



IS20

18th International Scientific
Conference on Industrial Systems
Industrial Innovation in Digital Age

**CONFERENCE
PROGRAM**

Novi Sad
October 7-9, 2020

Wednesday

09:00 – 10:00

Opening ceremony,
Welcome Address

I-16 (First floor)
(University Rectorate)

Bojan Lalić
General Chair

Tribute lecture to founder of School for Industrial Engineering and Management and founder of the conference "Industrial Systems" - Academician Dragutin Zelenović

Iztok Palčič
Keynote Speaker

Industry 4.0 Readiness Index

Wednesday

10:15 – 11:45

Production Systems I

Session chair: Aleksandar Rikalović

I-16 (First floor)
(University Rectorate)

Lozica Ivanović, Blaža Stojanović, Milan Rackov, Marko Penčić, Maja Čavić, Slavica Miladinović

Design and Development of Medical Devices

Bojana Bajić, Nikola Suzić, Nenad Simeunović, Slobodan Morača, Aleksandar Rikalović

Towards Real-time Data Analytics Application for Industry 4.0

Đerđ Horvat, Uglješa Marjanović, Marko Pavlović, Slavko Rakić

The Path towards Industry 4.0: Methodology for Serbian Manufacturing Industry

Darko Čapko, Slavica Medić, **Nedeljko Stojaković**, Tatjana Grbić

Optimization of the number of active servers and break schedule: A case study

Tanja Todorović, Nenad Medić, Zoran Anišić, Nemanja Tasić, Danijela Ćirić, Bojan Lalić

Industry 4.0 enablers: Implementation of organisational concepts as a support for technological improvements of manufacturing companies

Wednesday

10:15 – 11:45

Engineering Management I

Session chair: Jelena Spajić

I-16 (First floor)
(University Rectorate)

Bojana Sokolović, Ivana Katić, Andrea Ivanišević, Alpar Lošonc

Creating organizational sustainability – oriented innovative capabilities

Alpar Lošonc, **Andrea Ivanišević**, Mladen Radišić, Ivana Katić

Collective aspects of capability-based innovating firm

Bojan Jovanovski, Radmil Polenakovikj, Ivana Stankovska, Trajče Velkovski, Bojan Jovanovski

Innovativeness of micro and small enterprises – Are their innovation drivers different?

Jelena Raut, Slavica Mitrović Veljković, Boban Melović, Eda Ribarić Čučković, Đorđe Ćelić

Analysis of the influential elements of the entrepreneurial ecosystem

Petar Vrgović, Branislav Stevanov, Predrag Vidiciki

Responsible research and innovation in Industrial systems – an overview and implications for companies who strive to work for and with society

Wednesday, October 7, 2020

Wednesday

12:00 – 13:30

Information Management and Communication Systems I

Session chair: Sonja Ristić

I-16 (First floor)
(University Rectorate)

Rogério Dionísio, Teodora Lolić, Pedro Torres

Radio Interference Analysis of Industrial Wireless Networks: from Legacy Systems to New Standards

Danilo Nikolić, Dušanka Dakić, Aleksandra Kolak, Dajana Narandžić, Anja Janković

Integration of game-based software tools into higher education

Darko Stefanovic, **Sara Havzi**, Ivana Spasojevic, Teodora Lolić, Sonja Ristic

Software Tools to Support Visualising Systematic Literature Review

Julija Švonja, Sara Havzi, Ivana Spasojević

E-learning Platforms in Higher Education – An Overview of Leading Software and Evidence from University of Novi Sad

Teodora Lolić, Rogério Dionísio, Darko Stefanović, Dušanka Dakić, Sara Havzi

Learning Environment Digital Transformation: Systematic Literature Review

Miroslav Stefanović, Đorđe Pržulj, Sonja Ristić

Overview of Application of Blockchain Technology in e-Government

Robert Ramač, **Nebojša Taušan**, Sávio Freire, Nicolli Rios, Manoel Mendonça, Rodrigo Spinola, Vladimir Mandić

Technical Debt Payment Practices and Rationales Behind Payment Avoidance in the Serbian IT Industry

Wednesday

12:00 – 13:30

Engineering Management II

Session chair: Nenad Simeunović

I-16 (First floor)
(University Rectorate)

Benjamin Dorn, **Julian Germani**, Michael Geywitz, Manuel Remlinger, Felix Schuessler, Juergen Seitz

Analysis of the Prediction Quality of Technology Developments based on Gartner Hype Cycles for Emerging Technologies

Boris Agarski, Đorđe Vukelić, Milana Ilić Mićunović, Igor Budak

Evaluation of Impacts on Worker from Fixture Production with Life Cycle Assessment

Francesco Facchini, Salvatore Digiesi, **Andrea Lucchese**, Giovanni Mummolo

A Model for the evaluation of the information processing rate of smart operators

Christoph Szedlak, Holger Reinemann, Bert Leyendecker

Deduction of Digital Transformation Strategies from Maturity Models

Milena Rajić, Rado Maksimović, Peđa Milosavljević, Dragan Pavlović

Energy Flow Model in Industrial Environment

Gorana Milinčić Stančić, Đorđe Ćosić, Ljiljana Popović, Tanja Novaković

The influence of COVID 19 pandemic on cogeneration biogas plant operation - Business impact analysis

Wednesday

14:30 – 16:00

Mechatronics, Robotics and Automation

Session chair: Slobodan Dudić

I-16 (First floor)
(University Rectorate)

Vule Reljić, Želimir Trišić,
Dragan Šešlija, **Ivana Milenković**

Improving the Reliability of Pneumatic Control Systems by Using Remotely-controlled One-Way Flow Control Valve

Vule Reljić, **Petar Knežević**,
Dragan Šešlija, Slobodan Dudić

Improving the Energy Efficiency of Pneumatic Control Systems by Using Remotely-controlled Pressure Regulator

Srđan Tegeltija, Gordana Ostojić, **Ivana Šenk**,
Laslo Tarjan, Stevan Stankovski

IoT-based delivery system in state of emergency

Nataša Radaković, Ivana Šenk

Deep Autoencoder Based Leakage Detection in Water Distribution SCADA Systems

Dimitar Chakarov, Ivanka Veneva,
Pavel Venev, Georgi Katsarov, **Mihail Tsveov**

A pneumatically driven exoskeleton for upper limb rehabilitation: design and experiments

Marko Penčić, **Maja Čavić**, Dijana Čavić, Milan Rackov,
Zhenli Lu, Marko Orošnjak, Velibor Karanović

A Novel 2 DOFs Eyebrows Mechanism for Expressing Non-verbal Robot Communication

Wednesday

14:30 – 16:00

Engineering Management III

Session chair: Mladen Radišić

I-16 (First floor)
(University Rectorate)

Miroslav Ferenčak, Dušan Dobromirov, Mladen Radišić

Illiquid markets during the COVID – 19: Blessing or a Curse?

Marko Vuković, Đorđe Čosić

Impact of coronavirus COVID-19 crisis on insurance industry of Serbia

Srđan Janković

Bank controlling in Montenegro: effects of the pandemic crisis on the Montenegrin economy, banking sector and the profitability of banks

Veselin Perović, Bogdan Kuzmanović, Ranko Bojanić,
Ivana Popović, Dalibor Jeličić

The role of controlling in risk reduction in integrated reporting

Jelena Demko-Rihter, Jelena Tadić, **Denis Kušter**

Analysis of Critical Profitability Factors of Serbian Information and Communication Sector

Ranko Bojanić, **Dalibor Jeličić**, Veselin Perović,
Branislav Nerandžić

The role of logistic controlling in process performance measurement in industrial systems

Wednesday, October 7, 2020

Wednesday

16:15 – 17:45

Quality, Effectiveness and Logistics

Session chair: Nebojša Brkljač

I-16 (First floor)
(University Rectorate)

Stana Vasić, Marina Žižakov, Milan Delić,
Dusko Čučković, Ilija Čosić

Nebojša Brkljač, Dragoljub Šević, Stevan Milisavljević,
Marina Žižakov, **Stana Vasić**

Christoph Szedlak, Marcus Branke, Jane Worlitz,
Bert Leyendecker, Ralf Woll

Marko Pavlović, Nenad Medić,
Jelena Čulibrk, Bojan Lalić

Oliver Schmiedbauer, Hans Thomas Maier, **Florian Kaiser**,
Hubert Biedermann

Trajče Velkovski, Jasmina Chaloska, Vladimir Mučenski,
Bojan Jovanovski, Bojan Jovanovski

Vijoleta Vrhovac, **Goran Vujasinović**, Stevan Milisavljević,
Nebojša Brkljač, Slavica Mitrović

**Quality management and innovation performance:
A short literature review**

**Applying the Concepts of Circular Economy and Sustainable Supply
Chains within the Industry 4.0 - Literature Review**

**The Impact of Digitalization on Quality Management in Health
Systems: New Challenges and Opportunities**

**Effect of ISO 14001 on adoption of green technologies in emerging
economies**

**Maintenance- and Strategic Physical Asset Management:
Morphologies of two Connate Concepts**

**Identification of safety indicators in the manufacturing industry in
Republic of North Macedonia**

**Challenges in the functioning of supply chains in the context of the
epidemic caused by Covid 19 virus**

Wednesday

16:15 – 17:45

Engineering Management IV

Session chair: Jelena Demko Rihter

I-16 (First floor)
(University Rectorate)

Aleksandar Vekić, Jelena Borocki,
Kristina Đorđić, **Olivera Cikota**

Aleksandar Vekić, Jelena Femić,
Milica Tišma, Marko Vrška

Vladimir Đaković, Mirjana Sujjić Stameniće, Nebojša Ralević,
Slobodan Radišić, Jozef Kabok

Aleksandra Pavlović, **Milica Njegovan**, Andrea Ivanišević,
Mladen Radišić, Alpar Lošonc

Zhigang Zhang, Yang Xu

Đurađ Grubišić

Ana Nešić, Ivana Katić

European Startup Ecosystem as a Star of Economic Development

Startup opportunities in south-east Europe region

**Foreign Direct Investment and Investment Environment:
A Systematic Approach**

**Foreign Direct Investments in Serbian power sector: A discussion on
investments and impact on economic growth**

**Evolution of a complex system and construction of International
Ecosystem for Innovation and Entrepreneurship under the
background of BRI**

**The Role of Chinese Investments in Central and Eastern Europe
within BRI**

Trust in the modern organization: Success factor in open innovation

Thursday

09:00 – 10:30

Production Systems II

Session chair: Milovan Lazarević

I-16 (First floor)

(University Rectorate)

Bojan Jovanoski, Robert Minovski, Marjan Todorov,
Trajče Velkovski, Bojan Jovanovski

**Integration of value stream mapping & discrete event simulation:
A case study from Lean**

Ivona Jovanović, Ivan Tomašević,
Dragana Stojanović, Barbara Simeunović,
Dragoslav Slović

**Lean approach to lead time reduction in MTO manufacturing:
A case study**

Ivan Tomašević, Dragana Stojanović,
Barbara Simeunović, Ivona Jovanović,
Dragoslav Slović

**The Outcomes of Lean Implementation in High-Mix/Low-Volume
industry – Literature Review**

Andrea Lucchese, Antonella Marino,
Giorgio Mossa, Giovanni Mummolo

**Evaluation of the complexity of cognitive-oriented tasks in planned
maintenance procedures**

Milenko Sekulić, Vlastimir Pejić, Marin Gostimirović,
Dragan Rodić, Anđelko Aleksić

**Optimization of cutting parameters for surface roughness in the ball-
end milling process using genetic algorithm**

Vidosav Majstorović, **Dragan Đuričin**,
Radivoje Mitrović

**Shaping the Future of Serbia's Economy and Manufacturing: Industry
4.0 and Related Issues**

Thursday

09:00 – 10:30

Engineering Management V

Session chair: Andrea Ivanišević

I-16 (First floor)

(University Rectorate)

Jelena Miličević, Nemanja Sremčev, Ilija Ćosić,
Milovan Lazarević, Jovan Mandić

**Online university education and technologies in support
of traditional education**

Jelena Ćurčić, Anja Jakšić,
Ksenija Mitrović, Jelena Spajić,
Branislav Bogojević

Distance learning in higher education during the COVID-19 pandemic

Julija Švonja

**The validity of adopting the Knowledge Management Strategy as a
development policy of the University of Novi Sad**

Ljubica Duđak, Leposava Grubić Nešić,
Bojana Jakanović

**Individual and organizational knowledge as the main levers of busi-
ness in the knowledge economy**

Tatjana Savić-Šikoparija, Ljubica Duđak,
Tamara Bojanić

**The impact of the type of education on attitudes regards corporate
responsibility towards employees**

Thursday, October 8, 2020

Thursday

10:45 – 12:15

Engineering Management VI

Session chair: Danijela Gračanin

I-16 (First floor)

(University Rectorate)

Bojana Milić, Jelena Spajić,
Dunja Bošković, Danijela Lalić

Iva Šidanin, **Milica Njegovan**

Biljana Ratković Njegovan, **Sonja Bunčić**, Iva Šidanin

Ljubica Duđak, **Marija Pantelić**, Tatjana Savić-Šikoparija

Nikola Zivlak, Shiyuan Zhang, Yueqi Shi

Martin Riestler, Fazel Ansari,
Michael Foerster, Kurt Matyas

Aljoša Aleksić, Milan Delić,
Nemanja Tasić, Bojan Lalić

Social Media Advertising During the Pandemic: Online Retailers in Serbia

The power of media message in advertising of medical preparations

Media and sport: mutual benefit

Characteristics of organizational culture that supports CSR

Digital Marketing in China - Weibo and Fan Economy

A Procedural Model for Utilizing Case-Based Reasoning in After-Sales Management

Predicting customer changes in mass customised construction industry

Thursday

10:45 – 12:15

Information Management and Communication Systems II

Session chair: Milan Mirković

I-16 (First floor)

(University Rectorate)

Marko Arsenović, Srđan Sladojević, **Katarina Gavrilov**,
Andraš Anderla, Miroslava Sladojević

Marko Arsenović, Srđan Sladojević, **Stefan Orčić**,
Andraš Anderla, Miroslava Sladojević

Andrea Gutai, Dunja Sekulić, Ivana Spasojević

Nikola Luburić, Goran Sladić,
Milan Stojkov, Nikola Dalčeković

Uglješa Marjanović, Davide Taibi, Pedro Cabral,
Laimute Urbisiene, Agim Kasaj, Susana Marques

Manuel Leon-Urrutia, Davide Taibi, Vera Pospelova,
Sergio Splendore, Laimute Urbisiene, **Uglješa Marjanović**

Nikola Dalčeković, Goran Sladić,
Nikola Luburić, Milan Stojkov

Application of deep learning for automated arrhythmia detection using ECG signals

Detection of COVID-19 cases by utilizing deep learning algorithms on CT images

Metal Artefact Reduction from CT images using Matlab

Scaling the Security Development Lifecycle: From Startup IoT to Smart City Solutions

Digital transformation missing ingredients: Data Literacy

Data Literacy: An essential skill for the industry

Automating multidimensional security compliance for cloud-based industry 4.0

Thursday

12:15 – 12:45

Keynote Lecture

Prof. Dr. Feng Gengzhong
Dean of the School of Management
Xi'an Jiaotong University
Keynote Speaker

Future of management science and industrial engineering

Thursday

13:30 – 15:00

Engineering Management VII

Session chair: Branislav Stevanov

I-16 (First floor)

(University Rectorate)

Danijela Ćirić, **Marijana Topo**, Danijela Gračanin,
Angela Fajsi, Miroslav Vujičić

Angela Fajsi, Slobodan Morača,
Marko Milosavljević

Mirjana Jakanović, Obrad Spaić,
Aleksandra Koprivica

Danijela Ćirić, Milan Delić, Nenad Medić,
Tanja Todorović, Jelena Ćurčić

Tamara Bojanić, Branislav Nerandžić,
Branislav Stevanov, Danijela Gračanin

Marko Gudelj, Sanja Cvijanović, **Marina Žižakov**,
Zdravko Tešić, Bogdan Kuzmanović

Anja Janković, **Federico Adrodegari**,
Nicola Saccani, Nenad Simeunović

Project Management skill set challenges in Industry 4.0

Project management challenges in implementing agile methods in manufacturing SMEs

The influence of the project mature organization factors on the agile transformation

Exploring the relationship between project management risks and market conditions

Fundamentals of the Integrated Business Risk Management Model in Business Processes

Business process management improvement and a new model for performance management

Reshaping big data management for servitization: a new framework for industrial companies

Thursday

13:30 – 15:00

Information Management and Communication Systems III

Session chair: Andraš Anderla

I-16 (First floor)

(University Rectorate)

Miroslav Zarić, Željko Vuković,
Darko Jocić, Teodora Mitrović

Kornelije Rabuzin, Nikola Modrušan,
Snježana Križanić, Robert Kelemen

Marko Bojkić, Đorđe Pržulj, Miroslav Stefanović

Igor Kalin, Milan Mirković, Aleksandra Kolak

Aleksandra Kolak, Milan Mirković,
Danilo Nikolić, Igor Kalin

Darko Stefanović, **Dušanka Dakić**, Aleksandar Ivić

Andrej Katin, Valentina Lenarduzzi,
Davide Taibi, Vladimir Mandić

Process Driven Information System and Smart City Technologies Opportunities for Computer Aided Dispatch for Fire Service

Process Mining in Public Procurement in Croatia

Possible application of service-oriented architecture in domain of land administration system

Fake news detection on social networks – a brief overview of methods and approaches

Multimodal techniques and methods in affective computing – a brief overview

Business Process Management and E-government Systems

On the Technical Debt Prioritization and Cost Estimation with SonarQube tool

Thursday, October 8, 2020

Thursday

15:00 – 15:30

Closing ceremony

I-16 (First floor)
(University Rectorate)

Bojan Lalić
General Chair

Closing Remarks