



**10th INTERNATIONAL CONFERENCE OF MANAGEMENT AND INDUSTRIAL
ENGINEERING (ICMIE)**



CONFERENCE PROGRAMME

November 11th – 12th, 2021

Conference

“Business Change and Digital Transformation in a World Moving Through Crisis”

University POLITEHNICA of Bucharest, Romania

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WELCOME to ICMIE 2021

It gives us a great pleasure to welcome you to the 10th International Conference of Management and Industrial Engineering (ICMIE). The conference theme - *Business Change and Digital Transformation in a World Moving Through Crisis* is tackling an ongoing transformation of the business environment influenced by a crisis which affected the entire Globe, the pandemic COVID-19. The conference encourages to stimulate highly productive discussions and reflection over the topics, and possible solutions to cope with the change.

The 10th International Conference of Management and Industrial Engineering, ICMIE 2021, it is organized by the Faculty of Entrepreneurship, Business Engineering and Management, the Department of Entrepreneurship and Management from University POLITEHNICA of Bucharest, on November 11th – 12th, 2021, in Bucharest, Romania.

According to tradition, ICMIE 2021 will cover major areas of R&D education topics related to management and digital transformation. The aim of the conference is to provide an opportunity for academics, management practitioners and researchers to debate new concepts, approaches, and innovative practices within the dynamic world of technology – driven contemporary business.

The conference set-up includes not only research and practice paper sessions but also keynote addresses. Facilities were provided for online group meetings to discuss issues regarding the conference main themes among participants and participant organizations.

The conference will take place fully online, using the facilities provided by the University POLITEHNICA of Bucharest. The main mean of interaction for the speakers and information for the audience will be the Microsoft Teams platform.

University POLITEHNICA of Bucharest is the oldest and most prestigious engineering school in Romania. Its traditions are related to the establishment, in 1818, by Gheorghe Lazăr, of the first higher technical school with teaching in Romanian, at the Saint Sava Abbey in Bucharest.

We are privileged to encourage the wish of knowledge improvement of the new generation and to assist and guide them through this qualitative process. We would like to express our sincere gratitude to all contributors for submitting a significant number of papers with high quality. Special thanks to our reviewers, supporters, conference speakers and special guests who have made this event a great success! We look forward to meeting again in 2023!

ICMIE 2021
The Conference Organizing Committee

CONFERENCE OPENING

CONFERENCE OPENING

The speakers and participants will receive in advance the web links for the Microsoft Teams channels to be able to enter the sessions and the main four Tracks of the conference representing the channels for the four sections of the conferences: Entrepreneurship and Innovation; Technology and Competitiveness; People, Organizations and Change Management; Development Strategies and Environment.

INFORMATION FOR PRESENTERS

A standard time allocation for a single paper presentation is 20 minutes, comprising 15 minutes for presentation and 5 minutes for questions and discussion. Fill the gaps with active discussions and do not get out of the program sequence for the smooth running of the conference.

INFORMATION FOR SESSIONS CHAIRS

A chairperson has been allocated for all papers presentation and keynote sessions. Chairs are requested to maintain timelines. Keep track of the time slot for each paper, presentation and questions and discussion.

CONFERENCE PROCEEDINGS AND PUBLICATION

All the accepted and presented papers will appear in the fully indexed proceedings published by the conference committee. The proceedings of the conference will be sent to be indexed in Clarivate Analytics, ProQuest Database, Google Scholar.

Day 1, 11th of November

PROGRAMME in BRIEF

Time GMT/UTC+3	Plenary session Day 1	Topic	Speakers
10:30 – 11:00	Opening ceremony (Microsoft Teams Channel)	Welcome Speeches	ICMIE 2021 Organizing Committee Faculty of Entrepreneurship, Engineering and Business Management
11:00 – 12:30	KEYNOTES Speakers	<i>Industry 4.0: Expectations and Development in Germany – A Technology Assessment Point of View</i>	Gerhard BANSE, Berliner Zentrum Technik & Kultur, Germany
		<i>Inkjet printable conductive nano-colloid generation via Pulsed Laser Ablation in Liquid for photovoltaic application</i>	Dermot BRABAZON, Dublin City University (DCU), Ireland
		<i>The production of healthcare workforce for an ageing society</i>	Hafiz T.A. KHAN, University of Oxford, United Kingdom
12:30 – 13:00	Break		
Time GMT/UTC+3	Parallel Sessions Day 1	Track number and Link	
13:00 – 16:40	Entrepreneurship and Innovation	Microsoft Teams Channel Track 1	
13:00 – 18:40	Technology and Competitiveness	Microsoft Teams Channel Track 2	
13:00 – 19:00	People, Organizations and Change Management	Microsoft Teams Channel Track 3	13:00 – 19:00
13:00 – 18:20	Development Strategies and Environment	Microsoft Teams Channel Track 4	

Day 2, 12th of November

Time GMT/UTC+3	Plenary session Day 2	Track number and Link
10:00 – 13:00	People, Organizations and Change Management	Microsoft Teams Channel Track 3
13:00 – 14:00	Closing Ceremony	Microsoft Teams Channel General Track

CONFERENCE KEYSPEAKERS



Gerhard BANSE

Professor Dr. sc. phil. Professor e.h.
Berlin Centre Technology & Culture
Germany

Professor Gerhard BANSE is currently senior scientist at Karlsruhe Institute of Technology (since 2011) and at EA European Academy of Technology and Innovation Assessment Bad Neuenahr-Ahrweiler (since 2015). He is also Guest professor at Faculty of Humanities at Matej Bel-University Banská Bystrica (Slovak Republic), professor of general technology at Technical University of Brandenburg Cottbus, lecturer at Potsdam University, Bochum University at Applied Sciences (Germany), Silesian University Katowice (Poland), Technical University Rzeszów (Poland) and Technical University Graz (Austria). Member (since 2000), vice president (2009 – 2012) and president (2012 – 2019) of Leibniz-Sozietät of Sciences and Humanities Berlin (Germany); 2012 professor e.h. at Silesian University Katowice.

He has developed his dissertation thesis in 1974 and 1981 holds a habilitation on philosophical problems of technology since 1981. He has worked at several academic institutions notably, Department of Philosophy of Technology at Technical University Cottbus, Germany, European Academy Bad Neuenahr-Ahrweiler, Germany, in the field of technology assessment in Middle and Eastern European Countries, and as senior scientist at Institute for Philosophy at University Potsdam. Nowadays he is (co-)author or (co-)editor of more than 450 publications in books and journals (cf. http://www.trafoberlin.de/Autoren/banse_gerhard.html). *Main research topics would be philosophy of technology, general technology and Technology Assessment, initiation/consolidation of cooperation with Eastern European countries in the fields Philosophy of Technology, Technology Assessment, Sustainable Development and Information Society.*



Prof. Dermot BRABAZON

Full Prof. of Materials Science and
Engineering
Dublin City University, Ireland

Dermot Brabazon holds a Full Professorship of Materials Science and Engineering in the School of Mechanical Engineering at Dublin City University (DCU). He received his BEng (Mechanical Engineering) and PhD (Materials Science) from University College Dublin. From 1995 to 2000 he worked with Materials Ireland, a state materials science research center. Since 2012, he has been Director of the **Advanced Processing Technology Research Centre** at DCU; was co-founder in 2017 and is deputy Director of the **I-Form, Advanced Manufacturing Research Centre**; and established in 2019 and is Director (RoI) of the **Advanced Metallic Systems-Centre for Doctoral Training**.



Prof. Hafiz T.A. KHAN

Professor of Public Health
& Statistics at the University
of West London
Associate Professorial
Fellow at the Oxford
Institute of Population
Ageing
United Kingdom

Hafiz T.A. Khan is currently a Professor of Public Health & Statistics at the University of West London (<https://www.uwl.ac.uk/users/hafiz-khan>) and an Associate Professorial Fellow at the Oxford Institute of Population Ageing, University of Oxford, UK. He trained as a statistician and earned a PhD in Applied Statistics in 2006 from Edinburgh Napier University in Scotland. He began his teaching career at the University of Dhaka in 1991. Subsequently, he has worked at several academic institutions notably, Edinburgh Napier University in Scotland, the International Institute for Applied Systems Analysis in Austria, the National University of Singapore, the University of Oxford, Middlesex University London, Birmingham City University, and University of West London. For the last three decades, he has been involved in teaching Applied Statistics, Public Health, Demography, Health Economics, and Research methods at various institutions. His principal research interests lie in the broader areas of population and development including population ageing, health and well-being in later life with special focus on loneliness, multi-morbidity, long-term care and support provisions. He has written extensively on population, health and development related issues and published research articles in journals, working papers and book chapters on health and population related issues (<https://scholar.google.co.uk/citations?user=z8-PmZcAAAAJ&hl=en>).

Professor Khan is a Chartered Statistician of the Royal Statistical Society and a Fellow of Royal Society for Public Health in the UK

Day 1. THURSDAY, November 11th, 2021

Microsoft Teams Channel for the Opening
and Closing Ceremonies.
Conference splits into parallel tracks.

DETAILED PROGRAM of Parallel sessions

Time	Track 1: ENTREPRENEURSHIP AND INNOVATION Chairs: Cezar SCARLAT, Alexandra IOANID	Track 2: TECHNOLOGY AND COMPETITIVENESS Chairs: Dan DUMITRIU, Mirona POPESCU	Track 3: PEOPLE, ORGANIZATIONS AND CHANGE MANAGEMENT Chairs: Radu STANCIU, Olga BUCOVETCHI	Track 4: DEVELOPMENT STRATEGIES AND ENVIRONMENT Chairs: Bogdan FLEACA Georgiana MOICEANU
13:00 – 14:00	Massimo POLLIFRONI, Gheorghe MILITARU, Adrian IOANA, Riccardo POLLIFRONI, Economies and Pandemics. What Can Be the Key Drivers of the Resilient Enterprise	Jilan Atef KESHTA, May SALAH, Investigating the impact of digitalization on Egyptian seaports performance: Case study on Damietta port	Sherin ELBENDARY, Sara ELGAZZAR, Sarah EL GAMAL, Developing A Model of Knowledge Management to Enhance the TQM in the Egyptian Maritime Sector	Radovan DRÁB, Tomáš ŠTOFA, Peter DŽUPKA, Bike-Sharing as A Key to Sustainable Travel in A City?
	Cezar SCARLAT, The Triadic and Multi-Triad Models: Typology and Potential for Entrepreneurship and Business Management Studies	Victor VEVERA, Carmen-Elena CÎRNU, Alexandru GEORGESCU, Silviu NATE, Critical Infrastructure Protection - Resilience in An Uncertain Future	Ahmed E. Barakat, Perspectives in the Impact of Omni Channels Retailing on Customer Loyalty in the Egyptian Retail Market.	Mohamed Hassan GAMIL, Mohamed El-Barky SAHAR, The Impact of LEAN Production and Sustainable Marketing on Supply Chain Sustainability in the Food Sector. A pilot study
	Manuela EPURE, Dababrata CHOWDHURY, Measuring Innovation at the Firm Level: An Exploratory Experiment.	Ioan Cristian MUSTATA, Stevan STANKOVSKI, Anabela C. ALVES, Erwin RAUCH, Carina PIMENTEL and Bernd M. ZUNK, Development of competencies through digital enabled business simulations: findings from a case study of the TOPSIM general management simulation	Mădălina-Ioana BĂDILĂ, Lucian-Ionel CIOCA, Standards Utility in a Public Institution During a Pandemic	Vasile AVRAM, Augustin SEMENESCU, Adrian IOANA, Resit UNAL, Dragoş MARCU, Evolution of Non-Ferrous Metals Production, Consumption and Prices in the World Market for the Third Millennium
14:00 – 15:00	Ciprian MANEA, Iuxel VIJIAC, Augustin SEMENESCU, Studies Regarding the Access of Entrepreneurs to Research Infrastructures Funded by EU	Elena Niculina DRĂGOI, Gabriel Dan SUDITU, Mircea-Teodor NECHITA, Artificial Intelligence Based Modelling and Optimization of a Hybrid Equipment for Wastewater Treatment	Victor CONON, Augustin SEMENESCU, The Key Role of the Ophthalmologist in an Innovative Business Model in The Optical Medical Devices Market in Romania	Adrian IOANA, Vasile AVRAM, Augustin SEMENESCU, Management Elements Applicable in the Production of Non-Ferrous Alloys
	Ciprian MANEA, Gabriela IGNAT, Augustin SEMENESCU, Studies on Innovative Management Regarding the Level of Financial Sustainability of Start-Ups	Vladimir GHIŢĂ, Gheorghe MILITARU, The Design of an Application That Automates Client Access to Health Insurance Using Artificial Intelligence	Victor CONON, Augustin SEMENESCU, The transition from traditional marketing to digital marketing on the market of optical medical devices in Romania	Alexandru LAZAROV, Loredana MANASIA, Alexandra IOANID, Augustin SEMENESCU, Universities as Drivers of Sustainability in the Context of 2030 Agenda
	Andreea-Mihaela ROTĂRESCU, Bogdan FLEACĂ, Elena FLEACĂ, Theoretical Insights on ecological innovations challenges in the oil industry in Romania	Cristian MUSTATA, Ioana MUSTATA, Voichița GHENGHEA, Sissi CLOSS, Success Factors and Competence-Profile for UX Writing. Case Study General Management Simulation	D.F. MARCU, B FLOREA, A. IOANA, A. SEMENESCU, Monica CRACIUNICA, M. CIURDAS, G. IACOB, F. NICULESCU, R.M. IORDACHESCU, Study on the Social and Economic Impact of Covid 19 on Education in University	Alexandru LAZAROV, Alexandra IOANID, Augustin SEMENESCU, Education for Sustainable Development in Romanian Higher Education Landscape

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15:00 – 16:00	Cezar SCARLAT, Gabriela-Georgiana DUMITRACHE, Laila ALFARRA, Ștefania ARMĂȘELU, A Two-Face Mirror: Testing the Tests. Assessing the Students’ Entrepreneurial Skills	Bogdan FLOREA, Dragos Florin MARCU, Adrian IOANA, Augustin SEMENESCU, Roxana IORDACHESCU, Mihai BUTU, Gheorghe IACOB, Florentina NICULESCU, The Management of Command and Control Technology in the Cloud for Monitoring Aggregates in Materials Industry	Dan Andrei PANDURU, Cezar SCARLAT, Driver Factors for Managing Operations in the Oil and Gas Industry.	Iulian-Claudiu DUȚU, Tiberiu AXINTE, Ionaș-Cătălin DUMITRESCU, Oana VLĂDUȚ, Mihaela-Florentina DUȚU, An Energy Efficient Approach on An Electro-Hydraulic Driving System for Public Utility Works Vehicles
	Gabriela Doina STĂNCIULESCU, Cezar SCARLAT, The Company Within Industry: Lessons Learnt by Conducting Swot Analysis in the Romanian Book Publishing Industry	Denis IORGA, Irina TOMA, Mihnea Andrei CĂLIN, Gheorghe MILITARU, Analysing COVID-19 Impact on Attitudes Towards Artificial Intelligence Technologies in Newspapers	Dan Andrei PANDURU, Cezar SCARLAT, Implementing Strategic Change Initiatives in A Romanian Oil and Gas Company Using Social Networks. The Power of the Informal Leader.	Oana VLADUT, Iulian-Claudiu DUTU, Petruta MIHAI, Mihaela-Florentina DUTU, Maria-Valia MIHAI, Use of “Value Analysis” Method for An Energy Efficient Automotive Product
	Andreea Maria Gabriela MILITARU, Bogdan FLEACĂ, The Analysis of Open Innovation Trends in the Context of Worldwide Pandemic Crisis	Lucia – Cristina FARKAȘ, Digital transformation maturity models	Cătălina – Monica ALEXE, Cătălin – George ALEXE, The Challenges of Developing New Skills in the 21st Century	D. F. MARCU, B FLOREA, A. SEMENESCU, A. IOANA, G. IACOB, F. NICULESCU, M. BUTU, R.M. IORDACHESCU, Monica CRACIUNICA, Study on the Development of Economic Activities Aimed at Recovering Metals from Used Batteries.
16:00 – 17:00	Gabriela Doina STĂNCIULESCU, Considerations on Defining the Concept of Family Business	Marie GRENIER, Corina AGARICI, Răzvan Mihai DOBRESCU, How Fintechs Are Redefining the Future of Banking	Constantin ANGHELACHE, Mădălina-Gabriela ANGHEL, Ștefan Virgil IACOB, Constraints That May Influence Management in the Efficient Placement of Securities Portfolios on the Capital Market	Georgiana MOICEANU, Andreea BARBU, Mirona POPESCU, Olivia NEGOIȚĂ, Claudia Monica DUMITRA, Waste Management Facts Overview: Wastes and Recycling
	Georgian ANDREI, Gheorghe MILITARU, Raluca-Georgiana POPA, Investigating Customers' Perceptions of Online Sales of Shoes and Apparel: Evidence from Romania	Olivia Doina NEGOIȚĂ, Mihai Valeriu POPESCU, Mirona Ana Maria POPESCU, Anca Alexandra PURCĂREA, Bogdan Dumitru ȚIGĂNOAIA, Establishing the Trust Degree in Information Systems Security from Romanian SMEs	Constantin ANGHELACHE, Mădălina-Gabriela ANGHEL, Ștefan Virgil IACOB, The Concept of Certainty in The Choice of Portfolios - An Important Element in the Management of the Activity	Claudia Monica DUMITRA, Georgiana MOICEANU, Youngs Generation Attitudes Towards Circular Economy
	End of Track 1	Petronela Cristina SIMION, Andreea OLTEANU, Mirona Ana Maria POPESCU, Integrated Management System in the Field of Cyber Security DE Management	Andreea BARBU, Gheorghe MILITARU, Georgiana MOICEANU, Claudiu Adrian PURDESCU, Iustina Cristina COSTEA-MARCU, Ionut-Catalin SAVU Measuring the Efficiency of An Industrial Service Company Through the DEA Analysis. Evidence from Romania	Cristina Teodora BĂLĂCEANU, Florin ALEXE, Perspectives for the Development of the Romanian Economy in the Context of Using Rational Economic Behaviour

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17:00 – 18:00	End of Track 1	Mirona Ana Maria POPESCU, Petronela Cristina SIMION, Iustina Cristina COSTEA-MARCU, Dan DUMITRIU, Analysis of Low-Code Development Platforms	Elisabeta PARASCHIV, Cătălin-George ALEXE, Development of A Software Model for Evaluation of Retail Employee Performance	Cristina-Elena LASCU, The Energy Efficiency Before and Beyond Brexit
		Olivia Doina NEGOIȚĂ, Mirona Ana Maria POPESCU, Georgiana MOICEANU, A Scrum Based Model to Treat Urgent Meetings Within IT Companies	Georgiana MOICEANU, Maria Florentina CIUPITU, Unemployment Rate Analysis in Romania	Beatrice Alexandra ALEXANDRESCU, Dana Corina DESELNICU, The Evolution of Sustainability Strategies in Oil and Gas Industry in Romania
		Olivia Doina NEGOIȚĂ, Mihai Valeriu POPESCU, Mirona Ana Maria POPESCU, Anca Alexandra PURCĂREA, Security Measures Adopted by Romanian Companies	Corina AGARICI, How to Increase Organizational Effectiveness and Move Towards A Goal - Oriented Culture in Banking Industry	Mircea Constantin OPRIS, Dana Corina DESELNICU, Alexandra IOANID, Strategies in Pharmaceutical Companies for R&D Sustainability
18:00 – 19:00	End of Track 1	Ionut-Catalin SAVU, Gheorghe MILITARU, Andreea BARBU, Alexandra IOANID The ACIS Methodology Applied in Determining Critical Processes for A Nuclear Power Plant	Mariana ARSENE, Dana Corina DESELNICU, Sorin ARSENE, The Impact of Strategic Planning on Organizational Performance in Context of the Covid-19 Pandemic	Alexandra IOANID, Alexandru LAZAROV, Augustin SEMENESCU, Dana Corina DESELNICU, The impact of working from home during Covid-19 pandemic on Romanian companies and employees
		Raluca-Georgiana POPA, Sorin-Cristian IONESCU, Comparative Study of Knowledge Level Attesting Platforms	Liliana DUMITRESCU, Dana Corina DESELNICU, Bogdan DANCIU, Interrelation of the Professional Stress Dimensions	
		End of Track 2	Liliana DUMITRESCU, Dana Corina DESELNICU, Bogdan DANCIU, Affective Correlates of the Professional Stress <i>End of Track 3</i>	End of Track 4

	<p>Track 3: PEOPLE, ORGANIZATIONS AND CHANGE MANAGEMENT Chair: Dana DESELNICU</p>
10:00 – 10:20	Farinaz ALIPOUR, Olga BUCOVEȚCHI, Ulpia Elena BOTEZATU, Disaster Supply Chain Governance: The Role of Communication in Building Resilient and Sustainable Communities
10:20 – 10:40	Olga BUCOVETCHI, Radu D. STANCIU, Dorel BADEA, Towards the Double Challenge of Modern Managers
10:40 – 11:00	Natalia MANEA, Corina – Ionela DUMITRESCU, Nicoleta NICULESCU, Răzvan – Mihai DOBRESCU, Dumitru GOLDBACH, Iuliana GRECU, UPB Students’ Satisfaction Regarding the Online Learning Platforms
11:00 – 11:20	Natalia MANEA, Corina – Ionela DUMITRESCU, Nicoleta NICULESCU, Răzvan – Mihai DOBRESCU, Răzvan – Marian MARINESCU, Iuliana GRECU, Dumitru GOLDBACH, Starting a Business after Losing a Job because of the Covid 19 Pandemic: Motivation and Perception. A Quantitative Analysis
11:20 – 11:40	Eugen Bruno Ștefan, The Effects of Telework on Employees’ Health
11:40 – 12:00	Alexandru ȚUCU, Anca-Alexandra PURCĂREA, George-Cătălin CRIȘAN, Analysis of the Perception of the Importance of Legal Authority (ITM) Controls in Motivating Compliance with OHS Requirements in Rural Small and Microenterprises
12:00 – 12:20	Bogdan DANCIU, Dana Corina DESELNICU, Liliana DUMITRESCU, Variables Related to Professional Performance
12:20 – 12:40	Bogdan DANCIU, Dana Corina DESELNICU, Liliana DUMITRESCU, Correlates of Professional Satisfaction
12:40 – 13:00	Ana Maria IANOSI, Analysis of Different Codes Used in Reporting Systems
	End of Track 3
13:00 – 14:00	Closing Ceremony