

# COMET $\alpha$ 2024

7<sup>th</sup> INTERNATIONAL SCIENTIFIC CONFERENCE

14<sup>th</sup> - 16<sup>th</sup> November 2024  
Jahorina, B&H, Republic of Srpska



University of East Sarajevo  
Faculty of Mechanical Engineering  
Conference on Mechanical Engineering Technologies and Applications

## CONFERENCE PROGRAM COMET $\alpha$ 2024

14<sup>th</sup> – 16<sup>th</sup> November 2024.  
East Sarajevo – Jahorina, B&H, RS  
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**Countries from which conference participants come**



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### **November 14, 2024 (Thursday)**

- 13:00 – 14:00 - Registration
- 14:00 – 14:30 - Opening Conference
- 14:30 – 15:00 - Welcome Cocktail
- 15:00 – 16:45 - Plenary Session
- 16:45 – 17:00 - Coffee Break
- 17:00 – 19:30 - Presentation of companies and institutions
- 20:00 - Dinner

### **November 15, 2024 (Friday)**

- 09:00 – 10:00 - Registration
- 10:00 – 12:00 - Technical Session I (Conference Room No. 1)  
Manufacturing technologies and advanced materials
- 10:00 – 12:00 - Technical Session II-1 (Conference Room No. 2)  
Mechanical systems and product development
- 10:00 – 12:00 - Technical Session III (Conference Room No. 3)  
Applied mechanics and mechatronics
- 12:00 – 12:15 - Coffee Break
- 12:15 – 13:15 - Round table: Quality and innovations  
(Conference Room No. 1)
- 12:15 – 13:15 - Workshop: Proposal of innovation project  
(Conference Room No. 2)
- 13:15 – 14:45 - Lunch
- 14:45 – 15:45 - Workshop: Key benefits of adhesive bonding in the machine  
industry (Conference Room No. 2)
- 14:45 – 15:45 - Poster Session
- 16:00 – 18:00 - Technical Session IV (Conference Room No. 1)  
Renewable energy and environmental protection
- 16:00 – 18:00 - Technical Session II-2 (Conference Room No. 2)  
Mechanical systems and product development
- 16:00 – 18:00 - Technical Session V (Conference Room No. 3)  
Quality, management, organization and maintenance
- 18:00 - Free activities
- 20:00 - Gala Dinner

### **November 16, 2024 (Saturday)**

- 10:00 - Free activities – Visit to Sarajevo

**November 14, 2024 (Thursday) (Conference Room No.1, 15:00 – 16:45)**

**PLENARY LECTURES**

1. **Marcin Kamiński**, Lodz University of Technology, Poland  
**PROBABILISTIC ENTROPIES IN MECHANICAL ENGINEERING**
2. **Primož Podržaj**, University of Ljubljana, Faculty of Mechanical Engineering, Slovenia  
**MODERN APPROACHES IN RESISTANCE SPOT WELDING CONTROL**
3. **Mladimir Milutinović, Dejan Movrin, Saša Randelović**, University of Novi Sad, Faculty of Technical Sciences, Serbia  
**SMART TOOLS AND TOOLING DESIGN STRATEGIES FOR IMPROVED PROCESS CONTROL AND PART ACCURACY IN METAL FORMING**

**November 14, 2024 (Thursday) (Conference Room No.1, 17:00 – 19:30)**

**PRESENTATION OF COMPANIES AND INSTITUTIONS**

Chairperson: **Miroslav Milutinović**

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**ALUMIL**

**TOPOMATIKA**

**November 15, 2024 (Friday) (Conference Room No.1, 10:00 – 12:00)**

**Session I: MANUFACTURING TECHNOLOGIES AND ADVANCED MATERIALS**

Chairpersons: **Saša Živanović, Mladimir Milutinović, Aleksandar Košarac**

1. **Mirza Imširović, Uroš Trdan, Damjan Kločar, Drago Bračun, Aleš Nagode, Laurent Berthe, Matija Bušić, Miodrag Milčić, Dragan Milčić, Nataša Zdravković, Aleksija Đurić**  
**ENHANCING DIRECTED ENERGY DEPOSITED AL5356 THROUGH IN SITU WORKPIECE VIBRATIONS**
2. **Tatjana Lazović, Pavle Ljubojević, Snežana Čirić-Kostić, Nebojša Bogojević, Marina Dojčinović, Milan Stojanović**  
**SAMPLE PREPARATION FOR CAVITATION EROSION TESTING OF 3D-PRINTED METAL**
3. **Miloš Pjević, Mihajlo Popović, Goran Mladenović, Radovan Puzović**  
**THE POST-PROCESSING METHOD FOR LARGE-SIZED PARTS PRODUCED USING SLA/mSLA TECHNOLOGY**
4. **Radoslav Vučurević, Zdravko Krivokapić, Brankica Čomić**  
**THE INFLUENCE RANKING OF DRILLING PROCESS INPUT PARAMETERS ON SURFACE ROUGHNESS**

5. **Miloš Milovančević, Srđan Stojičić, Mirjana Miljanović, Nikola Simonović, Dragana Trnavac**  
OPTIMAL PREDICTORS FOR ABLATION DEPTH IN MICROMACHINING USING EXCIMER LASER BY ADAPTIVE NEURAL FUZZY LOGIC
6. **Srđan Stojičić, Milos Milovancevic, Mirjana Miljanović, Nikola Simonović, Dragana Trnavac**  
ASSESSMENT OF CHIP-TOOL INTERFACE TEMPERATURE USING AN ADAPTIVE NEURAL FUZZY INFERENCE SYSTEM
7. **Nikola Vorkapic, Branko Kokotovic, Sasa Zivanovic**  
CHATTER DETECTION USING SUPPORT VECTOR MACHINE
8. **Cvijetin Mladenović, Aleksandar Živković, Miloš Knežev, Dejan Marinković, Dejan Lukić**  
STABILITY LOBE DIAGRAM OF THE MILLING MACHINING SYSTEM WITH MULTIPLE DOMINANT VIBRATION MODES
9. **Marija Matejic, Jovana Markovic, Dragan Lazarevic, Jasmina Skerlic, Milan Radenkovic**  
THEORETICAL ANALYSIS OF STATIC AND DYNAMIC STIFFNESS OF THE SUPPORTING STRUCTURE OF MODULAR CLAMPING FIXTURES
10. **Strahinja Djurovic, Dragan Lazarevic, Bogdan Cirkovic, Zivce Sarkocecic, Milan Mistic, Marija Matejic**  
PREDICTION OF SURFACE ROUGHNESS WITH MULTIPLE REGRESSION ANALYSIS IN MACHINING PROCESS OF POM MATERIAL
11. **Jelena Jovanović, Nikola Mitrović, Sandra Gajević, Slavica Miladinović, Jasmina Blagojević, Blaža Stojanović**  
INVESTIGATION OF THE IMPACT OF ABRASIVE ACTION ON SURFACE ROUGHNESS AND WORN MASS OF LAMINATED COMPOSITES
12. **Katarina Pejić, Lana Šikuljak, Aleksandar Košarac**  
ADVANCED PARAMETRIC PROGRAMMING OF CNC MACHINES USING CUSTOM MACRO B LANGUAGE
13. **Aleksandar Vujović, Janko Jovanović, Jelena Šaković-Jovanović, Marko Mumović**  
TESTING OF THE MECHANICAL PROPERTIES OF PARK FURNITURE ELEMENTS OBTAINED FROM RECYCLED PLASTIC
14. **Selver Smajic**  
ANALYSIS OF DIFFERENT PROCEDURES DURING SAWING LOGS INTO SAWN TIMBER
15. **Radomir Pojužina, Lana Šikuljak, Aleksandar Košarac**  
SURFACE QUALITY OPTIMIZATION IN MILLING Ti6Al4V TITANIUM ALLOY

**November 15, 2024 (Friday) (Conference Room No.2, 10:00 – 12:00)**

#### **SESSION II-1: MECHANICAL SYSTEMS AND PRODUCT DEVELOPMENT**

Chairpersons: **Zoran Trifunov, Radoslav Tomović, Damjan Klobčar**

1. **Stevan Kjosevski, Monika Lutovska, Zoran Trifunov**  
CAPACITY OF CONTRIBUTING TO SUSTAINABLE DEVELOPMENT OF CARS WITH DIFFERENT PROPULSION SYSTEMS – WESTERN BALKAN STUDY

2. **Biljana Marković, Miljan Savić**  
ARTIFICIAL INTELLIGENCE (AI) MANAGEMENT SYSTEM, KEY ELEMENTS
3. **Miloš Josimović, Gordana Bogdanović, Milan Vasić, Mirko Blagojević**  
THE USE OF THE CYCLOIDALDRIVE BLOCK IN THE ANALYSIS OF CYCLOIDAL REDUCER EFFICIENCY
4. **Goran Pavlović, Mile Savković, Nebojša B. Zdravković, Goran Marković, Marko Todorović, Predrag Mladenović**  
OPTIMAL DESIGN OF THE HYBRID I-GIRDER OF THE SINGLE-BEAM BRIDGE CRANE
5. **Aleksija Djuric, Srđan Samardžić, Biljana Marković, Dragan Milčić, Damjan Klobčar, Nataša Zdravković, Miodrag Milčić**  
EXPERIMENTAL ANALYSIS OF THE BEHAVIOR OF ADHESIVELY BONDED CFRP-ALUMINUM ALLOY AW 5754 H22 JOINTS UNDER TENSILE-SHEAR LOAD
6. **Rade Vasiljević**  
ANALYSIS OF NODAL LOADS OF THE COLUMN OF A MECHANICAL LIFTS
7. **Nina Anđelić, Vesna Milošević-Mitić, Ana Petrović, Đorđe Đurđević**  
A VIEW OF THE INFLUENCE OF CONSTRAINED TORSION ON BEHAVIOUR OF THIN-WALLED CANTILEVER CHANNEL-SECTION AND Z-SECTION BEAMS
8. **Dijana Čavić, Maja Čavić**  
IMPROVEMENT OF MECHANICAL ENGINEERING SCHOOLING: PROJECT MEHART

**NOVEMBER 15, 2024 (Friday) (CONFERENCE ROOM NO.3, 10:00 – 12:00)**

**SESSION III: APPLIED MECHANICS AND MECHATRONICS**

Chairpersons: **Branimir Krstić, Nebojša Radić, Stevan Stankovski**

1. **Isak Karabegović, Raul Turmanidze, Predrag Dašić**  
THE AUTOMOBILE AND ELECTRO/ELECTRONIC INDUSTRY AS WORLD LEADERS IN THE IMPLEMENTATION OF INDUSTRY 4.0 TECHNOLOGIES IN PRODUCTION PROCESSES: REVIEW OF ROBOT TECHNOLOGY
2. **Marjan Dodić, Branimir Krstić**  
A LOW FIDELITY MATHEMATICAL MODEL OF A SINGLE ROTOR HELICOPTER IN FORWARD FLIGHT
3. **Stevan Stankovski, Gordana Ostojić**  
DEVELOPMENT OF TASKS FOR TRAINING IN PLC PROGRAMMING USING GENERATIVE ARTIFICIAL INTELLIGENCE
4. **Nikolina Dakić, Vule Reljić, Slobodan Dudić, Vladimir Jurošević, Filip Damjanović**  
DESKTOP APPLICATION FOR PNEUMATIC DIDACTIC COMPONENT RECOGNITION
5. **Nikola Vučetić, Ranko Antunović, Dejan Jeremić, Nebojša Radić, Imre**

**Zsolt Miklos**

ALGORITHM FOR ASSESSING THE INTEGRITY OF THE CYLINDER ASSEMBLY

**November 15, 2024 (Friday) (Conference Room No.1, 12:15 – 13:15)**

Round table: **QUALITY AND INNOVATIONS**

**November 15, 2024 (Friday) (Conference Room No.2, 12:15 – 13:15)**

Workshop: **Proposal of innovation project**

**November 15, 2024 (Friday) (Conference Room No.2, 14:45 – 15:45)**

Workshop: **Key benefits of adhesive bonding in the machine industry**

**November 15, 2024 (Friday) (Conferenc Hall 14:45 – 15:45)**

### **Session VII: POSTER SESSION**

Chairpersons: **Milan Rackov, Srđan Vasković, Miloš Matejić**

1. **Tatjana Stanivuk, Miroslav Dujmović, Nikola Muslim, Branko Lalić**  
ELECTRIC MOTOR STARTERS AND DRIVES
2. **Alma Čosić, Adis Dedić, Emir Nezirić, Dejan Jokić**  
EXPERIMENTAL ANALYSIS OF KINEMATIC PARAMETERS IN PLANAR MECHANISMS
3. **Aleksandar Bodić, Snežana Vulović, Milan Bojović, Jelena Živković, Miroslav Živković**  
IMPROVED STRUCTURAL FATIGUE ANALYSIS USING FEM: DEVELOPMENT OF API SCRIPTS FOR STRESS RANGE CALCULATI
4. **Dragan Rakić, Vukašin Slavković, Aleksandar Bodić, Milan Bojović, Miroslav Živković**  
USER INTERFACE DEVELOPMENT FOR IDENTIFYING CDP CONSTITUTIVE MODEL PARAMETERS
5. **Snežana Vulović, Miloš Pešić, Aleksandar Bodić, Marko Toplavić, Miroslav Živković**  
FINITE ELEMENT ANALYSIS OF CYLINDRICAL SURFACE CONTACT
6. **Vladimir Stojanovic, Vladimir Djordjevic, Ljubisa Dubonjic, Sasa Prodanovic**  
OPTIMAL CONTROL OF A TWO-WHEELED SELF-BALANCING MOBILE ROBOT BASED ON ADAPTIVE DYNAMIC PROGRAMMING
7. **Janani Rajaraman, Saša Prodanović, Sai Phani Chandra Chittaluri, Ljubiša Dubonjić, Vladimir Stojanović**  
ANALYZING AND OPTIMIZING PI CONTROLLER METHODS FOR TWO TANK SYSTEM: A LABORATORY-BASED STUDY
8. **Dejan Landup, Eleonora Desnica, Ivan Palinkaš, Luka Đorđević, Borivoj Novaković**  
EXAMPLES OF THE PRACTICAL APPLICATION OF 3D SCANNERS IN PARTS QUALITY CONTROL IN THE AUTOMOTIVE INDUSTRY
9. **Nenad Kostic, Vesna Marjanovic, Nenad Petrovic, Zivana Jovanovic Pesic**

PREDICTING STRESS CONCENTRATION FACTORS IN TENSION-LOADED SHAFTS USING ARTIFICIAL NEURAL NETWORKS

10. **Andjela Mitrović, Slobodan Savić, Mladen Josijević, Nebojša Hristov, Damir Jerković, Djordje Ivković**  
DETONATION WAVE CONTOURS IN EXPLOSIVELY FORMED PROJECTILE
11. **Milan Rackov, Siniša Kuzmanović, Ivan Knežević, Waldemar Matysiak, Jakub Hajkowski, Mateusz Barczewski, Mirjana Bojanić Šejat**  
THE IMPACT OF EFFICIENCY ON THE SELECTION OF UNIVERSAL GEAR MOTOR REDUCERS
12. **Tamara Koroman, Sanja Kanostrevac-Vidaković**  
ACCREDITATION PROCESS OF THE STANDARD METHOD BAS EN ISO 12156-1 IN THE "SISTEM QUALITA,S" LTD. PALE TESTING LABORATORY
13. **Josip Radić, Antonija Ereš, Držislav Vidaković, Marijana Hadzima-Nyarko**  
ASSESSMENT OF BUILDING VULNERABILITY THROUGH RAPID VISUAL SCREENING METHOD: CASE STUDY OF SELECTED STREET BLOCKS IN OSIJEK

**November 15, 2024 (Friday) (Conference Room No.1, 16:00 – 18:00)**

**SESSION IV: RENEWABLE ENERGY AND ENVIRONMENTAL PROTECTION**

Chairpersons: **Branislav Dudić, Eleonora Desnica, Goran Orašanin**

1. **Branislav Dudić, Alexandra Mittelman, Branko Štrbac, Borislav Savković**  
SUSTAINABILITY OF GLOBAL LITHIUM-ION BATTERIES
2. **Valentino Stojkovski, Marija Lazarevikj, Zoran Markov**  
MODEL FOR PROSPECTING HIDDEN HYDROPOWER AT EXISTING WATER SUPPLY SYSTEMS
3. **Danijela Nikolić, Minja Velemir Radović, Saša Jovanović, Zorica Đorđević**  
ENERGY ANALYSIS OF SERBIAN BUILDING WITH PV PANELS AND DIFFERENT HEATING SYSTEMS
4. **Goran Orašanin, Budimirka Marinović, Stojan Simić, Davor Milić, Jovana Blagojević**  
SUSTAINABLE WATER SUPPLY IN THE CONTEXT OF THE GREEN AGENDA FOR THE WESTERN BALKANS
5. **Minja Velemir Radović, Danijela Nikolić, Saša Jovanović**  
ENERGY EFFICIENCY IN THE BUILDING SECTOR IN SERBIA - AN OVERVIEW
6. **Srđan Vasković, Gojko Krunić, Aleksandar Anđelković, Mladen Tomić, Marko Romović**  
ASPECTS OF LPG FUEL APPLICATION IN CARS
7. **Jela Vorotović, Goran Vorotović, Đorđe Novković, Milan Lečić, Miloš Januzović**  
TURBULENCE ANISOTROPY IN A COUNTER-FLOW VORTEX TUBE FLOW
8. **Vesna Mihajlov, Jasmina Pekez, Uroš Šarenac, Ljiljana Radovanović, Mića Djurdjev, Aleksandar Ašonja**

JUSTIFICATION OF THE APPLICATION OF PHOTOVOLTAIC TRANSFORMATION OF SOLAR RADIATION FOR THE PRODUCTION OF ELECTRICITY FOR THE NEEDS OF PUBLIC INSTITUTIONS

9. **Milica Kašiković, Uroš Karadžić**  
SELECTION OF THE WATER TURBINE BASED ON ELECTRICITY GENERATION ON SUTJESKA RIVER
10. **Vuko Kovijanić, Uroš Karadžić, Anton Bergant, Igor Aleksić**  
TRANSIENT FLOW DURING RAPID FILLING OF HORIZONTAL PIPES WITH TRAPPED AIR
11. **Vasko Milatović, Nikola Šibalić, Aleksandar Vujović**  
MEASUREMENT OF NOISE LEVELS IN THE WORKPLACE
12. **Djordje Manojlovic, Vesna Jevtic**  
FLUE GAS DESULPHURIZATION PLANT WORKING EFFECTS IN THE THERMAL POWER PLANT
13. **Ruzena Kralikova, Ervin Lumitzer, Elena Lukač Jurgovska**  
DRONE THERMAL IMAGING: NEW TRENDS AND PERSPECTIVES
14. **Ivan Popović, Milan Djordjević, Jasmina Skerlić, Vladan Jovanović**  
DETERMINING THE RELIABILITY FUNCTION OF THE THERMAL POWER SYSTEM IN POWER PLANT "KOSTOLAC, BLOCK A2" USING THE WEIBULL DISTRIBUTION
15. **Zaga Trišović**  
RENEWABLE ENERGY EQUIPMENT IN BIOGAS PLANTS

**November 15, 2024 (FRIDAY) (Conference Room No.2, 16:00 – 18:00)**

**SESSION II-2 : MECHANICAL SYSTEMS AND PRODUCT DEVELOPMENT**

Chairpersons: **Lozica Ivanović, Stevan Kjosevski, Biljana Markovic**

1. **Radoslav Tomović, Aleksandar Tomović, Samir Dizdar**  
REPLICA OF CRNOJEVIC PRINTING PRESS - THE FIRST PRINTING MACHINE IN THE BALKANS
2. **Saša Živanović, Ljubomir Nešovanović, Zoran Dimić, Radovan Puzović**  
SIMULATION OF PARALLEL KINEMATIC MACHINE WITH SPECIFIC SOLUTIONS OF THE PASSIVE TRANSLATORY JOINT
3. **Nikola Babić, Milan Tica**  
RESULTS COMPARATION OF ANALYTICAL AND SOFTWARE METHODS OF STEEL STRUCTURE STATIC CALCULATION
4. **Milica Radovanović, Brankica Čomić, Snežana Dostinić, Budimirka Marinović, Obrad Spaić, Dejan Božić, Dejan Lukić, Mijodrag Milošević**  
THE INFLUENCE OF CNC TECHNOLOGY ON PRODUCTION TIME AND PROCESSING QUALITY
5. **Miloš Matejić, Anđela Perović, Ivan Miletić, Ljubica Mudrić-Staniškovski, Lozica Ivanović**  
DESIGN AUTOMATION OF SET SCREW CONNECTION
6. **Srdan Samardžić, Mersida Manjgo, Aleksija Đurić, Biljana Marković, Miroslav Milutinović, Spasoje Trifković**  
INFLUENCE OF FIBER ORIENTATION AND MOISTURE ON THE STRENGTH OF SINGLE-LAP ADHESIVE JOINTS OF PA6 GF



COMPOSITE

7. **Nikola Milošević, Spasoje Trifković, Miroslav Milutinović, Kulwant Singh**  
APPLICATION OF 3D PRINTING IN METAL CONSTRUCTIONS

**November 15, 2024 (FRIDAY) (Conference Room No.3, 16:00 – 18:00)**

**Session V: QUALITY, MANAGEMENT, ORGANIZATION AND MAINTANCE**

Chairpersons: **George Nenes, Slaviša Moljević, Aleksandar Aleksic**

1. **Monika Lutovska, Zoran Trifunov, Izet Zeqiri, Stevan Kjosevski**  
OCCUPATIONAL SAFETY AWARENESS MEASURING TOOL AMONG AGRICULTURAL WORKERS IN NORTH MACEDONIA
2. **Snežana Nestić, Danijela Tadić, Tijana Petrović**  
DETERMINING THE WEIGHTS OF COMMERCIAL CRITERIA FOR INVESTMENT PROJECT EVALUATION BASED ON THE IDOCRIW METHOD
3. **Aleksandar Aleksić, Ivana Spasenić, Danijela Tadić**  
ASSESSMENT AND SELECTION OF CLOUD SERVICE PROVIDERS FOR HOSTING WEB APPLICATIONS BY APPLYING MADM APPROACH
4. **Danijela Tadić, Nikola Komatina, Marija Savković**  
FORECASTING DEMAND TRENDS IN AUTOMOTIVE INDUSTRY: COMPARATIVE ANALYSIS OF EXPONENTIAL SMOOTHING AND REGRESSION ANALYSIS
5. **Dragan Vujović, Pavle Popović, Oto Iker**  
INTELLECTUAL CAPITAL MANAGEMENT IN CONDITIONS OF UNCERTAINTY
6. **Jovana Dragutinovic, Angela Fajsi, Slobodan Morača, Slaviša Moljević, Ranka Sudžum**  
KEY SUCCESS FACTORS OF AGILE TRANSFORMATION IN MANUFACTURING COMPANIES
7. **Slavenko Stojadinovic, Milos Pjevic, Nikola Slavkovic, Radovan Puzovic**  
3D SCANING AND INSPECTION GEOMETRICAL PARAMETERS OF SPROCKET TOOTH PROFILE
8. **Ranka Sudžum, Angela Fajsi, Luka Jevtović**  
EVALUATION OF INNOVATION PROJECTS USING INTUITIONISTIC FUZZY TOPSIS METHOD
9. **Vlado Medaković, Bogdan Marić**  
OVERALL EFFICIENCY AND EFFECTIVE PERFORMANCE OF PRODUCTION EQUIPMENT – CASE STUDY
10. **Rodoljub Vujanac, Nenad Miloradovic, Snezana Vulovic**  
SOME EXPERIENCES FROM THE PRACTICE ABOUT RESULTS AND IMPORTANCE OF WAREHOUSE RACKING INSPECTIONS
11. **Ivan Mačužić, Marija Savković, Nastasija Nikolić, Đorđe Milojević**  
APPLICATION OF ROBOTICS SYSTEMS FOR QUALITY INSPECTION IN INDUSTRY

12. **Belma Fakić, Adisa Burić, Edib Horoz**  
ENSURING THE VALIDITY OF TEST RESULTS TO ENSURE RELIABILITY

## **CONCLUSIONS AND CLOSING CEREMONY OF COMETA2024**

**President of the Organizing Committee  
PhD Milija Kraišnik**

## CA21121 - European Network for the Mechanics of Matter at the Nano-Scale (MecaNano)



### Description

Our society urgently needs new materials with improved performance and durability in order to overcome its environmental crisis. Room for significant progress is available at the nano-scale, where all properties originate. Research at this length scale has strongly intensified over the past two decades, but the knowledge remains very fragmented, so that a holistic understanding of how the nanoscale mechanical behavior gives rise to the macroscopic properties of the materials is still missing.

The Action ambitions to combine the expertise and resources of European and associated researchers to overcome the different bottlenecks limiting the exploration of mechanical size effects. Synergetic gains will be achieved through a common agreement on the physical parameters to be investigated and by promoting interoperability of the research data. In addition, the experimental yield will be boosted by easing access to the latest techniques in nanomechanical testing, nanomechanical simulation and nanocharacterization to the whole community. Even more dramatic gains will be achieved by promoting the application of machine learning to nanomechanical research and favoring the development of interdisciplinary in situ techniques.



Start date - 30/09/2022



End date - 29/09/2026



[www.mecanano.com](http://www.mecanano.com)



# DEVELOPMENT AND EVALUATION OF INNOVATIVE PROJECTS STEMMING FROM COLLABORATION WITH BUSINESS



## Description

As part of a project aimed at enhancing innovation and technical culture in Bosnia and Herzegovina, training sessions were held for students and entrepreneurs to increase understanding of the significance of innovations and the process of innovative thinking. The training included theoretical and practical knowledge, as well as examples of best practices from both the local and international community.

Through concrete steps, specific challenges faced by businesses in the mechanical industry were identified. Based on these issues, students developed innovative solutions, resulting not only in improved practical skills for the students but also in tangible goods and services available to the economy.

One of the key outcomes of the project is the development of a new model for evaluating student projects that allows for more objective and transparent assessment of innovations. This model is tailored to the needs of the industry and enables students to better align their projects with market demands.

Additionally, during the project, several scientific papers were published in international journals and presented at relevant conferences, contributing to the dissemination of knowledge and experiences gained during the project work, as well as promoting Bosnian innovations on an international level.

Collaboration with business entities not only enabled students to recognize real business challenges but also created a platform for dialogue and idea exchange between the academic community and industry, which is crucial for the development of an innovative ecosystem in Bosnia and Herzegovina.

The project was funded by the Ministry of Civil Affairs of Bosnia and Herzegovina through the grant "Support for Technical Culture and Innovation in Bosnia and Herzegovina" for the year 2023.

## NOTES

