

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

5th International Scientific Conference

SMART MANUFACTURING ON THE HORIZON: A Conceptual Shift from Industry 4.0 to Industry 5.0

CONFERENCE PROGRAM

October 1st–2nd, 2026
Academy of Sciences and Arts of Bosnia and Herzegovina,
Bistrik 7, 71000 Sarajevo



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Department of Technical Sciences

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1st–2nd October 2026
Sarajevo, Bosnia and Herzegovina

CONFERENCE PROGRAM

Thursday, 1st October 2026
Registration of participants and Welcome drink 18.00 h
Hall ANUBiH, Bistrik 7, Sarajevo

Friday, 2nd October 2026
Registration of participants
8:30–9:30 h
Hall ***ANUBiH, Bistrik 7, Sarajevo***

Opening Conference
SMART MANUFACTURING ON THE HORIZON:
A Conceptual Shift from Industry 4.0 to Industry 5.0

Welcoming speech
Hall ***ANUBiH, Bistrik 7, Sarajevo***
9:30–9:45 h

***Moderators**: Prof. Isak Karabegović, PhD; Prof. Sead Pašić, PhD; Prof. Lejla Banjanović-Mehmedović; Prof. Samir Vojić, PhD; Prof. Mehmed Mahmić, PhD; Prof. Samir Lemeš, PhD*

***Secretare:** Prof. Ermin Husak, PhD; Prof. Safet Isić, PhD; Prof. Amra Bratovčić, PhD; prof. Mirha Bičo Ćar PhD*

9:45 *THE FUTURE OF SMART MANUFACTURING - INTEGRATION, INTELLIGENCE AND INNOVATION*
Vidosav Majstorović

10:00 *ARCHITECTURE OF INDUSTRY 4.0 SMART MANUFACTURING SYSTEMS BASED ON MOBILE AND COLLABORATIVE ROBOTICS*
Isak Karabegović, Ermin Husak, Mehmed Mahmić, Samir Vojić, Isić Safet, Pjereta Agalliu

10:15 *APPLICATION OF AUGMENTED REALITY IN COLLABORATIVE ROBOTS*
Ermin Husak

10:30 *SMART MANUFACTURING ENABLED BY LLM AI AGENTS AND RETRIEVAL-AUGMENTED GENERATION*
Mijodrag Milošević

10:45 *A HUMAN-CENTRIC DIGITAL TWIN FRAMEWORK FOR INDUSTRY 5.0 IN TRANSPORT AND LOGISTICS*
Osman Lindov

11:00 *DIGITALIZATION AND THE CIRCULAR ECONOMY IN BOSNIA AND HERZEGOVINA: CHALLENGES OF THE TWIN TRANSITION IN A TRANSITIONAL ECONOMY*
Munira Šestić, Mirha Bičo Ćar, Anes Hrnjić, Amila Bijedić

11:15 *INDUSTRY 4.0 AND GREEN CHEMISTRY INTEGRATION FOR SUSTAINABLE SMART CHEMICAL MANUFACTURING*
Amra Bratovčić

11:30 *AN INTEGRATED MODEL OF INDUSTRY 4.0 AND INDUSTRY 5.0 FOR QUALITY MANAGEMENT DURING THE ENTIRE LIFE CYCLE OF PLASTIC INJECTION MOLDS*
Dušan Janković, Goran Janković, Zora Joković, Aleksandar Supurović, Vidosav Majstorović

PANEL DISCUSSION:
SHAPING THE FUTURE OF SMART MANUFACTURING:
Integration, Intelligence, and Innovation

Panelists: *Prof. Maida Čohodar Husić, PhD; Prof. Isak Karabegović, PhD; Prof. Lejla Banjanović-Mehmedović, PhD; Prof. Aleksandar Rodić, PhD; Prof. Samir Lemeš, PhD.*
Moderator: *Prof. Amra Bratovčić, PhD*

11:45 – 12:45

Coffee break – Lunch break
13:00–14:00

14:00 *WIRELESS COMMUNICATION LINK OPTIMIZATION IN CYBER-PHYSICAL SYSTEMS USING SMART SENSOR NETWORKS*
Enes Saletović, Malik Kriještorac, Đulaga Hadžić

14:15 *AN EXPLAINABLE ARTIFICIAL INTELLIGENCE FRAMEWORK FOR PREDICTIVE MAINTENANCE USING HYBRID MACHINE LEARNING AND MULTI-TASK TRANSFORMER MODELS*
Milica Tufegdžić

14:30 *EXPLAINABLE AND TRUSTWORTHY AI FOR STEEL PLATES FAULT DETECTION USING SHAP AND LIME*
Nerma Mezetović, Lejla Banjanović-Mehmedović, Isak Karabegović

14:45 *SEMANTIC DATA POLLUTION: A NEW CHALLENGE FOR CYBERSECURITY AND STANDARDIZATION OF AI MODELS IN SMART FACTORIES*
Samir Lemeš

15:00 *CYBER SECURITY OF SMART MANUFACTURING ACCORDING TO THE INDUSTRY 5.0 MODEL: CHALLENGES, SOLUTIONS AND FUTURE DEVELOPMENT DIRECTIONS*
Sonja Dimitrijević, Vidosav D. Majstorović

15:15 *DARK FACTORY VS. HUMANOID FACTORY: TWO DEVELOPMENT DIRECTIONS OF INDUSTRIAL AUTOMATION IN COMPARISON*
Viktorio Malisa

15:30 *DIGITAL COMPETENCE AND TECHNOLOGY ADOPTION IN VOCATIONAL EDUCATION: EVIDENCE FROM BOSNIA AND HERZEGOVINA*
Madžida Hundur Hiyari, Nejra Merdović, Jovana Kepčija Pavlović, Adna Softić, Amra Džuho, Ana Lalović

15:45 *FROM DIGITAL MATURITY ASSESSMENT TO DIGITAL TRANSFORMATION STRATEGY: EVIDENCE FROM SMES IN BOSNIA AND HERZEGOVINA*
Nejra Merdović, Madžida Hundur Hiyari, Adna Softić, Lejla Gurbeta Pokvić

Discussion - Conclusions
16:00–17:00 h

THE VENUE OF THE CONFERENCE
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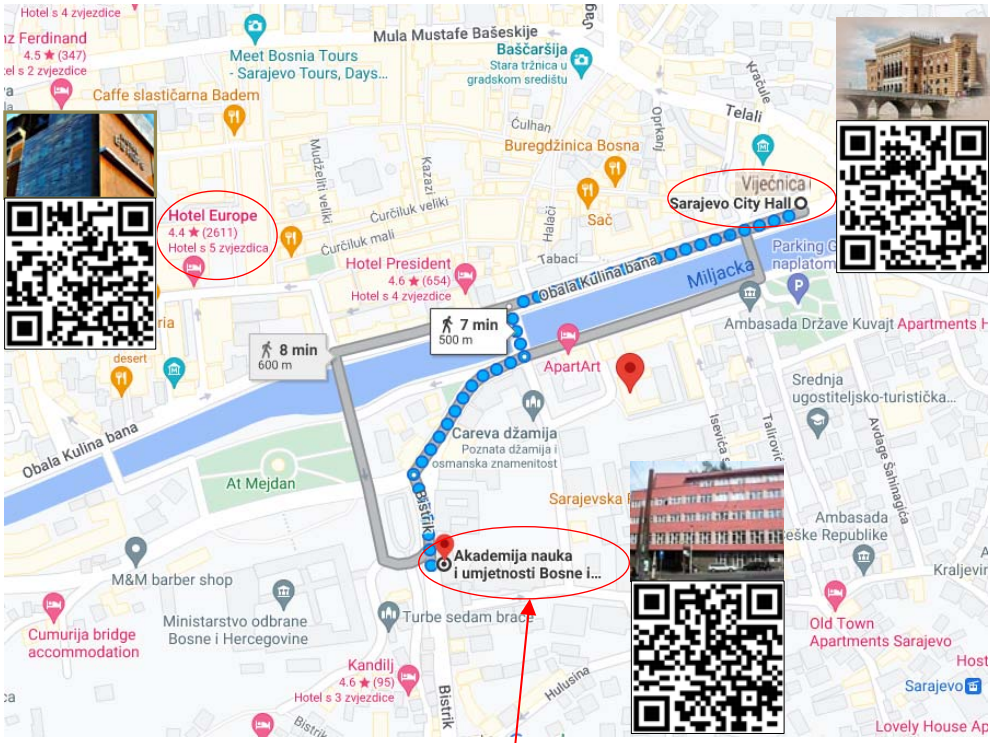
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