, Philippines, Greece, Bulgaria, Australia, Italy, Nigeria etc.

He conducted 165+ Webinar/Workshops/ Seminars locally and internationally.

He is involved in a few grant research projects in the USA, Malaysia, Thailand, Bulgaria, European Union, India, and Bangladesh.

Earlier he was Associate Professor at BRAC Business School, BRAC University, Bangladesh; Asia Graduate School of Business (AGSB), UNITAR International University, Malaysia; Dept. of Operations Research/Decision Sciences, Universiti Utara Malaysia (UUM), Malaysia and Dept. of Operations Management, American International University-Bangladesh (AIUB).

He accomplished his Ph.D. and M.S. with outstanding performance in Computer & Engineering Management (CEM) under the Graduate School of Business (GSB) from Assumption University, Thailand. His Ph.D. research was in the field of Supply Chain Management.

His core research areas are supply chain management, production & operations management, operations research, research methodology, engineering management, technology management, and educational management.

Habib is an active member of different professional organizations, including IEEE (Senior Member); IEOM (President, SCM Technical Division); CILT – UK (Fellow); BSPUA (V.P, R & I); IETI (Senior Member and Board of Director); IRED (Fellow); GRDS (Vice-President) just to name a few.

He also serves as General Chair, Program Chair, Technical Chair, Organizing Committee Member, Technical Committee Member, Track Chair, Session Chair as well as Reviewer of numerous international conferences.

Finally, He is involved with QS World University Ranking/Times Higher Education Ranking as an academician.

Part III Keynote Speeches

Keynote Speech 1: The Role of Big Data in the Transition to Sustainability

Prof. Dr. Phoebe Koundouri,
Department of International & European Economic Studies, Athens University of Economics and Business, Greece

Biography: Prof. Phoebe Koundouri is a world-renowned environmental economics professor and global leader in sustainable development. She is widely recognized as a pioneer in innovative, human-centric, interdisciplinary systems for the sustainable interaction between nature, society, and the economy. Prof. Koundouri is listed in the most-cited women economists in the world, with 15 published books and more than 300 published peer reviewed scientific papers.

Prof. Koundouri is University Professor (the university's highest academic rank) at the School of Economics, Athens University of Economics and Business, an elected fellow of the World Academy of Art and Science (World Academy of Art & Science) and the President-elect of the European Association of Environmental and Natural Resource Economists for the period 2019-2025 (EAERE www.eaere.org -with more than 1200 scientific member institutions, from more than 75 different countries).

Prof. Koundouri is the Founder and Scientific Director of the Research Laboratory on Socio-Economic and Environmental Sustainability (ReSEES) (https://www.dept.aueb.gr/en/ReSEES) at Athens University of Economics and Business, focusing on interdisciplinary research on socio-economic and environmental systems. She is also Affiliated Professor at the ATHENA Research and Innovation Center, where she founded and scientifically directs the Sustainable Development Unit and the EIT Climate-KIC Hub Greece (www.athena-innovation.gr/el/eit-climate-kic-hub-greece) of the European Institute of Innovation and Technology (https://eit.europa.eu/), the latter focusing on accelerating technological and social innovations for use in the transition to a climate neutral economy.

Prof. Koundouri is also the co-Chair of United Nations Sustainable Development Network (UN SDSN) -Europe (https://www.unsdsn.org/). The leadership of UN SDSN-Europe is constituted from existing National SDSN European networks and its mission is to serve as a science driven interface with European Commission policymaking. Prof. Koundouri is also the Chair of the Scientific Advisory Board of the International Centre for Research on the Environment and the Economy (ICRE8) (http://icre8.eu/) and Chair of the Scientific Advisory Board of the European Forest Institute (https://efi.int/).

Prof. Koundouri is one of the Commissioners of the prestigious Lancet Commission on COVID-19 (https://covid19commission.org/commissioners) for which she co-chairs the "Jobs-based Green Recovery" Task Force. She leads the UN SDSN Senior Working Group on "Transformation Pathways for the implementation of EGD and the SDGs", co-leads the UN SDSN Sustainable Shipping and Ports and Shipping Initiative, and the UN SDSN 4-seas (Mediterranean, Black, Caspian and Aral Seas) Blue Growth Initiative. She is a member of the CEPR (Center for Economic

Policy Research) Network (RPN) on Climate Change (https://cepr.org/content/cepr-rpn-climate-change-researchers) , member of the Priministerial Committee for the Recovery and 10-year Development Plan of Greece, the National Climate Change Committee of the Greece, as well as chair or member of numerous European and International Scientific, Research and Policy Boards and Committees.

Prof. Koundouri acts as a scientific advisor to the European Commission, World Bank, European Investment Bank, the European Bank of Reconstruction and Development, OECD, UN, NATO, and WHO, etc. numerous national and international foundations and organizations, as well as national governments across the world. Also, Prof. Koundouri is editorial board member of more than 20 prestigious scientific journals.

Since 1997, she has coordinated more than 100 interdisciplinary research projects, in all five continents, focused on combinations of Sustainable Development, Climate Change Mitigation and Adaptation, Behavioural Economics and Econometrics, Economics of Wellbeing and Happiness, Natural Resource-Food-Energy Nexus, Smart Water Systems, Ecosystem Services Valuation, Blue Growth, Circular Economy, Systems Innovation, Innovation Acceleration and Commercialization, and has attracted significant competitive research funding. Prof. Koundouri and her large interdisciplinary team (more than 200 researchers) have produced research and policy results that have contributed to accelerating research and innovation for the enablement of Sustainable Development and has contributed to shaping European and National policies.

Over the last two decades, Professor Koundouri has given keynote and public lecturers, at high level forums all over the world, and received various prizes for academic excellence, including best paper awards, highest policy impact paper, European Research project award, etc. as well as the prestigious European Research Council (ERC) Synergy Grant (2020-2027) (http://unsdsn.gr/to-professor-phoebe-koundouri-athens-university-of) , which focuses on design of the next generation of urban water systems, via the combination of water science, systems and control theory, economics, decision-science and machine learning. This is the biggest research project in the world at the moment working on urban water systems.

Prior to joining the Athens University of Economics and Business, Professor Koundouri has held academic positions at the University of Cambridge, University College London, University of Reading and London School of Economics. Prof. Koundouri holds a PhD and MPhil in Economics and Econometrics from the University of Cambridge (UK). For her studies she received a full scholarship from the University of Cambridge and the Cambridge Commonwealth Trust..

Abstract: The European Green Deal (EGD) is the growth strategy for Europe, covering an extensive range of areas, including Climate Action, Energy, Agriculture, Industry and Infrastructure, Environment and Biodiversity, Transportation, Finance and Development, and Research and Innovation. At the same time, the political leadership of Europe has explicitly committed to integrating the United Nations Sustainable Development Goals (SDGs) into the European policy framework and economic agenda. The 17 SDGs derive from the UN Agenda 2030 and serve as the blueprint for developing national/continent/global investment programs for poverty eradication and sustainable development on a global scale by 2030.

In 2020, the United Nations Sustainable Development Solutions Network (UN SDSN), established a Senior Working Group (SWG), consisting of distinguished academics and representatives of international organizations, in an effort to support the European policymakers in the joint implementation of the EGD and the 17 SDGs and help them in the new challenging regulatory framework.

In its 2nd Annual Report, the SWG proposed two text-mining methodologies - A human-based and a (deep) Machine Learning-based- to analyse EGD policy documents and assess their alignment with the Agenda 2030 and the 6 Transformations for operationalizing the SDGs introduced by Sachs et al. 2019. Further, the SWG built the connection between EGD/SDGs implementation and the need to measure, monetize and integrate into investment assessment processes, Natural and Social Capital. Through a meta-regression analysis of values extracted from existing empirical studies, an ecosystem-based benefits-transfer valuation approach was developed using a value transfer function, to assign economic values to Natural Capital across the 14 biogeographical and marine areas of Europe and the importance of bringing them into investment and financial decisions were highlighted. In this Keynote Speech, Prof. Phoebe Koundouri, the lead author of SDSN SWG's annual reports, outlines the framework around the transition to Sustainability, explains the massive work being done by the cluster of Institutions she directs (AE4RIA) in this regard, and highlights the crucial role that Information Technology and Big Data technologies have in supporting an effective "Green and Digital" transition. The objectives of the 17 SDGs are complex, interrelated, and very demanding of the scientific foundations on which their implementation relies; and Big Data algorithms are required for their ability to process huge amounts of data in a logical time frame, supporting in this way the extraction of valuable insights from unstructured forms of information and facilitating a reliable process of monitoring the SDGs achievement at global, national and local levels.

Keynote Speech 2: Management in an Artificial Intelligence Era

Prof. Dr. Adrian David Cheok,
i-University Tokyo, Director of the Imagineering Institute, Malaysia, Visiting Professor at Raffles University, Malaysia, Visiting Professor at University of Novi Sad-Serbia, on Technical faculty "Mihailo Pupin", Serbia, Faculty of Ducere Business School, and CEO of Nikola Tesla Technologies Corporation

Biography: Adrian David Cheok AM is Full Professor at i-University Tokyo, Director of the Imagineering Institute, Malaysia, Visiting Professor at Raffles University, Malaysia, Visiting Professor at University of Novi Sad-Serbia, on Technical faculty "Mihailo Pupin", Serbia, Faculty of Ducere Business School, and CEO of Nikola Tesla Technologies Corporation.

He is Founder and Director of the Mixed Reality Lab, Singapore. He was formerly Professor of Pervasive Computing, University of London, Full Professor and Executive Dean at Keio University, Graduate School of Media Design and Associate Professor in the National University of Singapore. He has previously worked in real-time systems, soft computing, and embedded computing in Mitsubishi Electric Research Labs, Japan.

In 2019, The Governor General of Australia, Representative of Her Majesty the Queen Elizabeth II, has awarded Australia's highest honour the Order of Australia to Adrian David Cheok for his contribution to international education and research.

He has been working on research covering mixed reality, human-computer interfaces, wearable computers and ubiquitous computing, fuzzy systems, embedded systems, power electronics.

He has successfully obtained approximately $130 million dollars in funding for externally funded

projects in the area of wearable computers and mixed reality from Daiwa Foundation, Khazanah National (Malaysian Government), Media Development Authority, Nike, National Oilwell Varco, Defence Science Technology Agency, Ministry of Defence, Ministry of Communications and Arts, National Arts Council, Singapore Science Center, and Hougang Primary School. The research output has included many high quality academic journal papers, research awards, keynote speeches, international exhibitions, numerous government demonstrations including to government President and Prime Ministers, broadcast television worldwide broadcasts on his research (such as CNN/ CNBC/ ABC/ Discovery/ National Geographic etc.), and hundreds of international press media articles.

He has been a keynote and invited speaker at numerous international conferences and events. He was invited to exhibit for two years in the Ars Electronica Museum of the Future, launching in the Ars Electronica Festival 2003 and 2017. His works “Human Pacman”, “Magic Land”, and “Metazoa Ludens”, were each selected as one of the world’s top inventions by Wired and invited to be exhibited in Wired NextFest 2005 and 2007.

He was awarded the Hitachi Fellowship, the A-STAR Young Scientist of the Year Award, and the SCS Singapore Young Professional of the Year Award. He was invited to be the Singapore representative of the United Nations body IFIP SG 16 on Entertainment Computing and the founding Chairman of the Singapore Computer Society Special Interest Group on Entertainment Computing. He was awarded an Associate of the Arts award by the Minister for Information, Communications and the Arts, Singapore. He was awarded as Fellow in Education, World Technology Network. He was awarded a Microsoft Research Award for Gaming and Graphics. He received the C4C Children Competition Prize for best interaction media for children, the Integrated Art Competition Prize by the Singapore Land Transport Authority, Creativity in Action Award, and a First Prize Nokia Mindtrek Award. He received a First Prize in the Milan International InventiON competition. He received the Gold award for best Creative Showcase ACE, He is winner of Keio University Gijyuju-sho award, awarded for the best research of the year in Keio University, Japan’s oldest university. He received an SIP Distinguished Fellow Award which honours legendary leaders whose illustrious lives have positively influenced lives across generations and communities around the globe. He was awarded Young Global Leader by the World Economic Forum. This honour is bestowed each year by the World Economic Forum to recognize and acknowledge the top young leaders from around the world for the professional accomplishments, commitment to society and potential to contribute to shaping the future of the world. He was awarded “Honorary Expert” by Telefonica and El Bulli, the number one restaurant in the world. He is a Fellow of the Royal Society for the encouragement of Arts, Manufactures and Commerce (RSA), an organization which is committed to finding innovative practical solutions to today’s social challenges. His research on smell interfaces was selected by NESTA as Top 10 Technologies of 2015. In 2016, he was awarded the Distinguished Alumni Awards by University of Adelaide, in recognition of his achievements and contribution in the field of Computing, Engineering and Multisensory communication. In 2017, he entered the elite list of The h-Index for Computer Science, a list that contains only the top 0.06\% of all computer scientists in the world. In 2018, he was awarded Albert Nelson Marquis Lifetime Achievement Award. Remote kissing gadget ‘Kissenger’ was selected to the Top 100 Science Spinoffs and has entered the top 2% out of 5,000 global science spin-offs according to the following criteria: uniqueness of the technology/product, high commercial potential and positive impact to the humanity’s well-being by Spinoff.com.

He is/was Editor in Chief of the academic journals: Journal of Future Robot Life, Advances in Robotics and Automation, Transactions on Edutainment, ACM Computers in Entertainment,

Lovotics: Academic Studies of Love and Friendship with Robots, and Multimodal Technologies and Interaction.
He is/was Associate Editor of Advances in Human Computer Interaction, International Journal of Virtual Reality, Virtual Reality, and The Journal of Ambient Intelligence and Humanized Computing (AIHC).
He is on the Editorial Board of International Journal of Arts and Technology (IJART), Journal of Recent Patents on Computer Science, The Open Electrical and Electronic Engineering Journal, International Journal of Entertainment Technology and Management (IJEntTM), The Journal of Virtual Reality and Broadcasting, and Interacting with Computers.
Adrian David Cheok, who was born and raised in Adelaide, Australia, graduated from the University of Adelaide with a Bachelor of Engineering (Electrical and Electronic) with First Class Honours in 1992 and an Engineering Ph.D in 1998.

Abstract: Recently Big Data together with AI have made it possible for sentient Big Data AI to become virtual online Managers. In the future humans will be replaced by these online robots. We discuss how Big Data is used together with AI to make management robots.

Keynote Speech 3: Modern Big Data Management over Social Media for Fake News Identification Using Deep Mining with Bi-Directional LSTM-Recurrent Neural Network

Prof. Dr. Tanzila Saba,
Artificial Intelligence & Data Analytics (AIDA) Lab, College of Computer and Information Sciences, Prince Sultan University, Saudi Arabia

Biography: Prof.Tanzila Saba earned her PhD in document information security and management from the Faculty of Computing, Universiti Teknologi Malaysia (UTM), Malaysia, in 2012. She won the best student award in the Faculty of Computing UTM in 2012. Currently, she serves as a Research Professor and Associate Chair of the Information Systems Department in the College of Computer and Information Sciences at Prince Sultan University Riyadh KSA. In recent years, her primary research focus is medical imaging, pattern recognition, data mining, MRI analysis, and Soft-computing. She led more than fifteen research funded projects. She has above three hundred research publications that have around 10358 citations with an h-index of 63. Her most publications are in Bioinformatics, Data science and data security research domains published in ISI/SCIE indexed. Some of her Springer and Elsevier publications have been recognized as the Best Paper and Highly Cited Paper of the year. Due to her excellent research achievement, she is included in Marquis Who's Who (S & T) 2012." She is an editor and reviewer of reputed journals and on the panel of TPC of international conferences. She is the editorial board member of NATURE Scientific Reports. She has full command of various subjects and taught several courses at the graduate and postgraduate levels. She is skilled in ABET & NCAAA quality assurance on the accreditation side. She is a senior member of IEEE. Prof.Tanzila is the leader of the Artificial Intelligence & Data

Analytics Research Lab at PSU and an active professional member of ACM, AIS, and IAENG organizations. She won the Best Researcher Award at Prince Sultan University for consecutive five years. She has been the PSU WiDS (Women in Data Science) ambassador at Stanford University since 2018 and Saudi Arabia Ambassador at WomenTech platform since 2020. She has been listed in Guide2Research and Top 2% Stanford Scientist list for the consecutive 2 years.

Abstract: Currently, social media is full of news and its size is increasing exponentially daily. However, most of the news are fake and such fake news creates problems for individuals and institutions. Moreover, fake news impact may cause damage from citizens' personal repute to a country's foreign relations. Several techniques have been reported to collect and detect fake text news on social media, but none are commercially feasible. This talk presents a deep learning classification model to detect news unreliable (fake) or reliable (true) using the fake text news benchmark dataset. The original data shape in 'train.csv' was 25114 but after pre-processing the data shape converted to 20800 and similarly from 'test.csv' data shape converted from 5880 to 5200. The 70% (13936) of the part of pre-processed data of 'train.csv' was used as a training sample and 30% (6864) was used as a validation sample. The bidirectional Long Short-Term Memory (Bi-LSTM) model was developed in this study to classify the news as unreliable (fake) or reliable (not fake) on pre-processed fake news dataset. The model performance is measured with different statistical methods and metrics. The proposed model obtained 99.8%, 99.9%, and 99.7% accuracy, sensitivity, and specificity from the training set. While 92%, 93%, and 91% accuracy, sensitivity, and specificity attained from the validation set. The FPR and FNR from the training part were found as 0.0004 and 0.0022 while 0.0698 and 0.0898 were found for the validation part. The present study achieved a high accuracy rate for identifying fake news. The proposed model can be helpful for researchers to detect whether the news is fake or true.

Keynote Speech 4: Management and Big Data Futuritial

Prof. Dr. Luiz Moutinho,

(BA, MA, PhD, MAE, FCIM) Full Professor of Marketing and Technology, Universidade da Maia, Portugal; Visiting Professor of Marketing at Suffolk Business School, Faculty of Arts, Business and Applied Social Science, Univ. of Suffolk, Ipswich, England, and at The Marketing School, Portugal; Adjunct Professor of Marketing at GSB, Faculty of Business and Economics, Univ. of South Pacific, Suva, Fiji

Biography: Professor Luiz A M Moutinho (BA, MA, PhD, MAE, FCIM) is Full Professor of Marketing and Technology, Universidade da Maia, Portugal; Visiting Professor of Marketing at Suffolk Business School, Faculty of Arts, Business and Applied Social Science, Univ. of Suffolk, Ipswich, England, and at The Marketing School, Portugal; Adjunct Professor of Marketing at GSB, Faculty of Business and Economics, Univ. of South Pacific, Suva, Fiji.
In 2020 he was elected as the member of The Academia Europaea. In 2017 he received a degree of

Prof. Honoris Causa from the Univ. of Tourism and Management Skopje, North Macedonia.
During 2015 - 2017 he was professor of BioMarketing and Futures Research at the DCU Business School, Dublin City University, Ireland. This was the first Chair in the world on both domains - BioMarketing and Futures Research. Previously, and for 20 years, he had been appointed as the Foundation Chair of Marketing at the Adam Smith Business School, University of Glasgow, Scotland.
He completed his PhD at the University of Sheffield in 1982. He has been a Full Professor for 32 years and held posts at Cardiff Business School, University of Wales College of Cardiff, Cleveland State University, Ohio, USA, Northern Arizona University, USA and California State University, USA. He has held Visiting Professorship positions at numerous universities in China, Lithuania, Austria, New Zealand, Denmark, Slovenia, Portugal, Hungary, Taiwan, Brazil, Colombia, Fiji and Cyprus.
Between 1987 and 1989 he was the director of the Doctoral Programmes at the Confederation of Scottish Business Schools and at the Cardiff Business School between 1993 and 1996. He was director of the Doctoral Programme in Management at the University of Glasgow between 1996 and 2004.
Professor Moutinho is the Founding Editor-in-Chief of the Journal of Modelling in Management (JM2) and Co-editor-in-Chief of the Innovative Marketing Journal. He has another 4 associate editorships as well as being in the editorial boards of another 47 international academic journals.
His areas of research interest encompass marketing and management futurecast, artificial intelligence, biometrics and neuroscience in marketing, futures research algorithmic self, EmoWear - a wearable tech device that detects human emotions, evolutionary algorithms, human-computer interaction, the use of artificial neural networks in marketing, modelling processes of consumer behaviour and tourism futurecast.
He has developed a number of conceptual models over the years in areas such as tourism destination decision processes, automated banking, supermarket patronage, among other areas. The testing of these research models has been based on the application of many different statistical, computer and mathematical modelling techniques ranging from multidimensional scaling, multinomial logit generalised linear models (GLMs) and linear structural relations to neural networks, ordered probit, simulated annealing, tabu search, genetic algorithms, memetic algorithms and fuzzy logic.
Prof. Moutinho has 36 books published, over 157 articles published in refereed academic journals. He has 14,531 academic citations, the h-index of 58 and the i10-index of 151 (Google Scholar, July 18th, 2022).

Abstract: The presentation starts by addressing the issues of the constant changes and innovations, strategy role nowadays and responsibility of management in adequate using data for company growths. New value chains, BD & strategy, agility, as important pillars of enterprises development are discussed. Different classes of data are explained next: BD/small/little data, edge analytics, fast + actionable data, future data tsunami, BD society, data marketplaces, real time data, sensor data and data semantic... The second part of the presentation covers hyperdata, data deluge, data agility, data fabric technology, data lakes, data virtualisation, data agility, ultra-scale analytics and system 2 DL. Finally, some emerging trends like data ethics and hiveminds are emphasized, as well as necessity of managers' courage to successfully lead within the new circumstances.

Keynote Speech 5: Big Data & Innovation: The Importance of Culture & Leadership

Prof. Dr. Chris Rowley,
GradCIPD, BA, MA (Warwick), DPhil (Nuffield College, University of Oxford)
Visiting Fellow, Kellogg College, University of Oxford, UK
Research Associate, Centre for Mutual & Co-Owned Business, Kellogg College, University of Oxford, UK
Professor Emeritus, Bayes Business School, City, University of London, UK

Biography: Prof. Chris Rowley worked in a wide range of industries & jobs before returning to education part time & then university, who has 30+ years' experience of many university systems in the UK, Europe & Asia:

- Established Centre for Research in Asian Management at City, University of London, UK
- Helped establish think tank & publications series on human capital development in Singapore
- External examiner & advisor for UK & Asian university external courses & programmes
- Examined 50+ PhDs globally
- Won several international grants & evaluated grants internationally
- Experienced speaker for students, executives & practitioners at universities & companies in UK, US & Asia
- Editor of journal + book series
- Published 800+ articles (in about 50 Refereed Academic Journals, such as Human Resource Management, British Journal of Management, Asia Pacific Business Review, Journal of Hospitality & Tourism Management, etc.), books & chapters & practitioner pieces.
- Regularly gives interviews, expert comments & opinion pieces to the international mass media:

o News services: Financial Times, FT Adviser, BBC, CBNC, Bloomberg, Financial News, Guardian, Times, Sunday Times, Independent, Telegraph, Evening Standard, iNewspaper, Corriere della Sera (Italy), Japan Times, China Daily, South China Morning Post, Shanghai Daily, China Business News, Social Sciences in China Today, Svenska Dagbladet (Sweden), La Razon (Spain), La Nacion (Argentina), Global Finance Magazine (US), Sydney Morning Heald (Australia), The Economist
o TV/radio: ITV, Arirang TV, China Radio International, American Public Media Radio, ABC Radio Australia, RNZ New Zealand, Sputnik Radio, Sirius XM, US, Wharton Business Radio, Share Radio, BBC Radio 4, BBC Radio 5 Live
o Practitioner outlets: CIPD People Management, HR Magazine, HR Legal Service, HR Matters, HR Bullets, Workplace Savings & Benefits, Employee Benefits, Changeboard, Recruitment Times, Raconteur, CMI Professional Manager, CFO Magazine, World Financial Review, Financial Management Magazine, Digida

Abstract: As a keynote address, I thought it would be more useful and better to give some sort of macro, broad, less technical overview of the area. So, there are four main parts to my talk. Following

the introduction and some very broad and simple discussion and examples of what big data and innovation are, I will move onto the third and main section about impacts on the area and end with a conclusion.

I will start with four key points. First, individuals and processes do not occur in a 'black box'. Second, there may be institutional supports in the area, but thirdly, there are also cultural influences, including for example, attitudes to risk-taking, uncertainty and the need for effective leadership. Fourth, it is a fashionable topic. In terms of the impacts on big data and innovation, I will make three points. First, they involve uncertain processes and outcomes. Therefore, second, the area involves risk taking – or 'uncertainty avoidance', Yet, people's comfortableness with this varies hugely. Third, I will explore what might be behind this variability and focus on a pair of interlinked factors: culture and leadership. This requires some discussion of terms and meanings in the area of 'uncertainty'. I will then outline the second impact, from leadership and why it is important and matters and what 'makes' leaders. I will provide some different leadership styles, which in turn requires us to note a framework of variables: followers; leader; situation with leader-member exchange as a dyadic relationship. This can be seen in variations in global leadership in the context of universalism versus particularism and what makes 'effective' leaders in terms of the '3Cs' of context, culture, competence and especially the role of types of skills. I will end with some key implications for practice.

Part IV Poster Presentation

Poster Presentation Preparation

- There is no size constraint for the e-poster, if you have difficult to decide one, then A1 size (594mm×841mm) is recommended.
- Please send the poster at **.PDF** format. The Poster would be updated on the conference website after pre-review and confirmation.
- The Poster could design as you like with requirements as below:
  - ✧ The conference logo should be clearly shown in the header
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List of Posters

Please Click http://www.academicconf.com/poster?confname=mmbd2022 to Access the Poster Presentations.

If you have any questions to ask the presenters, you can leave your questions at the webpage of related poster listed via the same link mentioned above. The presenters will answer your questions as soon as possible via the same webpages.

11:55-12:25, August 16th, 2022 (Tuesday) (GMT+9, Seoul Time)

MMBD1187	Intellectual Capital and Information: Examples About Some Relationships *Dr. Oscar Ramada, Atlântico Business School, Portugal*
MMBD1206	Review of Li-Li mixture XOR Algorithm *Ms. Jie-feng YANG, Shiyuan College of Nanning Normal University, China*
MMBD1215	Multivariate Research on Satisfaction Influencing Factors of Flipped Classroom Teaching Mode *Dr. Jie He, Baoji Vocational & Technical College, China*
MMBD1231	Detection Method of Computer Room Personnel Based on Improved Swin Transformer *Dr. Qionglan Na, State Grid Jibei Information and Telecommunication Company, China*
MMBD1241	VSM a Powerful Diagnostic and Planning Tool for a Successful Lean Implementation: a Tunisian Case Study of an Auto Parts Manufacturing Firm *Dr. Lamia Ben Fredj-Ben Alaya, University of Carthage, Tunisia*
MMBD1250	A Lightweight Meter Detection Method Based on Yolov5 *Dr. Shuaitong Zhang, North China Electric Power University, China*

Abstracts of Posters

MMBD1187, MMBD1206, MMBD1215, MMBD1231 and MMBD1250 To avoid repeatability issue, the abstracts will be available after the full papers are published in the conference proceedings.

MMBD1241 VSM a Powerful Diagnostic and Planning Tool for a Successful Lean Implementation: a Tunisian Case Study of an Auto Parts Manufacturing Firm

Lamia Ben Fredj-Ben Alaya

IHEC-Carthage (Institut des Hautes Etudes Commerciales de Carthage), University of Carthage, Tunisia

Abstract. For the past few years, many manufacturing organisations have been trying to get ‘lean’. A headlong rush to become lean also resulted in a scattered implementation of lean projects/tools often associated with a lack of a shared lean vision. This prevents them from effectively reaping the benefits of lean manufacturing paradigm. Meanwhile, many researchers and academics point out that any lean transformation initiative will be more effective if it starts by implementing Value Stream Mapping technique. However, little empirical work is available to provide real answers to practitioners on how to really apply Value Stream Mapping (VSM) as a diagnostic and planning tool. The experience of applying VSM in a real manufacturing case study has revealed that VSM has the capability to diagnose a manufacturing system with a lean perspective and to identify the opportunities for various lean projects/tools. The results demonstrate and validate authors’ finding that VSM is a good starting tool for transforming any enterprise into lean. They incite researchers/ practitioners to start to enhance/extend their approach towards lean by integrating the standard VSM approach with additional lean tools to enable people not only to see but also to communicate and to manage their processes.

Keywords: Lean implementation; Value Stream Mapping; VSM implementation process; targeted lean projects/tools; improvement actions plan; auto parts sector

Part V Oral Presentation

Oral Presentation Guidelines

- The oral presentations include the forms of pre-recorded video presentation and oral presentation on live via **Microsoft Teams (MS Teams)** meeting.
- For oral presentation on live, please refer to the official instructions on how to share content via MS Teams before the conference.
- The pre-recorded video should be uploaded to MMBD2022 online submission system **before August 10, 2022** in the format of **.mp4** and time duration should be 15-20 mins.
- Visit ***Here*** to know How to record a video with PowerPoint
- The PPT either for pre-recorded video presentation or oral presentation on live could design as you like with requirements as below:
  - ✓ The conference logo should be added to each PPT slide
  - ✓ Title, presenter and affiliation information should be indicated in the first slide
  - ✓ Each slide should be concise, uncluttered and readable from a distance
  - ✓ Include only key words and phrases for visual reinforcement
- Signed and stamped electronic oral presentation certificate would be issued via e-mail after the conference

Best Oral Presentations Selection

Four best oral presentations will be selected by session chairs and conference committee.

Selection Criteria

A best presentation will be selected based on the following items:

- ✓ Research Quality
- ✓ Presentation Performance
- ✓ Presentation Language
- ✓ PowerPoint Design

Selection Procedure

- Each session will select one Best Oral Presentation, please ensure your Paper ID (MMBD****) is shown correctly on the first or last page at your presentation data.
- The best presenter of each session will be awarded with free registration to the next MMBD conference.

Best Oral Presentations Award

This award consists of a certificate and the privilege of free registration to attend MMBD2023.

Oral Session 1: Modern Management based on Big Data (1)

August 17th, 2022 (Wednesday) (GMT+9, Seoul Time)

Session Chair:

Dr. Dante L. Silva, Mapua University, Philippine

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Please Click http://www.academicconf.com/video?confname=mmbd2022 to Access the Video Presentations.

9:30-9:55	**MMBD1220** (Invited) (Video)	Master Data Management Adoption Model in Malaysia Local Government *Prof. Nazri Kama, Universiti Teknologi Malaysia, Malaysia*
9:55-10:25	**MMBD1237** (Invited) (Video)	Recommendation Systems Approaches in Big Data *Assoc. Prof. Maizatul Akmar Ismail, Universiti Malaya, Malaysia*
10:25-10:45	**MMBD1282** (Invited) (Live)	Mouse Tracking for User Experience Assessment in News Sites: A Case Study from Human Factor Engineering *Assoc. Prof. Marcos César da Rocha Seruffo, Federal University of Pará, Brazil*
10:45-10:55	**MMBD1257** (Video)	Implementation of a Driving Simulator for the Collection of Data on Human Behavior in Vehicular Traffic *Assoc. Prof. Diego Vallejo-Huanga, IDEIAGEOCA Research Group, Universidad Politécnica Salesiana, Ecuador*
10:55-11:10		**BREAK**
11:10-11:25	**MMBD1267** (Live)	Digital Information Mobility Schema: A Data-Flow Model Featuring Risk-Resilient Approach Towards Effective Construction Worksite Synergy Utilizing Fuzzy-Analytic Hierarchy Process *Dr. Dante L. Silva, Mapua University, Philippines*
11:25-11:40	**MMBD1268** (Live)	Forecasting Construction Cost using Artificial Neural Network for Road Projects in the Department of Public Works and Highways Region XI *Ms. Donna Ville Leopoldo Gante, Mapua University, Philippines*
11:40-11:55	**MMBD1211** (Live)	Construction and Analysis of Enterprise Innovation Capability Evaluation Model–A Case Study of 30 Listed Companies in Gansu Province *Ms. Jinghan Li, Northwest Minzu University, China*
11:55-12:05	**MMBD1236** (Video)	Investment Approach By Alpha Value: Case of Firms Listed on The Stock Market In Vietnam Period Before and After The Covid-19 Epidemic *Assoc. Prof. Phong Anh Nguyen, University of Economics and Law, Vietnam; Vietnam National University, Vietnam*

Abstracts of Oral Session 1

MMBD1220 Master Data Management Adoption Model in Malaysia Local Government

Nazri Kama

Department of Informatics, Razak Faculty of Technology and Informatics, Universiti Teknologi Malaysia, Kuala Lumpur, Malaysia

Abstract. Master Data Management (MDM) is an approach for effective management of shared master data across organizations. MDM consolidates and integrates master data from multiple organizations to the central platform and publishes the centralized data to the authorized applications across different organizations. In the Malaysian public sector, few MDM initiatives have been developed, however, the adoption by local government remains slow. In addition, there have been limited studies on the MDM adoption. Hence, research is needed to investigate determinants that influence the MDM adoption by local government. This research already developed a model of determinants that influence the MDM adoption by local government. The research started with the identification of problem and knowledge gaps by reviewing existing MDM literature and MDM adoption reports in Malaysia. Then, two Systematic Literature Review (SLR) were conducted to identify potential determinants influencing the MDM adoption by local government. Based on the SLR results and with the underpinning theory of Technology-Organization-Environment framework, Diffusion of Innovation and Fit-Viability Model, a conceptual model was developed and verified by several experts. Next, a survey instrument was developed through content validity test with experts and was pilot test with a set of respondents. Subsequently, data collection was conducted from local government department units in Malaysia and several responses were analysed to validate the conceptual model using Partial Least Square-Structured Equation Modelling analysis. Overall, this research contributes to the theoretical, contextual and practical knowledge of MDM and information technology adoption in the context of Malaysia local government.

Keywords: Master data management, Data centralization, IT adoption, Local government, Technology-Organization-Environment framework

MMBD1237 Recommendation Systems Approaches in Big Data

Maizatul Akmar Ismail

Department of Information Systems, Faculty of Computer Science and Information Technology, Universiti Malaya, Kuala Lumpur, Malaysia

Abstract. Intelligent data handling techniques are beneficial for users; to store, process, analyze and access the vast amount of information produced by electronic and automated devices. The leading approach is to use recommender systems (RS) to extract relevant information from the vast amount of knowledge, and quickly aid the process of information seeking. This talk will focus on the applications of RS in E-Commerce, E-Learning, Multimedia and Tourism domains. The future research direction of RS in Big Data will also be discussed, particularly on Context-Aware Recommender Systems (CARS) as a leading solution to big data challenges.

Keywords: Recommendation Systems, Big Data

MMBD1282 Mouse Tracking for User Experience Assessment in News Sites: A Case Study from Human Factor Engineering

Danilo Teixeira Lima[1], Yomara Pinheiro Pires[2], Rita de Cássia Romeiro Paulino[2],* and Marcos Cesar da Rocha Seruffo[3]

[1] *Postgraduate Program in Anthropogenic Studies in the Amazon (PPGEAA/ UFPA), Federal University of Pará, Brazil*
[2] *Postgraduate Program in Journalism (PPGJOR/UFSC), Brazil*
[3]*Postgraduate Program in Electrical Engineering (PPGEE/UFPA), Federal University of Pará, Brazil*

Abstract. In Brazil, currently, news sites are one of the main means of obtaining information. Research carried out by Digitals New Report shows that (83%) of the Brazilian public consumes news online, including on social media sites. Thus, the need to analyze how this public tends to use and consume the information offered by these sites is understood. From human factors engineering, a term used to describe a series of elements that study how users appreciate and interact with products, it is possible to seek an understanding of how users consume information, allowing us to think about improvements in the experience of consumption of news sites, such as those used in this case study. Techniques for mouse tracking generate interaction data that can be used to improve the UX of news sites, supported by human factors engineering, a case study is presented on a methodology to capture and analyze user mouse tracking, the order to evaluate the execution of tasks of five news sites. Among the results obtained, from the accomplishment of the four defined tasks, it was possible to identify that advertisements and other advertising resources are structured in a more attractive way than the news. The study also identified important features that are not being highlighted, in addition to an excess of visual information on news sites.
Keywords: News Website, Human Factor Engineering, User Experience, and Tracking

MMBD1257, MMBD1267, MMBD1268, MMBD1211, and MMBD1236 To avoid repeatability issue, the abstracts will be available after the full papers are published in the conference proceedings.

Oral Session 2: Modern Management based on Big Data (2)

August 17th, 2022 (Wednesday) (GMT+9, Seoul Time)

Session Chair:

Prof. Adnan Abid, Virtual University of Pakistan, Pakistan

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Please Click http://www.academicconf.com/video?confname=mmbd2022 to Access the Video Presentations.

14:30-14:55	**MMBD1240** (Video) (Invited)	Learning Analytics Using Big Data for Computing Education *Prof. Adnan Abid, Virtual University of Pakistan, Pakistan*
14:55-15:15	**MMBD1278** (Live)	Big Data and AI for Transport and Public Safety Security: Best and Worst Practice *Dr. Jennifer Trelewicz, TGPO Consult, Ltd., Russia*
15:15-15:40	**MMBD1207** (Video) (Invited)	The Source or the Message? The Influence of Influencer Marketing and Its Implications for Brands and Sustainability *Assoc. Prof. David Jiménez Castillo, University of Almeria, Spain*
15:40-15:50	**MMBD1209** (Video)	Supply Chain with Customer-Based Two-Level Credit Policies under an Imperfect Quality Environment *Dr. Ana León-Gómez, University of Malaga, Spain*
15:50-16:05		**BREAK**
16:05-16:25	**MMBD1221** (Video)	Human Resources Training: A Bibliometric Analysis *Prof. Ignacio Danvila del Valle, Complutense University of Madrid, Spain*
16:25-16:40	**MMBD1280** (Video)	The Concept of Multimodal Service: Airline Planning and Operations *Assoc. Prof. Slavica Dožić, University of Belgrade, Serbia*
16:40-17:05	**MMBD1286** (Video) (Invited)	Brand Addiction and Continuance Intention After COVID-19: A Focus on Online Food Delivery Services *Assoc. Prof. Barbara Francioni, University of Urbino Carlo Bo, Italy*
17:05-17:25	**MMBD1238** (Video)	The Use of Power Means for Summarizing and Protecting Business Data *Mr. Mark Stander, Global Corporate Strategy, London, AECOM, UK*

Abstracts of Oral Session 2

MMBD1240 Learning Analytics Using Big Data for Computing Education

Adnan Abid

Faculty of Computer Science and Information Technology, Virtual University of Pakistan, Pakistan

Abstract. Learning Analytics using Big Data Analysis has become a popular discipline among educationists and researchers as it has a potential to reveal new facets of teaching and learning that could be utilized to improve the efficiencies of related learning environments. This talk aims to cover some interesting research outcomes in a couple of disciplines.

First, it aims to discuss the possible usage of Big Data Analytics for improving the efficacy of Introductory programming courses (IPCs), as these courses hold special significance in laying down the foundation for subsequent higher level courses in computer science and associated disciplines. The LA studies in IPCs are mostly anecdotal as less or no attention is given to examine learning at various cognitive levels. Moreover, the structuring of the course contents is significant to systematically analyze Big data in educational institutes that is being generated from learners' interactions. The research is required to examine how the Big data can be analyzed methodically for IPC and apply systematic techniques for LA. This could help the stakeholders to guide their decision making processes by optimizing their efforts in educational institutes.
The second dimension of this talk intends to discuss the effectiveness of blending gamification with project centric approach for personalized learning using data analytics. This facet dominantly focuses on the applied computing courses including Database Systems, Software Engineering, Project Management etc.
Keywords: Big Data, Computing Education

MMBD1278 Big Data and AI for Transport and Public Safety Security: Best and Worst Practice

Jennifer Trelewicz
TGPO Consult, Ltd., Russia

Abstract. In the last several years unprecedented growth in computing power, developments in communication technology (5G), and the availability of solutions for machine learning and AI have made possible full or partial automation of many complex tasks for public safety. This includes transport control, predictive maintenance, monitoring for service and security deployment, optimization of routes, and many other topics. As a result, large cities become safer from crime, transport can handle more cargo and more passengers, costs and profits can be optimized.
However, there is another side to automation, which comes not from processor or wireless communications speed, but from problems with project management practices as well as limitations of the algorithms and technology itself. The result is not just lost revenue, but human tragedies that would not have happened without the technical solutions. As it is said, sometimes technology allows people to make bad decisions faster.
In this talk I will discuss good and bad practice in the application of big data and AI technologies in transport and public safety, outlining technical pitfalls that make the solutions less safe, as well as important aspects of project design and management that should not be ignored.
Keywords: Big Data, Internet of things, Public Safety

MMBD1207 The Source or the Message? The Influence of Influencer Marketing and Its Implications for Brands and Sustainability

David Jiménez Castillo
Department of Business and Economics, University of Almeria, ceiA3, Spain

Abstract. Influencer marketing has increasingly become a strategic communication tool for brands during the last years. Although recent literature has examined several persuasion cues related to the social media influencers (i.e., the source) and the contents they create (i.e., the message) that can impact on consumers' emotional and behavioural responses, much remains to be explored about the process of influence, specifically, the role of the trade-off between the source and the message in explaining how consumers respond to brand endorsement. It has been shown that when influencers disclose their posts as an ad, their credibility can be damaged and, consequently, the attitude and

interest in the recommended product can also decline. However, when followers perceive a strong connection and similarities with an influencer, they can be less concerned about his/her commercial interests, which can positively affect consumers' behavioural outcomes such as purchase behaviour. This tension suggests that the psychological mechanisms underlying the process of influence are still an interesting area of research. In my presentation I will explain the importance of some determinants of the influential power of influencers which are related to the source and the message, to better understand consumers' response toward the recommended brands. Also, I will explore how this power represents an opportunity for companies that have a green orientation when promoting sustainable products through influencers, which might also lead to shift users' current behaviours towards more sustainable behaviours.

Keywords: Influencer Marketing, Persuasion, Brand Communication, Consumer Behaviour, Sustainability

MMBD1209 The Role and Impact of Tourism on Economic Development: a DSGE Approach

Ana León-Gómez[1], Jose Manuel Santos-Jaén[2]

[1] *University of Malaga, Spain*

[2] *University of Murcia, Spain*

Abstract. Nowadays, there is a need to establish a procedure for measuring the level of tourism impact on economic growth. To this end, previous studies have used Dynamic Stochastic General Equilibrium (DSGE) models, often developed by Monte Carlo method, which generates multiple data problems. The purpose of this study is to solve the measurement and estimation problems of DSGE macroeconomic models applied to the tourism. We evaluate the estimation of economic growth regressions of the Solow model based on the Stochastic Simulation Algorithm formulated according to the Next Reaction method. Our results improve the accuracy levels of the DSGE models applied to the tourism as they achieve faster convergence of the coefficients of the variables, thus reducing possible measurement errors and the level of deviations. Our findings have important practical and social implications for the economic contribution of tourism. The improved accuracy of the DSGE model developed allows for optimal decision making. This study contributes to the literature on DSGE models by providing more robust results that allow predictions to be made with a lower level of error and bias, which is of vital importance for public institutions and other stakeholders in macroeconomic and tourism analysis.

Keywords: DSGE Model Estimation, Economics Tourism Impact, Monte Carlo Method, Stochastic Simulation Algorithm, Next Reaction Method.

MMBD1221 Human Resources Training: A Bibliometric Analysis

Ignacio Danvila del Valle, Estevez-Mendoza, Carlos

Complutense University of Madrid, Spain

Abstract. Research on human resources training has been shaped by a great number of articles published in recent decades. This study contributes to the literature by examining how this research is built on the basis of different intellectual frameworks and by identifying the relevant references, authors, topics, and journals. With this aim, we used bibliometric techniques to examine over 900 articles published between 1975 and 2016. We observed three publication periods that have shaped the evolution of research in this "eld. In the journals that have published these articles, a wide range of disciplines have been used to address the topic of human resources. The dominant focus is on US and labor-intensive industries, giving researchers the opportunity to undertake further cross-country

and cross-industry studies. By considering human capital and performance, the resource-based view provides theoretical support for the articles through which leading authors have built a core grounding for the topic.

Keywords: Human Resources, Training, Bibliometrics, Citation and Co-occurrence Analysis, Knowledge Mapping

MMBD1280 The Concept of Multimodal Service: Airline Planning and Operations

Slavica Dožić

Air Transport Department, Faculty of Transport and Traffic Engineering, University of Belgrade, Serbia

Abstract. Multimodality as a concept is well known in cargo transport. When it comes to the passengers' transport, it is worth noting that cooperation and data exchange among different stakeholders in air transport has already been implemented in order to provide safe, orderly and expeditious transport of passengers. Different levels of cooperation and data exchange among TSPs from different modes of transport can be noticed on the state level (SYN+AIR's D3.2), but full integration of different TSPs from different modes (including air transport) and different countries has not been achieved yet. Therefore, multimodality as a concept in passenger transport (which implies full coordination and integration of different modes of transport) could be considered as a service which will be implemented in the future. Fully integrated transport system will offer the possibility to buy a single ticket for the whole journey (including all segments performed by different modes of transport); it will provide a single information platform for passengers, as well as platform for communication and data exchange among TSPs; timetables will be coordinated, etc. The system having all these attributes will be able to provide seamless door-to-door journey for passengers (with the air transport as the main leg). To achieve full integration of the transport system, TSPs from different modes of transport should collaborate on different levels. Considering the air transport, it can be noticed that it requires usage of different modes, since air passengers need to combine different modes to make door-to-door journeys.

In the new concept of multimodality, airlines as TSPs from air transport, as well as TSPs from other modes of transport, should make some changes in their planning activities and operations. Regarding planning activities, TSPs need to adapt them to the new concept. Namely, it means that airlines should make their plans considering the plans of TSPs of the other modes involved in the multimodal chain. Therefore, the solution could be (SYN+AIR's D4.3) joint planning of all TSPs involved in the multimodal chain, supported by the local authorities and governments. On the strategic level, the access and egress infrastructure, as well as access facilities (such as elevators, moving stairs, etc.), should be planned in order to accelerate and facilitate the process of transfer from one to another transport mode, and to make journey seamless. Another type of cooperation on a strategic level refers to development of joint information system, as well as decision support systems which should be based on the models which define appropriate revenue sharing among TSPs involved in multimodal chain. Moreover, revenue management should be considered in the view of multimodality collaboration. As timetable synchronization is one of important attributes in the concept of multimodality, that implies need for joint planning, and further new models and new approaches.

In order to make this multimodal concept successful, it is important to encourage TSPs, to get into collaborations of this type, providing them information related to benefits. Airlines as one of participants should perceive opportunities and challenges related to the multimodal service. It is worth noting that passengers would be very satisfied with the new service (SYN+AIR's D4.4) which enables seamless door-to-door journey. Therefore, collaboration and full integration of system would increase demand, and reduce inconvenience in the case of disruption. Since airlines would have

relevant information provided from their partners in the multimodal chain, that would help them to ensure a seamless journey, which further contributes to passengers' satisfaction and their loyalty. Also, the airline's operations would be more reliable. Moreover, the new concept would lead to more efficient use of resources, while TSPs would improve their visibility on the market, through joint activities.

On the other hand, new challenges would be faced, too. Disruption management would become more complex in the case of an integrated system, compared to the non-integrated one. This complexity should be solved and that presents a new potential for application of different operations research techniques. Disruption management would also require definition of responsibility sharing in the case of multimodality.

Considering all above-mentioned, it could be concluded that the new concept of multimodality will improve the transport system efficiency, increase passengers' satisfaction as well as passenger demand, optimize usage of resources and offer possibility for new researches.

Keywords: Multimodality, Door-To-Door Journey, Fully Coordinated Transport System

MMBD1286 Brand Addiction and Continuance Intention After COVID-19: A Focus on Online Food Delivery Services

Barbara Francioni

University of Urbino Carlo Bo, Italy

Abstract. The principal aim of this study is to examine the possible influence of fear of COVID-19 and perceived risk of eating out during COVID-19 on the consumers' attitude toward adopting online food delivery services (OFDS). Moreover, the study aims to identify a possible impact of the customers' attitude toward adopting OFDS on brand addiction and continuance intention after COVID-19 toward OFDS brands. To achieve these goals, a Web-based self-completion survey has been adopted by achieving a total of 398 completed surveys. Subsequently, structural equation modeling has been employed by using SPSS AMOS. Main findings show a positive relationship between fear of COVID-19 and perceived risk of eating out, that in turn reveals a positive impact on attitude toward using OFDS brands, thus activating a virtuous process leading to the formation of consumers' positive and addictive feelings towards OFDS brands. Theoretically, the paper responds to the call for more studies focused on the brand addiction analysis in the COVID-19 era. From a managerial perspective, it provides a practical understanding regarding the possible strategies restaurants can adopt to offer efficient OFDS to their consumers.

Keywords: Brand Addiction; Continuance Intention after COVID-19; Fear of COVID-19; Online Food Delivery Services; Attitude Toward Using Online Food Delivery Services

MMBD1238 The Use of Power Means for Summarizing and Protecting Business Data

Mark Stander

Global Corporate Strategy, London, AECOM, UK

Abstract. Sometimes business data sets, such as company revenues or project values, comprise many small and some large positive values, the release of which can lead to unwanted disclosure. These data sets are often summarized using moments including the sample mean and variance, which are defined using sums of data values raised to given powers. The Lehmer mean is a generalization of the sample mean, referred to as a power mean, that tends to the maximum data value as the power increases. We present a novel method for protecting business data which involves a modification of the Lehmer mean that tends to the second largest data value. This is related to methods to reconstruct

distributions based on a limited number of moments, which is sometimes referred to in the literature as the Truncated Moment Problem. We use business data to discuss how the Lehmer mean can provide disclosure protection for the largest two data values. We briefly mention the Gini mean as an extension of the Lehmer mean, a variation of our Lehmer mean protection method based on rounding, and some other well-known mathematical inequalities.

Keywords: Gini Mean, Lehmer Mean, Power Means, Release of Sensitive Business Data, Statistical Disclosure Limitation, Truncated Moment Problem

Oral Session 3: Modern Management based on Big Data (3)

August 18th, 2022 (Thursday) (GMT+9, Seoul Time)

Session Chair:

Dr. Hamed Taherdoost, University Canada West, Canada

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9:30-9:55	**MMBD1233** (Invited) (Live)	The Effect of Blockchain on Big Data *Dr. Hamed Taherdoost, University Canada West, Canada*
9:55-10:20	**MMBD1246** (Live) (Invited)	Adoption of Fintech to Overcome Illicit Financial Flows (IFF): Empirical Research Based on Horizontal Analysis Using Big data *Prof. Valliappan Raju, International Islamic University of Malaysia, Malaysia*
10:20-10:40	**MMBD1247** (Video)	Elastic Trust Management in Decentralized Computing Environments *Assoc. Prof. Hiroyuki Sato, The University of Tokyo, Japan*
10:40-10:50	**MMBD1242** (Video)	Applying Pretrained Models to Bug Report Summarization *Ms. Mukhtar Samal, Gyeongsang National University, South Korea*
10:50-11:05		**BREAK**
11:05-11:25	**MMBD1255** (Live)	Nonparametric Estimation of the Production Frontier Using a Data-Fitting Technique *Assoc. Prof. Yu Zhao, Tokyo University of Science, Japan*
11:25-11:40	**MMBD1232** (Video)	Value Co-creation for Innovation: Evidence from Indonesian Organic Community *Dr. Handyanto Widjojo, Universitas Prasetiya Mulya, Indonesia*
11:40-11:55	**MMBD1245** (Video)	Multi-objective Optimal Scheduling Model for Shared Bikes Based on Spatiotemporal Big Data *Dr. Xiaoxia Wang, Guangdong University of Technology, China*

Abstracts of Oral Session 3

MMBD1233 The Effect of Blockchain on Big Data

Hamed Taherdoost

University Canada West, Vancouver, Canada

Abstract. Blockchain as an emerging technology is a distributed database that consists of data blocks holding individual transactions. Blockchain is making a significant shift to make considerable developments in the way businesses operate. Big Data is another trending technology that has provided enormous opportunities for businesses to gain insight by following data patterns and trends facing businesses with some issues and challenges such as dirty, private, or inaccessible as well as benefits for businesses. However, the integration of Big Data and Blockchain is expected to address issues and challenges of Big Data technology. The combination of these powerful technologies is expected to offer great value for businesses since blockchain can make the results of Big Data more valuable by ensuring the security, quality, and accessibility of data in blocks that will in turn provide better managing huge volumes of data that flow daily in organizations. The main characteristics of Blockchain include decentralization, security, and integrity helps. Many interesting opportunities that will be delivered as the result of adopting Blockchain technology to facilitate Big Data and the ways that Big Data influences Blockchain will be discussed in the speech.

Keywords: Blockchain, Big Data

MMBD1246 Adoption of Fintech to Overcome Illicit Financial Flows (IFF): Empirical Research Based on Horizontal Analysis Using Big data

[1]Valliappan Raju, [1]Salina Kassim, [2]Arrunkumar Kalathinathan, [2]Karthick Krishna

[1] *International Islamic University of Malaysia, Malaysia*

[2] *World Research Union, India*

Abstract. Several traditional practices are coherently shifting to impeccable methods by maneuvering the needs of its users. This entails almost all verticals in an economy. Be it agriculture or export business, the scrupulous simplification has become a prerogative exertion. Among all the shifts, the enticing amusement is on FinTech for policy makers and corporates. FinTech has revolutionized and transformed the conventional operations that is been perceived since the inception of monetary transactions. In 2021, this has become a multibillion-dollar (USD) sector where leading companies and startups are flooding to venture in it. FinTech researchers and service-providers have produced impressive solutions to monitor not only the financial extravagance but also the convenience to a common man. This study is neither having an objective to carry out the merits nor demerits of FinTech, but to present a trend analysis of FinTech to alleviate the effects of shadow or parallel economy. This is possible if roots of Illicit Financial Flows (IFF) are captured. World Bank (World Bank Annual Report 2020) claims IFF as major driver of shadow economy. Every consecutive year International Monetary Fund (IMF) organizes a forum with economists and finance experts to submit their views or reports on progress of IFF in international trades. The reports are outrageous. Efforts are made to control IFFs but there hasn't been a concrete plan. During this research, it was imperative to notice that few countries have bailed out of poverty line with the help of FinTech sector. Although this is unimaginable, there are authentic evidences submitted in this research about it. This led the authors to come up with this research using Big Data as a tool to measure using horizontal analysis or trend analysis.

Keywords: Big Data, Fintech, Horizontal Analysis, Illicit Financial Flows

MMBD1247 and MMBD1255 To avoid repeatability issue, the abstracts will be available after the full papers are published in the conference proceedings.

MMBD1242 Applying Pretrained Models to Bug Report Summarization

Samal Mukhtar, Seonah Lee
Department of AI Convergence Engineering, Gyeongsang National University, South Korea

Abstract. Bug reports are specific documents that highlight information about bugs in software systems. Bug reports typically contain the descriptions of bugs, detailed user information, the replication procedure of the bugs, and discussions to fix bugs. Hence, the reports are voluminous, and it is challenging to catch the main problem from the bug reports. To challenge this problem, previous studies suggested novel methods for summarizing bug reports. However, to the best of our knowledge, no previous works for bug summarization have not utilized pretrained models. We use two pretrained models BART and T5 to produce bug summaries. Considering difficulties in utilizing abstractive patterns for bug summarization, we also propose an approach that improves the results of the T5 more than two times. Our proposed approach divides a bug report into several sections, and sections into tokens. Based on them, our approach summarizes bug reports. The approach helps preserve the details in the input data that can be missed by the T5 architecture. To evaluate the performance of our approach with two predefined models, we use two popular bug report benchmarks, Summary Dataset and Authorship Dataset, and compare the results of the combinations with those of state-of-the-art approach in bug summarization BugSum with few parameters in a balanced way. The experimental results show that T5 with the applied approach and BART outperform BugSum on average 43% and 79% concerning Rouge-1 and Rouge-2 metrics. Thus, this work demonstrates a way to obtain a higher performance of bug summarization with pretrained models.

Keywords: Abstractive Text Summarization, Bug Report Summarization, Extractive Text Summarization, Issue Reports, Pretrained Models, Software Engineering

MMBD1245 Multi-objective Optimal Scheduling Model for Shared Bikes Based on Spatiotemporal Big Data

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Abstract. The station-free bike sharing is one of the indispensable short-distance means of transportation. However, with the surge in the number of shared bikes, the imbalance of supply and demand in time and space caused by the disorderly parking of shared bikes has also emerged. The proposed multi-objective optimal scheduling method is feasible only by combining the massive spatiotemporal trajectory data of shared bikes and user travel demands. This study analysed user travel patterns based on enormous order data, divided the operation areas of shared bikes into internally connected communities, and obtained the shared bike dispatch hotspots in each community segment through Geohash coding. Then, a novel multi-objective optimal scheduling model for shared bikes based on the NSGA-II algorithm was proposed. The model took the number of transport vehicles participating in shared bike dispatching and the actual number of dispatch points as decision variables, and the optimization goal was to reduce the cost of shared bike dispatching and improve the utilization rate of shared bikes. Furthermore, the scheduling model was optimized, and a set of multi-objective optimal solutions were obtained. The results showed that the optimization algorithm

was better than the traditional method. The research findings are of great significance for optimizing dispatching routes, and formulating low-carbon dispatching strategies for shared bikes.

Keywords: Shared Bikes, Bikes Scheduling Model, Community Detection, Multi-objective Optimization Algorithm

MMBD1232 Value Co-creation for Innovation: Evidence from Indonesian Organic Community

Handyanto Widjojo

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Abstract. The purpose of this paper is to explore how value co-creation in the Indonesian Organic Community overcomes the resource limitations of small enterprises through the integration of collective resources to drive innovation. A framework is derived and developed from service-dominant logic (SDL) and supported by consumer culture theory (CCT). It also offers a specific strategy that is required for the growth and sustainability of the organic-products entrepreneurship. Applied thematic analysis was performed by combining observation and in-depth interviews to multi-actors in the community. The result shows that a collaboration network with external actors and the dynamic interaction within the community drive resource integration forming value co-creation platform and lead to innovation in product, process, marketing and organization. The novelty of the research is a combination of SDL and CCT that provides a new marketing perspective of value co-creation concept. SDL offers an understanding of multi-actor value co-creation that is built from the knowledge and skills-based resources, meanwhile CCT unveils the roles of the community in developing the positive perception of organic products in the market ecosystem.

Keywords: Innovation, Value Co-creation, Organic, Community, Service-dominant logic, Consumer Culture Theory

Oral Session 4: Modern Management based on Big Data (4)

August 18th, 2022 (Thursday) (GMT+9, Seoul Time)

Session Chair:

Dr. Omaima Hassan, Senior Lecturer, Robert Gordon University, UK

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14:30-14:55	**MMBD1289** (Live) (Invited)	A Differential Privacy-based Secure Data Sharing Model in Cloud Environment *Prof. Ashutosh Kumar Singh, National Institute of Technology, Kurukshetra, India*
14:55-15:20	**MMBD1266** (Live) (Invited)	Big Data Analytics Implications On Central Banking Technological Progress *Prof. Elsadig Musa Ahmed, Multimedia University, Malaysia*
15:20-15:40	**MMBD1277** (Live)	Big Data Analysis in the Fields of Business Strategy and Firm Performance *Assist. Prof. Jamil Anwar, COMSATS University Islamabad, Pakistan*
15:40-16:00	**MMBD1259** (Live)	A Default Prediction (PD) Model for Italian Banks: an Empirical Analysis with Econometric and Machine Learning Approaches *Prof. Giuseppe Orlando, University of Bari, Italy*
16:00-16:15		**BREAK**
16:15-16:35	**MMBD1281** (Live)	Local Quantum-Inspired Classification Applied to a Relevant Dataset *Dr. Davide Pastorello, University of Trento, Italy*
16:35-16:55	**MMBD1284** (Live)	The Impact of Social Media on Individuals' Economic Decisions: Opportunities for a New Business Model *Assist. Prof.Pierluigi Vellucci, Roma Tre University, Italy*
16:55-17:20	**MMBD1222** (Live) (Invited)	What Explains TikTok's International Success? *Dr. Xin Li, Senior Lecturer, Newcastle University Business School, UK*
17:20-17:45	**MMBD1275** (Live) (Invited)	The Impact of Corruption on Analyst Coverage *Dr. Omaima Hassan, Senior Lecturer, Robert Gordon University, UK*

Abstracts of Oral Session 4

MMBD1289 A Differential Privacy-based Secure Data Sharing Model in Cloud Environment

Ashutosh Kumar Singh, Rishabh Gupta

Department of Computer Applications, National Institute of Technology, Kurukshetra, India

Abstract. With the variety of cloud services, such as the lowest cost, high scalability and efficiency, the cloud service provider also provide machine learning services, which are used in many applications, including risk assessment, product recommendation, and image recognition. Due to

multiple benefits, most organizations transfer their data to the cloud platform for storage, analysis, and sharing purposes. As the cloud is run by a third party; therefore, data owners cannot fully rely on this environment. Thus, protecting owners' data while sharing it with other parties has become a major challenge. This paper proposes a Differential Privacy-based Secure Data Sharing (DP-SDS) model in the cloud environment, which protects the owners' data by generating and injecting the noise and performing the classification task by employing differential privacy and machine learning approaches.

Keywords: Cloud Computing, Machine Learning, Differential Privacy, Data Privacy

MMBD1266 Big Data Analytics Implications On Central Banking Technological Progress

Elsadig Musa Ahmed

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Abstract. Purpose: This paper examines big data analytics implications on the technological progress of the central banking financial system.

Design/methodology/Approach-A digital technological progress framework and model developed to examine the economy's aggregate supply by including the monetary policy, big data analytics, pollutants emissions as independent variables, and the economy's aggregate demand as a moderating variable in a modified extensive growth theory framework and model to calculate the productivity indicators and the total factor productivity (TFP) as the central banking technological progress that combined the mentioned variables qualities contribution. Besides, data analytics positive externalities and the negative externalities such as data analytics shortcomings as undesirable unpriced output in the form of cybersecurity and pollutants' emissions among other proxies are internalized in the framework and the model to integrate the digital technology innovation with digital technology shortcomings and climate change.

Findings-The significant contribution of this study has modified the fundamental findings of Nobel Prize Laureates' research findings (Nordhaus and Romer, 2018) to integrate innovation, digital technology shortcomings, and climate change in the form of green technological progress (green productivity) as well as existing studies in developing framework and model to measure the digital technology indicators via big data analytics such as digital technology positive externalities and negative externalities that include cybersecurity shortcomings and negative externalities generated by pollutants' emissions. The role of these externalities on long-term sustainable economic growth has been ignored by several past studies undertaken in these areas.

Originality/Value-This modified extensive theory framework and model in a significant method articulate the technological progress issues and sustainable economic growth as one of the most critical sustainable development and long-run economic growth dimensions in the central banking financial system functions to manage the economy's aggregate supply and demand.

Keywords: Central Bank, Aggregate Supply and Demand, Big Data Analytics, Machine Learning, Artificial Intelligence, Financial System, Technological Progress, Externalities

MMBD1277 Big Data Analysis in the Fields of Business Strategy and Firm Performance

Jamil Anwar

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Abstract. The complexity and constant shifting challenges of the global market has raised the question whether organizations should stick to the pure strategies or they should hybridize their strategic orientation to enhance performance. Similarly, there is an inconclusive debate in

contemporary literature about the superiority of strategic consistency over strategic flexibility. Most of the empirical research in Strategic Management is cross-sectional using information collected through questionnaire or interviews to measure either the intended strategy or perceived strategy leaving out the realized or emergent strategy. The reason for this can be the fact that realized cannot be measured through perceived information rather it needs longitudinal archived financial data. Similarly, very few attempts have been made to investigate the transition of strategic orientation over the time to find out the Strategic Behaviour of the firms mainly due to misunderstanding of the power of the Big data and the usage of the relevant tools to handle the big data. Based on these issues, the talk is about to answer the following research questions:

a. How to find out the realized or emergent strategic orientation and strategic behaviour of the firms over the time in a selected country? Specifically, to know:

i. Whether firms pursuing pure strategies or hybrid strategies?

ii. Is there consistency in their strategic behaviour over the time or they are flexible over the time?

b. Does there exists a significant difference in the performance based on their strategic groups/types or strategic behaviour of the firms? Specifically;

i. Is the performance of viable strategies similar or differ significantly within an industry or across industries?

ii. Is hybrid strategy superior to pure strategy?

iii. Is consistency in strategy performs better than flexibility in strategic behaviour?

c. How the contingent factors such as age, size, and industry effect on Business strategy and Organizational performance?

The answers to the above questions will be discussed and how big data helps in in this regards?

Keywords: Big Data; Business Strategy, Strategic Behaviour, Organizational Performance

MMBD1259 A Default Prediction (PD) Model for Italian Banks: an Empirical Analysis with Econometric and Machine Learning Approaches

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Abstract. PD modelling seems to be a well-studied domain. For the chosen asset class of the Italian banking sector, we show that the available PD models of banks would be misleading if straight-forwardly applied to Italian banks today. We argue that the PD determinants of the Italian banks are ROA, leverage and BCC category of the bank, not depending much upon the liquidity stance. Moreover, we demonstrate that the conventional approach dominates over the ML one. We are first to demonstrate the model performance as a supervisory tool to analyse the bank standing retrospectively.

Keywords: Bank Failure, Adaptive Lasso, Logistic Regression, CART, Random Forest, Machine Learning, Model Selection

MMBD1281 Local Quantum-Inspired Classification Applied to a Relevant Dataset

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Abstract. The mathematical formulation of quantum mechanics can be used to devise machine learning algorithms that do not require any quantum hardware in the sense that the quantum formalism is applied to define data representations that are managed by classical computers. The so-called quantum-inspired machine learning is based on particular kinds of information storing and processing defined by means of the mathematical objects from the quantum theory that do not necessarily relates to physical quantum systems. Moreover we adopt a local approach, as the promising one introduced in [1], where a K-nearest neighbors (kNN) algorithm is applied over the training set before the execution of the considered classifier (e.g. a SVM) in order to decrease the number of training points and perform classification in a neighborhood of the test point. An interesting quantum-inspired binary classification algorithm has been introduced in terms of a nearest mean classifier based on the trace distance between density operators encoding feature vectors [2]. Another quantum-inspired classifier has been proposed is based on the Helstrom quantum state discrimination [3] used for binary classification [4]. Both algorithms are structured on an encoding of the feature vectors into density operators and on techniques for estimating the distinguishability of quantum states like a distance in the space of the quantum states and the Helstrom measurement. Classification accuracy of these quantum inspired classifiers can be improved by increasing, in terms of tensor products, the number of copies of the quantum states that encode the feature vectors, at the cost of dramatically increasing the computational space and time. However, in the present work, we argue that the local approach for representing data into quantum states provides a description of the quantum encoding that allows to implement feature maps saving space and time resources. We introduce the quantum encoding in terms of Bloch vectors applied to the execution of some quantum-inspired classifiers. In particular we run the Helstrom classifier representing data with different quantum encodings (i.e. different feature maps) and others quantum-inspired classifier based on quantum state discrimination. In the experimental part, there are the experimental results obtained running the quantum-inspired classifiers and the comparison with classical algorithms over the German Credit Scoring dataset [5] that is of practical relevance for financial applications of the considered local quantum-inspired methods.

Keywords: Quantum-inspired Machine Learning, Classification, Locality In Feature Space

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MMBD1284 The Impact of Social Media on Individuals' Economic Decisions: Opportunities for a New Business Model

Pierluigi Vellucci

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Abstract. The World Wide Web was born in Europe, at CERN, about thirty years ago. Since then, the Internet has grown exponentially, and the success of the World Wide Web was immediate and widespread. Nowadays, we cannot even imagine what our lives would be like without it. The Internet was the spark that started society as we know it today. The world around us radically differs from our parents' world. The advent of social media has accelerated this revolution. Because of their widespread diffusion, a voluminous and complex amount of information — "big data" — from social media such as Twitter, Instagram, and Facebook are now ubiquitous and of increasing interest to researchers studying collective decision-making in economics. Big data from these public platforms

enable Machine Learning (ML) algorithms to uncover more fine-grained patterns and to easily incorporate new data improving prediction performance. Artificial intelligence is made possible by the fact that machines have access to our data, they can observe our behaviors to learn, and therefore there is a symbiosis: on the one hand, machines learn from being at the center of the global data infrastructure, and on the other, we benefit from services unthinkable until a few years ago. But in recent years, thanks to the pressure exerted by public opinion, several considerations in the management of big data have gained increasing attention in the academic debate. Maximize user engagement in social media through the number of clicks, as well as manipulation of user opinions, the respect for their autonomy, is no longer enough when the object of these decisions are humans. These questions ask for a rethinking of the business model that governs the management of big data from social media: we will discuss it in this talk.

Keywords: Social Media, Business Model, Big Data, Management

MMBD1222 What Explains TikTok's International Success?

Xin Li

Newcastle University Business School, UK

Abstract. In this talk, I will explain the rapid international success of TikTok, a Chinese-made social media app. The topic is of academic and practical value because the common sense is that firms from emerging markets are normally deemed as copycats and have rarely gained global popularity, needless to say in a short period of time. One explanation of TikTok's rapid international success is that it is due to TikTok's business model innovation. In this talk, I will debunk such a business model innovation argument. Afterwards, I will explain TikTok's rapid international success by focusing on how ByteDance, the Chinese firm that developed TikTok, has overcome the three major hurdles facing emerging market firms when internationalizing, namely, the liability of foreignness, liability of origin, and the paradox of global integration and local responsiveness. An important element of my explanation is that TikTok uses advance digital technologies such as artificial intelligence algorithm to overcome the paradox of global integration and local responsiveness.

Keywords: Emerging Market, Internationalization, Liabilities of Origin, Paradox, Artificial Intelligence, Strategy

MMBD1275 The Impact of Corruption on Analyst Coverage

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Abstract. Purpose: This study aims to investigate the impact of country-level corruption and firms' anti-bribery policies on analyst coverage. Analyst coverage has been identified as a powerful tool to detect fraud and should equally act as a possible tool to reduce corruption.

Design/methodology/approach: This study used a negative binomial count regression method on a longitudinal data set of a sample of S&P Global 1200 companies for the years 2010-2015. To control for potential endogeneity bias and improve the reliability of the estimation, both country-level corruption and firms' anti-bribery policies variables were instrumented.

Findings: After controlling potential endogeneity bias, the results show that the adoption of anti-bribery policies at firm level attracts more analysts to follow a firm. The results for corruption at country level show that analyst coverage increases in less corrupted countries indicating that the costs of corruption exceed its potential benefits. When the variables corruption at country level and anti-bribery policies are interacted, the relationship is positive and highly significant.

Practical implications: Given the potential important role played by anti-corruption measures, firms are encouraged to adopt them to reduce the incidence of corruption and to increase analyst coverage, which will reinforce the benign effect of monitoring.
Originality/value: Although the literature on corruption at the country level is rich, it is geared towards the determinants of corruption in contrast to its consequences, and fewer studies have focused on the impact of corruption at firm level because of data limitations. This paper addresses this gap and contributes to the literature on the consequences of corruption at firm level.
Keywords: Corruption, Sell-Side Analysts, Analyst Coverage, Analyst Following, Anti-Bribery Policies, Multi-Country

Part VI Acknowledgements

On behalf of the MMBD2022 Organizing Committee, we would like to take this opportunity to express our sincere gratitude to our participants. Without their support and contributions, we would not be able to hold the conference successfully in this special year. We would also like to express our acknowledgements to the Technical Program Committee members who have given their professional guidance and valuable advice as reviewers.

Special Thanks go to the supports from the TPC Co-Chairs: Prof. Dr. Md. Mamun Habib, School of Business, Independent University, Bangladesh; Visiting Scientist, University of Texas - Arlington (UTA), USA and Prof. Changjun Yi, Executive Vice-Dean, Business School of Huaqiao University, China. In these uncertain times, their continuous support and valuable opinions help us to meet the challenges of organizing the conference in this moment and those yet to come.

Below are the lists of the Technical Program Committee members. For those who contribute to the success of the conference organization without listing the name here, we would love to say thanks as well.

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