



*AKADEMIJA NAUKA I UMJETNOSTI BOSNE I HERCEGOVINE*  
*АКАДЕМИЈА НАУКА И УМЈЕТНОСТИ БОСНЕ И ХЕРЦЕГОВИНЕ*  
*ACADEMY OF SCIENCES AND ARTS OF BOSNIA AND HERZEGOVINA*

4<sup>th</sup> International Scientific Conference

**INDUSTRY OF THE FUTURE:  
FROM INDUSTRY 4.0 TO INDUSTRY 5.0**  
**Integration of Humans and Technology**

***CONFERENCE  
PROGRAM***

October 2–3, 2025  
Academy of Sciences and Arts of Bosnia and Herzegovina,  
Bistrik 7, Sarajevo



*4<sup>th</sup> International Scientific Conference*

*INDUSTRY OF THE FUTURE: FROM INDUSTRY 4.0 TO INDUSTRY 5.0 - Integration of technology and people*

*2<sup>nd</sup>–3<sup>rd</sup> October 2025, ANUBiH, Sarajevo, Bosnia and Herzegovina*

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***Department of Technical Sciences***

*4<sup>th</sup> International Scientific Conference*

***INDUSTRY OF THE FUTURE: FROM INDUSTRY 4.0  
TO INDUSTRY 5.0 - Integration of technology and people***

# **CONFERENCE PROGRAM**

*2<sup>nd</sup>–3<sup>rd</sup> October 2025*

*Sarajevo, Bosnia and Herzegovina*

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*INDUSTRY OF THE FUTURE: FROM INDUSTRY 4.0 TO INDUSTRY 5.0 - Integration of technology and people*

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## **CONFERENCE PROGRAM**

*Thursday, 2<sup>nd</sup> October 2025*

*Registration of participants and Welcome drink 18.00 h*

*Hall ANUBiH, Bistrik 7, Sarajevo*

*Friday, 3<sup>rd</sup> October 2025*

*Registration of participants*

*8:30–9:30 h*

*Hall ANUBiH, Bistrik 7, Sarajevo*

*Opening Conference*

***INDUSTRY OF THE FUTURE: FROM INDUSTRY 4.0 TO  
INDUSTRY 5.0 - Integration of technology and people***

*Welcoming speech*

*Hall ANUBiH, Bistrik 7, Sarajevo*

*9:30–9:45 h*

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**Moderators:** Prof. Isak Karabegović, PhD; Prof. Lejla Banjanović–Mehmedović, PhD; Prof. Sead Pašić, PhD; Prof. Samir Lemeš, PhD; Prof. Safet Isić, PhD

**Secretary:** Prof. Samir Vojić, PhD; Prof. Amra Bratovčić, PhD;  
Prof. Mirha Bičo Ćar, PhD

**9:45** INTEGRATION OF ROBOTIC TECHNOLOGY AND HUMAN CREATIVITY:  
FROM AUTOMATION TO HUMANIZATION

Isak Karabegović, Ermin Husak, Samir Vojić, Edina Karabegović,  
Mehmed Mahmić

**10:00** COGNITIVE AND VISUAL-MOTOR ROBOTIC MANIPULATION IN  
INDUSTRIAL ENVIRONMENTS: A PUZZLE ASSEMBLY PARADIGM  
Aleksandar Rodić, Jelena Ilić, Natalija Dimitrijević, Aleksandar  
Milenković

**10:15** TOWARDS A SMART MAINTENANCE MODEL  
Vidosav Majstorovic, Vladimir Simeunovic, Dragan Stosic, Sonja  
Dimitrijevic, Filip Todorovic

**10:30** ENHANCING HUMAN-ROBOT COLLABORATION THROUGH  
MULTIMODAL DATA AND ROBOT LEARNING IN HUMAN-  
CENTERED INDUSTRY 5.0 SYSTEMS  
Lejla Banjanović-Mehmedović

**10:45** “TEXT TO 3D MODEL” ARTIFICIAL INTELLIGENCE (AI) AND  
ADDITIVE MANUFACTURING (AM) IN THE FIELD OF PRODUCT  
DESIGN, DEVELOPMENT AND MANUFACTURING  
Adis J. Muminović

**11:00** FROM AUTOMATION TO HUMAN-CENTRIC INNOVATION:  
EMBRACING INDUSTRY 5.0 IN CHEMICAL MANUFACTURING  
Amra Bratovčić

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**11:15** *INDUSTRY 4.0 and INDUSTRY 5.0: EVOLUTION OF SYSTEM STRUCTURES FROM DIGITALIZATION AND CYBERNATION TO COGNITIZATION*

*Elvis Hozdić*

**11:30** *EVALUATING THE ENVIRONMENTAL IMPACT OF AI AND INFORMATION TECHNOLOGIES*

*Samir Lemeš*

**PANEL DISCUSSION:  
DEVELOPMENT AND IMPLEMENTATION OF SMART  
MANUFACTURING - Integrating humans and technology**

**Panelists:** *Prof. Sadko Mandžuka, PhD; Prof. Zoran Miljković, PhD;  
Prof. Lejla Banjanović-Mehmedović, PhD; Prof. Darko Lovrec, PhD;  
Prof. Lejla Gurbeta Pokvić, PhD*

**Moderator:** *Prof. Maida Čohodar Huskić, PhD*

*11:30–12:30 h*

*Coffee break – Lunch break*

*12:45–14:00 h*

**14:00** *AUGMENTED REALITY IN INDUSTRY 4.0/5.0*

*Mijodrag Milošević, Mladen Vuković, Dejan Lukić*

**14:15** *COEXISTENCE AND INTEGRATION OF ARTIFICIAL INTELLIGENCE AND HUMANS IN TRAFFIC ENGINEERING*

*Osman Lindov*

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**14:30** *MATHEMATICAL MODELING BEHIND RECURRENT NEURAL NETWORKS*

*Amina Radončić, Isak Karabegović*

**14:45** *MACHINE LEARNING MODELLING OF CO<sub>2</sub> EMISSIONS FOR SUSTAINABLE DEVELOPMENT: A COMPARATIVE STUDY OF BOSNIA AND HERZEGOVINA, CROATIA, AND SLOVENIA*

*Mirza Pašić, Nejra Biber*

**15:00** *WOMEN AND INDUSTRY 5.0: EXPANSE FOR INCLUSION AND DIVERSITY IN THE CONTEXT OF DEVELOPING COUNTRY*

*Munira Šestić, Mirha Bičo Ćar, Elvir Šahić*

**15:15** *DRONE-BASED MACHINE LEARNING APPROACH FOR ACCURATE WHEAT YIELD PREDICTION*

*Madžida Hundur Hiyari, Nejra Merdović, Merima Smajlhodžić  
Deljo, Lemana Spahić, Basil Bošnjak, Lejla Gurbeta Pokvić*

**15:30** *ACCELERATING INNOVATION IN HEALTHCARE THROUGH HIGH-PERFORMANCE COMPUTING: APPLICATIONS AND FUTURE PERSPECTIVES*

*Adna Softić, Sarah Spahić, Amra Džuho, Ana Lalović, Adna Ašić,  
Lejla Gurbeta Pokvić*

*Discussion - Conclusions*

*16:00–17:00 h*

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***THE VENUE OF THE CONFERENCE***

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*Bistrik 7, Sarajevo*

*Bosnia and Herzegovina*

*SARAJEVO*

***THE VENUE OF THE CONFERENCE***



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## INDUSTRY OF THE FUTURE: FROM INDUSTRY 4.0 TO INDUSTRY 5.0 - Integration of technology and people 2<sup>nd</sup>–3<sup>rd</sup> October 2025

Academy of Sciences and Arts of Bosnia and Herzegovina

Bistrik 7, Sarajevo

Bosnia and Herzegovina

SARAJEVO



Academy of Sciences and Arts  
of Bosnia and Herzegovina  
St. Bistrik 7  
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