АКАДЕМИЈА НАУКА И УМЈЕТНОСТИ
РЕПУБЛИКЕ СРПСКЕ

СРПСКА АКАДЕМИЈА
НАУКА И УМЕТНОСТИ

ALMA MATER
EUROPAEA
THE UNIVERSITY FOR LEADERSHIP

ТЕХНИЧЕСКИ УНИВЕРСИТЕТ
ГАБРОВО

XIX МЕЂУНАРОДНИ НАУЧНИ СКУП
САВРЕМЕНИ МАТЕРИЈАЛИ 2026

ПРОГРАМ РАДА

XIX INTERNATIONAL SCIENTIFIC CONFERENCE
CONTEMPORARY MATERIALS 2026

PROGRAMME

Бања Лука, 10–11. септембар 2026. године
Banja Luka, September 10th to 11th, 2026

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ОРГАНИЗАТОР НАУЧНОГ СКУПА

Академија наука и умјетности Републике Српске

СУОРГАНИЗАТОРИ

Српска академија наука и уметности
Alma Mater Europaea
Технички универзитет Габрово

ПОКРОВИТЕЉ НАУЧНОГ СКУПА

Министарство за научнотехнолошки развој и високо образовање

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Academy of Sciences and Arts of the Republic of Srpska

COORGANIZERS

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UNDER THE PATRONAGE OF

Ministry of Scientific and Technological Development and Higher Education

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Prof. Pero Dugić, Ph.D. (Republic of Srpska)
Prof. Milorad Tomić, Ph.D. (Republic of Srpska)

ЧЕТВРТАК, 10. СЕПТЕМБАР 2026. ГОДИНЕ

- Долазак и смјештај пленарних предавача у хотелу „Босна” у Бањој Луци
- Долазак и смјештај учесника научног скупа који живе изван Бање Луке у хотелима по избору

ПЕТАК, 11. СЕПТЕМБАР 2026. ГОДИНЕ

08.30 Регистрација учесника научног скупа (АНУРС)
09.00 Отварање конференције
09.20 Пленарна предавања
14.00 Постер презентације
15.00 Дискусија
Затварање конференције

THURSDAY, SEPTEMBER 10, 2026.

- Arrival of the plenary speakers and accommodation in the hotel „Bosna” in Banja Luka
- Arrival of the participants and accommodation in the hotels optionally

FRIDAY, SEPTEMBER 11, 2026.

08.30 Registration of the participants in the ASARS
09.00 Opening of the Conference
09.20 Plenary session
14.00 Poster presentations
15.00 Discussion
Closing ceremony

ПЕТАК, 11. СЕПТЕМБАР 2026. ГОДИНЕ

FRIDAY, SEPTEMBER 11, 2026

СВЕЧАНО ОТВАРАЊЕ СКУПА
OPENING CEREMONY
(09.00– 09.20)

- Скуп ће отворити и учеснике поздравити предсједник Владе Републике Српске, др Саво Минић
- The event will be opened and the participants welcomed by the Prime Minister of the Republic of Srpska, Savo Minić, Ph.D.
- Поздравно обраћање гостију
- Welcome speeches of the guests

РАДНИ ДИО СКУПА

WORKING SESSION

(09.20 – 14.00)

ПЛЕНАРНА ПРЕДАВАЊА

PLENARY SESSION

(09.20 – 14.00)

9.20 – 9.40 Nenad Filipović
Testing and modeling of the toxicity for microfluidic devices

9.40 – 10.00 Ljupčo Kocarev
Transformative Path of AI: From AI Agents to Agentic AI

10.00 – 10.20 Janos Santa
Optimizing Production Efficiency Through Lean Six Sigma: A Data-Driven Approach to Variation and Waste Reduction with the support of Artificial Intelligence

10.20 – 10.40 Ivana Radonjić Mitić, Iliya Zhelezarov
Enhancement of Eco- and Energy-Saving Technologies at the Technical University of Gabrovo

10.40 – 11.00 Domenico Guida
From Multibody Modeling to Automatic Machine Code Generation: Experimental Identification and Optimization of Sloshing Dynamics for Pharmaceutical Applications

11.00 – 11.20 Coffee Break

11.20 – 11.40 Ljubomir Majdandžić
Photovoltaic power plant with a capacity of 62.1 kWp on the building of the Croatian Energy Regulatory Agency

11.40 – 12.00 Duško Dudić
Characteristics of AC currents produced by the human body

12.00 – 12.20 Predrag Dašić
Application of artificial intelligence in reliability analysis of technical systems

12.20 – 12.40 Slavica Maletić
Alow Frequency Dielectric Properties of Epoxy-Based Composites Reinforced with Graphite Flakes and Exfoliated Expanded Graphite

12.40 – 13.00 Snežana Papović
The new ionic additives for safer and durable electrolytes in lithium-ion batteries

13.00 – 13.20 Ivan Stević
AI-Supported Management of Polluting Substances from TPP and Production of Green Construction Materials

13.20 – 13.40 Sanja Stojanović
Biomaterials for Regenerative Medicine and Wound Healing: Current Perspectives and Novel Strategies

13.40 – 14.00 Maria Savanović
From Photocatalytic Powders to Reusable Materials: Sustainable Strategies for Water Purification

ПОСТЕР ПРЕЗЕНТАЦИЈЕ
POSTER SESSION

(14.00–15.00)

1. Gorana Mrđan, Dragana Mekić, Suzana Apostolov, Đenđi Vaštag, Borko Matijević
   Study of the Intermolecular Interactions of Para Phenyl Substituted Asymmetrical Biscarbohydrazones

2. Dragana Mekić, Đenđi Vaštag, Gorana Mrđan, Borko Matijević,Suzana Apostolov
   Experimental and Computational Evaluation of Lipophilicity and Ecotoxicity Thiocarbohydrazone Derivatives

3. Suzana Apostolov, Dragana Mekić, Gorana Mrđan, Borko Matijević, Đenđi Vaštag
   RP-TLC Descriptors as Predictors of the Selected Biological Properties of Thiocarbohydrazones

4. Dejana Savić, Milica Balaban, Dajana Janjušević, Sanja Pržulj, Vesna Antić, Aleksandra Tasić
   Brewer's Spent Grain as a Sustainable Bio-Based Adsorbent for the Removal of Selected Pesticides From Aqueous Media

5. Srđan Preradović, Dino Hasanagić, Vesna Antić, Milica Balaban
   Valorization of Brewer's Spent Grain as a Nutrient-Rich By-Product: Influence of Drying Conditions on Its Chemical Composition

6. Dajana Janjušević, Dejana Savić, Milica Balaban, Vesna Antić
   Thermal Behavior of Poly(Lactic Acid) Biocomposites Reinforced with Brewer's Spent Grain

7. Božidar Ilić, Svjetlana Zeljković, Saša Zeljković
   Evaluation of Waste Glass as a Partial Growing Medium Replacement for Horticultural Plants: A Pilot Study

8. Dragana Cerović, Slavica Maletić, Ivan Petronijević, Dušan Popović, Blanka Škipina, Biljana Pećanin, Dragana Grujić, Branka Ružičić
Investigation of Physical Properties of Antistatic Protective Fabric

9. Biljana Pećanin, Slavica Maletić, Dragana Grujić, Branka Ružičić, Manja Kurečič, Alen Erjavec, Dragana Cerović, Blanka Škipina
Influence of $BaTiO_3$ Particle Size on the Dielectric Properties of PLA Composites

10. Dragana Grujić, Branka Ružičić, Aleksandar Savić, Ljiljana Topalić-Trivunović, Blanka Škipina, Biljana Pećanin, Branka Đuza, Dragana Cerović, Andreja Rudolf
Antibacterial Protection and Thermophysiological Comfort of Gloves for Cold Functionalized with Phase Change Materials and Agrimonia Arbutifolia L. Extract

11. Pavle Lončar, Vladan Mićić, Ivan Ristić, Nebojša Vasiljević
Synthesis of Novel Polymeric Materials for Advanced Water Treatment

12. Dijana Jelić, Din Avdispahić, Dragoljub Mirjanić, Slavko Mentus
Schiff Bases Derived from 2-Aminophenol and Substituted Benzaldehydes: Thermal Stability and Degradation Mechanism

13. Marija Mitrović, Nebojša Vasiljević, Regina Fuchs-Godec, Kristina Đerić, Vladan Mićić, Milorad Tomić
Wild Oregano as a Green Steel Corrosion Inhibitor in 3% NaCl Solution

14. Duško Kostić, Mitar Perušić, Srećko Stopić, Nebojša Vasiljević, Jelena Vuković, Vladimir Damjanović, Radislav Filipović, Svetlana Pelemiš
Modification of Tionite by Alkaline Roasting for Improved Titanium Leaching

15. Srđan Vuković, Svetlana Pelemiš, Danijela Vuković, Aleksandar Vuković
Radioecological Behavior of Cesium-137 in the Environment

16. Aleksandra Mitrović, Jelena Lamovec, Svetlana Pelemis
Forensic Memory of Materials: How Engineering Materials Record, Preserve, and Reveal Past Mechanical, Thermal, and Chemical Events

17. Dušan I. Ilić, Siniša M. Vučenović, Stevo K. Jaćimovski, Jovan P. Šetrajčić
A Study of The Energy Spectra and Phonon States in Crystalline Nanofilm Structures

18. Siniša M.Vučenović, Jovan P. Šetrajčić
Overview of Contemporary Research in Materials Physics

19. Nikola R. Vojnović, Igor Mandić, Jovan P. Šetrajčić
Analysis of the Spectrum of Electronic States in a Crystalline Nanofilm with a Complex Lattice

20. Slobodan Gnjato, Tatjana Popov, Goran Trbić
Evaluating Hydrological Drought of the Trebišnjica River Based on the Streamflow Drought Index (SDI)

21. Milan Pantić
Fundamentals of Quantum Physics and Applications in Quantum Technologies

22. Zoran Govedar
Condition of Coppice Beech Forests in the Republic of Srpska and Management Methods – Case study in the Lopare area

23. Isak Karabegović, Mustafa Tabaković, Midhat Tabaković
Integration of Biomaterials Into Service Robotic Systems for Medical Applications:contemporary Trends and Future Development Directions

24. Rade Biočanin, Jovan Vasilijević, Marijana Milikić
Synergistic Approach in the Organization of Transport of Hazardous PTT Shipments Using Artificial Intelligence

25. Jovan Vasilijević, Rade Biočanin
Multi-Criteria Optimization of Environmental Safety Dangerous PTT Shipments, Using Artificial Intelligence

26. Maja Vuković, Vladan Mićić, Nebojša Vasiljević
Optimization and Comparative Analysis of Conventional and Modern Methods for the Extraction of Bioactive Compounds from Orange Peel

27. Vojkan Zorić, Nenad Kapor, Radovan Radovanović, Jovana Zorić
Application of Scanning Electron Microscopy with Energy-Dispersive X-ray Spectrometry (SEM/EDS) in the Forensic Analysis of Micro-traces from a Real Event

28. Mihajlo Zorić, Marijana Regojević, Marko Rodić, Ljiljana Vojinović-Ješić, Mirjana Radanović
New Cocrystal of Copper(I) Complexes with a P-Donor Schiff Base

29. Kaloyan Ivanov, Dragomir Vassilev
Applied Model for Compliance with ESG/CSRD in Manufacturing Enterprises

30. Anđela Ristić, Nebojša Vasiljević, Dario Balaban, Goran Tadić
Simulation, Optimization and Heat Integration of LPG Fractionation System

31. Nikola Cekić
Stone Facades in Modern Architecture

32. Jelena Marković, Goran Marković, Ivan Stevović
Economic and Environmental Aspects of Waste Management –"Meteris" Landfill Case Study

33. Ivan Stevović, Mihailo Jovanović, Jovana Jovanović
Artificial Intelligence and Sensor Theory in Environmental Monitoring

34. Zoran Ćurguz, Dragoljub Mirjanić, MIlan Popović
The Effect of Air Exchange Rate on Indoor Radon Concentration

35. Perko Vukotić, Ranko Zekić
Radon in public kindergartens in Montenego

36. Ivan Lasić, Jelena Đorđević, Dražan Primorac, Aco Janićijević
"In Vivo" Measurements of Radionuclide Activity in the Entire Human Body and Determining the Degree of Health Risk Due to Contamination

37. Ivan Lasić, Aco Janicijević, Vesna Radumilo, Dražan Primorac
Management of Population Health Risk Levels by Measuring the Ambient Radiation Dose Equivalent at the Location of a Nuclear Facility

38. Zoran Petrović, Bojana Pečenica, Aleksandra Radulović, Dragana Kešelj, Pero Dugić, Sabina Begić, Tatjana Botić
Characterization of 80–200 μm Silica Gel and Its Influence on Soybean Oil Bleaching

39. Đorđe Milošević, Marija Branković, Sreten Perić, Radovan Radovanović, Mihael Bučko, Fatima Živić
Comparative Evaluation of Hydrogel Density Measurement Methods

40. Neđo Đurić, Dijana Đurić
Overview of the State of Geothermal Energy in the World

41. Stevo K. Jaćimovski, Dane Subošić, Dušan I. Ilić, Jovan P. Šetrajčić
Analytical Dispersion Model of Multilayered Structures (ADMM) in Air Pollution Distribution Analysis

42. Darko Divnić, Dragoljub Mirjanić, Esad Jakupović
ANURS Laboratory for Solar Energy - A Comprehensive Scientific and Technical Analysis, Infrastructural Capacities, and Application in the Light of Contemporary Research

43. Ivana Radonjić, Nemanja Pudar, Milutin Petronijević, Tatijana Dlabač, Ilija Knežević, Lana Pantić, Dragoljub Mirjanić
Seawater Influence on PV Panels Performances

44. Predrag Dašić, Snežana Topalović, Marija Simić, Dragica Milanović
Uses of Circular Economy Business Models within Manufacturing Companies

45. Marina Karić, Predrag Dašić, Goran Mihajlović, Jelena Erić Obućina
Models of Kinets of Convection-Condensation Drying of Biomaterials

46. Vladimir Lukić, Đorđe Mirjanić, Predrag Dašić
Intelligent and Smart Materials: Structures and Structural Systems

47. Radovan Nikolić, Zvonko Petrović, Dragica Novaković, Predrag Dašić
Modeling of Plastomer Products as a Basis for Injection Mold Design

48. Predrag Dašić, Raul Turmanidze, Aleksandar Ašonja
Development Trends in Micro and Nano Turning for Processing Modern Composite Materials

49. Predrag Dašić, Slađana Beljić Miletić, Suzana Jakovljević
Application of AI-Based Geographic Information System for Water Quality Assessment

50. Sandi Božičković, Ratko Garić
Application of Artificial Intelligence in Predicting the Electrical Properties of Solid Materials

51. Bruno Bojić
The Role of Artificial Intelligence for Managers of Mining and Metallurgical Companies

52. Stevo Najman, Milena Radenković Stošić, Sanja Stojanović
In Vivo Evaluation of Biomaterials for Regenerative Medicine: Application of Various Animal Models

53. Vladan Mirjanić, Milesa Srećković, Đorđe Mirjanić, Svetlana Pelemiš, Aleksandar Bugarinović, Milica Vlahović
Application of Laser in Dentistry in Different Time-Space Parameters

54. Milesa Srećković, Aco Janićijević, Aleksandra Janićijević, Radovan Gospavić, Jelena Ilić, Sofija Petković
Interaction of Coherent Radiation with Matter in an Interval of Six Decades

55. Aleksandra Radulović, Igor Đukić, Vladan Mirjanić, Mirsad Kadić
Electromyographic Evaluation of the Effects of an Occlusal Splint in Individuals with Bruxism

56. Stojko Vidović, Jelena Bećarević, Vanja Vidović
Association of the FABP2 Polymorphism with Acute Myocardial Infarction

57. Renata Josipović, Irena Kuzmanović Radman, Tijana Adamović, Adriana Arbutina, Marija Obradović, Marijana Arapović Savić, Mirjana Umićević Davidović, Ognjenka Janković, Marijana Popović Bajić, Vladan Mirjanić
In Vitro Evaluation of Water Sorption and Solubility of Three Dental Materials

58. Josipa Karij Trivunović, Vladan Mirjanić
Mother's Oral Microbiome and Child's Oral Health Development: The Role of Genetics, Epigenetics and Preventive Care

59. Josipa Karij Trivunović,Vladan Mirjanić
Personalized Dentistry - The Future of Treatment Based on the Patient's Genetic Profile

60. Josipa Karij Trivunović, Vladan Mirjanić
Antibacterial Properties of Nanomaterials in Jaw Orthopedics

61. Darko Manjenčić, Marijana Vasić, Milica Ivanović, Mladen Nikolić, Zorana Milosavljević, Vladan Mićić, Pero Dugić
Catalytic Innovations in Base Oil Production: Enhancing Reaction Selectivity Through Molecular Refining

62. Darko Manjenčić, Marijana Vasić, Bojan Slavić, Predrag Pravdić, Milena Deljanin, Anja Manjenčić, Milorad Tomić
Advanced Materials in Engineering for Protection Against Electromagnetic Radiation

63. Rade Biočanin
Modern CBRN Materials for Protection and Decontamination in Emergency Situations (In War and Peace)

64. Sonja Ketin, Boban Kostić, Rade Biočanin
Remote Sensing of Methane and Carbon Dioxide for Climate Change Monitoring

65. Irena Kuzmanović Radman, Radmila Arbutina,Tijana Adamović, Adriana Arbutina, Vladan Mirjanić, Renata Josipović, Mirjana Umićević Davidović, Marijana Arapović Savić, Saša Marin, Nataša Trtić
Assessment of Periapical Status of Endodontically Treated Teeth Using the Pai Index

66. Goran Kolarević, Dragoljub Mirjanić, Aleksandar Kostovski, Goran Marošević
Radiation Protection in the Design of Bunkers for CT Simulators

67. Tijana Adamović, Ognjenka Janković, Valentina Veselinović, Nataša Trtić, Verica Pavlić, Vladan Mirjanić, Renata Josipović, Irena Kuzmanović Radman, Adriana Arbutina, Borut Kosec, Rebeka Rudolf
Dose-Dependent Effect of Gold Nanoparticles on Thermal Conductivity, Diffusivity, and Effusivity of PMMA Denture Base Resin

68. Dražan Jaroš, Bojan Pavičar
Does the Collimator Rotation Have an Influence on the Dose Distribution in the VMAT Planning for Head and Neck Cancer?

69. Predrag Kuzmanović, Dušan Mrđa
Corrosion of Depleted Uranium Penetrators as a Source of Uranium(VI) in the Environment of the Balkans

70. Ivana Janković, Nada Čitaković, Biljana Vučetić Tadić, Marin Tadić
Magnetic Properties of Cube-Like and Rounded Hematite Nanoparticles Synthesized by Hydrothermal Synthesis Method

71. Jovana Savić, Milica Rančić, Mlađan Popović, Ivana Gavrilović-Grmuša
Modification of Starch-Based Wood Adhesive with Citric Acid to Improve Moisture Resistance

72. Pavel Kovač, Mirfad Tarić, Borislav Savković, Lubomir Soos, Dušan Ješić
The Quality of the Worked Surface of the Hardened Material Obtained by Turning Processing with Different Tool Materials

73. Dušan Ješić, Pavel Kovač, Borislav Savković, Branislav Dudić, Branko Štrbac, Katarina Stojanović
Determination of Friction in Biomechanical Joints Using Artificial Intelligence

74. Dušan Ješić, Pavel Kovač, Lubomir Soos, Borislav Savković, Ildiko Mankova
Tribologyproperties of Austempered Ductile Iron as Function of Their Structure

75. Branislav Dudić, Dušan Ješić, Borislav Savković, Pavel Kovač, Branko Štrbac
Global Development and Technological Progress of Lithium Batteries

76. Branislav Dudić, Dušan Ješić, Borislav Savković, Pavel Kovač, Branko Štrbac
Contribution of Heat Pumps to Energy Efficiency and Sustainable Development

77. Radmila Lišanin, Marija Stojmenović, Jelena Gulicovski, Milan Kragović
pH-Dependent Phenol Removal from Aqueous Solutions using a Sustainable Carbon Adsorbent Derived from Food Waste

78. Radmila Lišanin, Marija Stojmenović, Jelena Gulicovski, Jovana Bukumira, Milan Kragović
Characterization of Carbon Adsorbent Obtained by Carbonization of Organic Household Waste for Use in Water Treatment