



**ROMANIAN ACADEMY OF TECHNICAL SCIENCES**  
**THE GENERAL ASSOCIATION OF THE ENGINEERS IN ROMANIA**  
**„CONSTANTIN BRÂNCUȘI” UNIVERSITY OF TÂRGU JIU**  
**FACULTY OF ENGINEERING**



# **PROGRAMME**

**NATIONAL SCIENTIFIC CONFERENCE**  
**WITH INTERNATIONAL PARTICIPATION**

# **CONFERENG 2024**

**November 29<sup>th</sup> - 30<sup>th</sup> 2024**

**TÂRGU JIU**



**ROMANIAN ACADEMY OF TECHNICAL SCIENCES**  
**THE GENERAL ASSOCIATION OF THE ENGINEERS IN ROMANIA**  
**“CONSTANTIN BRÂNCUȘI” UNIVERSITY OF TÂRGU JIU**  
**FACULTY OF ENGINEERING**

## **PROGRAM**

**NATIONAL SCIENTIFIC CONFERENCE**  
**WITH INTERNATIONAL PARTICIPATION**

**“CONFERENG 2024”**

**November 29<sup>th</sup> - 30<sup>th</sup> 2024**

**TÂRGU–JIU**

**ROMANIA**



## HONORARY COMMITTEE

- **Professor PhD Mihai MIHĂIȚĂ**, President of the Romanian Academy of Technical Sciences
- **Professor PhD Florin TĂNĂSESCU**, University of Bucharest, Romania, Vice-president of the Romanian Academy of Technical Sciences
- **Professor PhD Valentin NĂVRĂPESCU**, University of Bucharest, Romania, Vice-president of the Romanian Agency for Quality Assurance in Higher Education
- **Professor PhD Luminița-Georgeta POPESCU**, Rector of "Constantin Brâncuși" University

## SCIENTIFIC COMMITTEE

**President:** Prof. PhD Roxana Gabriela POPA, University "Constantin Brâncuși" of Târgu-Jiu / Dean of Faculty of Engineering

**Members:**

- Professor PhD István BÍRÓ University of Szeged, Hungary
- Professor PhD Ivan MILEV, Mining and Geology University Sofia, Bulgaria
- Professor PhD Milan RACKOV University of Novi Sad, Serbia
- Professor PhD Josef TIMMERBERG, Jade University, Wilhelmshaven, Germany
- Professor PhD Paun ANTONESCU, National University of Science and Technology POLITEHNICA Bucharest
- Professor PhD Ilare BORDEASU, Polytechnic University of Timișoara
- Professor PhD Gilbert Rainer GILLICH, Babeș-Bolyai University of Cluj-Napoca, corresponding member of the Romanian Academy of Technical Sciences
- Professor PhD Vasile PĂDUREANU, Transylvania University of Brașov
- Professor PhD Elena SCUTELNICU, "Dunărea de Jos" University of Galați
- Assoc. prof. PhD Radostin DIMITROV, Technical University of Varna, Bulgaria
- Assoc. prof. PhD Zlateva PENKA, Technical University of Varna, Bulgaria
- Assoc. prof. PhD Georgi Tsonev VELEV, Technical University of Gabrovo, Bulgaria
- Professor PhD Mircea MIHALACHE, USAMV București
- PhD Athanasios TILIAKOS, National Research and Development Institute for Cryogenic and Isotopic Technologies (ICSI Rm. Vâlcea)
- Professor PhD Tiberiu IANCU, University of Life Sciences "King Mihai I" Timișoara
- Professor PhD Corina BÎRLEANU, Technical University Cluj-Napoca
- Professor PhD Diana ANDONE, Polytechnic University of Timișoara
- Professor PhD Jean-Vasile ANDREI, Petroleum-Gas University of Ploiesti
- Professor PhD Dan Florin NIȚOI, National University of Science and Technology POLITEHNICA Bucharest

- Professor PhD Augustin SEMENESCU, National University of Science and Technology POLITEHNICA Bucharest
- Professor PhD Oana-Roxana CHIVU, National University of Science and Technology POLITEHNICA Bucharest
- Professor PhD Aurel-Liviu OLARU, University of Craiova
- Professor PhD Nicu George BÎZDOACĂ, University of Craiova
- Professor PhD Cosmin IONETE, University of Craiova
- Professor PhD Liviu Marius CÎRTINĂ, "Constantin Brâncuși" University of Târgu-Jiu
- Professor PhD Daniela CÎRTINĂ, "Constantin Brâncuși" University of Târgu-Jiu
- Professor PhD Mihai CRUCERU, "Constantin Brâncuși" University of Târgu-Jiu
- Professor PhD Ștefan GHIMIȘI, "Constantin Brâncuși" University of Târgu-Jiu
- Professor PhD Cristinel RACOCEANU, "Constantin Brâncuși" University of Târgu-Jiu
- Professor PhD Dan DOBROTĂ, University "Lucian Blaga" of Sibiu
- Professor PhD Nicoleta GILLICH, Babeș-Bolyai University of Cluj-Napoca
- Professor PhD Codruța-Oana HAMAT, Babeș-Bolyai University of Cluj-Napoca
- Professor PhD Eugen RĂDUCA, Babeș-Bolyai University of Cluj-Napoca
- Assoc. prof. PhD Virgil STOICA, Polytechnic University of Timișoara
- Assoc. prof. PhD Ion-Marian POPESCU, University of Craiova
- Assoc. prof. PhD Olivia Doina NEGOIȚĂ, National University of Science and Technology POLITEHNICA Bucharest
- Assoc. prof. PhD Ilie UȚU, University of Petroșani
- Assoc. prof. PhD Zoltan Iosif KORKA, Babeș-Bolyai University of Cluj-Napoca
- Assoc. prof. PhD Ilie BORCOȘI, "Constantin Brâncuși" University of Târgu-Jiu
- Assoc. prof. PhD Mădălina BUNECI, "Constantin Brâncuși" University of Târgu-Jiu
- Assoc. prof. PhD Bogdan DIACONU, "Constantin Brâncuși" University of Târgu-Jiu
- Assoc. prof. PhD Florin GROFU, "Constantin Brâncuși" University of Târgu-Jiu
- Assoc. prof. PhD Cristinel POPESCU, University "Constantin Brâncuși" of Târgu-Jiu
- Assoc. prof. PhD Viorica Mariela UNGUREANU, "Constantin Brâncuși" University of Târgu-Jiu
- Assoc. prof. PhD Remus DOBRA, "1 Decembrie 1918" University of Alba Iulia
- Assoc. prof. PhD Mircea RISTEIU, "1 Decembrie 1918" University of Alba Iulia
- Assoc. prof. PhD Dragoș PĂSCULESCU, University of Petroșani
- Assoc. prof. PhD Cornel HAȚIEGAN, Babeș-Bolyai University of Cluj-Napoca
- Lecturer PhD Alin NIOAȚĂ, "Constantin Brâncuși" University of Târgu-Jiu

## ORGANIZING COMMITTEE

### **President:**

- Prof. PhD Roxana Gabriela POPA

### **Secretary:**

- Assoc. prof. PhD Florin GROFU

### **Members:**

- Professor PhD Mihai CRUCERU
- Professor PhD Liviu Marius CÎRȚÎNĂ
- Professor PhD Gabriel Cătălin IANCU
- Professor PhD Sorinel Ștefan GHIMIȘI
- Professor PhD Cristinel RACOCEANU
- Assoc. prof. PhD Mădălina Roxana BUNECI
- Assoc. prof. PhD Minodora Maria PASĂRE
- Assoc. prof. PhD Adina TĂTAR
- Assoc. prof. PhD Maria Nicoleta MIHUȚ
- Assoc. prof. PhD Viorica Mariela UNGUREANU
- Assoc. prof. PhD Cristinel POPESCU
- Assoc. prof. PhD Ilie BORCOȘI
- Assoc. prof. PhD Bogdan Marian DIACONU
- Assoc. prof. PhD Iuliana Carmen Bărbăcioru
- Lecturer PhD Lucica ANGHELESCU
- Lecturer PhD Gheorghe GÎLCĂ
- Lecturer PhD Ramona Violeta CAZALBAȘU
- Lecturer PhD Adrian RUNCEANU
- Lecturer PhD Cristina Felicia IONICI
- Lecturer PhD Alin NIOAȚĂ
- Lecturer PhD Alin STĂNCIOIU
- Lecturer PhD Irina Ramona PECINGINĂ
- Lecturer PhD Emil Cătălin ȘCHIOPU
- Lecturer PhD Adriana COMARLĂ
- Lecturer PhD Marian IONESCU
- Lecturer PhD Constanța RADULESCU
- Lecturer PhD Aurora Cătălina IANĂȘI
- Lecturer PhD Cătălin CHIMEREL
- Assist. Ph.D. student Elena Loredana STĂNCIOIU
- Assist. Ph.D. student Alina Elena LUPULESCU

## ***CONFERENCE SCHEDULE***

### **Friday, November 29<sup>th</sup>, 2024**

- 8<sup>00</sup> - 10<sup>00</sup> - Registration**
- 10<sup>00</sup> - 11<sup>00</sup> - Opening ceremony**
  - Plenary lecture**
- 11<sup>00</sup> – 11<sup>30</sup> - Coffee break**
- 11<sup>30</sup> - 14<sup>00</sup> - Conference sessions**
- 14<sup>00</sup> - 15<sup>00</sup> - Lunch**
- 15<sup>00</sup> - 18<sup>00</sup> - Conference sessions**
- 19<sup>00</sup> - Dinner**

## ***THE SECTIONS OF THE CONFERENCE***

1. Control system, electronics, information technology and cyber security
2. Food, agriculture and rural development
3. Energy and environment
4. Mechanical engineering, Materials and manufacturing system, Quality management

### **Saturday, November 30<sup>th</sup>, 2024**

09.00 - 10.00: Visit in research laboratories of the faculty

11.00 - 18.00: Program for visiting the touristic objectives and sites in Târgu Jiu

## Section 1

### Control system, electronics, information technology and cyber security

Conference room: A015

Date 29. 11. 2024

Hours: 1100 – 1400

Chairman: Assoc. prof. PhD. Florin Grofu, “Constantin Brâncuși” University from Târgu Jiu

Technical secretariat: Assistant PhD Stud. Eng. Lupulescu (Machidon) Alina-Elena, “Constantin Brâncuși” University from Târgu Jiu

1. **VIRTUAL CLASSROOM LEARNING FACILITATOR: AN EFFECTIVE TEACHER-STUDENT RELATIONSHIP IN THE ONLINE ENVIRONMENT**

Cornelia Victoria ANGHEL-DRUGĂRIN, Lect.PhD Engineer, *Babes-Bolyai University, Cluj-Napoca, ROMANIA*

Codruta Oana HAMAT(corresponding author), Prof.Dr.Eng. *Babes-Bolyai University, Cluj-Napoca, ROMANIA*

Nicoleta MIREA, Research Eng. *Politehnica University, Research Centre for Engineering and Management, Timisoara, ROMANIA*

2. **TEACHERS' PERCEPTIONS OF ONLINE EDUCATION FROM ROMANIA VERSUS EUROPE DURING 2020-2024: A CASE STUDY**

Cornelia Victoria ANGHEL-DRUGĂRIN, Lect.PhD Engineer, *Babes-Bolyai University, Cluj-Napoca, ROMANIA*

Codruta Oana HAMAT(corresponding author), Prof.Dr.Eng. *Babes-Bolyai University, Cluj-Napoca, ROMANIA*

Nicoleta MIREA, Research Eng. *Politehnica University, Research Centre for Engineering and Management, Timisoara, ROMANIA*

3. **SYSTEM FOR MONITORING AND REGULATING THE TEMPERATURE OF CYLINDERS IN A CALENDERING PLANT**

Grofu Florin, *Assoc. Prof. PhD Eng., Constantin Brâncuși” University from Târgu Jiu, ROMANIA*



4. **OPTIMIZING ENERGY CONSUMPTION IN SMART HOMES WITH IoT AND HOME ASSISTANT**  
 Dan Cristian LAZĂR<sup>1</sup>, Dan Codrut PETRILEAN<sup>1</sup>, Ilie UTU<sup>1</sup>, Adina TĂTAR<sup>2</sup>,  
 Dragos PASCULESCU<sup>1</sup>, Teodora LAZĂR<sup>1</sup>  
<sup>1</sup> *University of Petrosani, Faculty of Mechanical and Electrical Engineering, ROMÂNIA*  
<sup>2</sup> *Constantin Brancusi University of Targu-Jiu, Faculty of Engineering, ROMÂNIA*
  
5. **DESIGNING AND CREATING A BRIGHT ADVERTISEMENT**  
 Mihaela Molnar,*Babeş-Bolyai University of Cluj-Napoca, ROMÂNIA*  
 Ana-Maria Budai\*,*Babeş-Bolyai University of Cluj-Napoca, ROMÂNIA*  
 Eugen Răduca,*Babeş-Bolyai University of Cluj-Napoca, ROMÂNIA*  
 Marcel Burduniuc, *Technical University of Moldova, Chisinau, Republic of Moldova*
  
6. **MAXIMIZING ENERGY EFFICIENCY IN HVAC SYSTEMS USING AI-ENHANCED CONTROL MODELS**  
 Cașotă (Ghicaianu) Maria-Isabela, PhD Stud. Eng., *University of Petroșani, ROMANIA*  
 PETRILEAN Dan Codruț, *University of Petroșani, ROMANIA*
  
7. **ROMANIAN ELECTRONIC COMPONENTS IN THE MUSEUM OF THE FACULTY OF ENGINEERING IN REȘITA**  
 Eugen RĂDUCA, *Babes -Bolyai University, Cluj Napoca, ROMANIA*  
 Mihaela MOLNAR\*, *Babes -Bolyai University, Cluj Napoca, ROMANIA*  
 Cornel HAȚIEGAN, *Babes -Bolyai University, Cluj Napoca, ROMANIA*  
 Roberta RĂDUCA, *Politehnica University of Timisoara, ROMANIA*
  
8. **COMPUTATIONAL THINKING: THE INFLUENCE OF ENGAGING AND INNOVATIVE INSTRUCTION IN ROMANIAN SCHOOLS**  
 Adrian Runceanu, *Constantin Brancusi University, Targu-Jiu, ROMANIA*  
 Mihaela-Ana Runceanu, *Ecaterina Teodoroiu High College, Targu-Jiu, ROMANIA*
  
9. **DIGITALIZATION AND ENTREPRENEURSHIP EDUCATION**  
 Corina Ana BORCOȘI, „*Constantin Brâncuși*” *University from Târgu Jiu, ROMANIA*  
 Ilie BORCOȘI, „*Constantin Brâncuși*” *University from Târgu Jiu, ROMANIA*

Conference room: A015

Date 29. 11. 2024

Hours: 1500 – 1800

Chairman: Assoc. prof. PhD. Florin Grofu, “Constantin Brâncuși” University from Târgu Jiu

Technical secretariat: Lecturer PhD. Gheorghe Gîlcă, “Constantin Brâncuși” University from Târgu Jiu

**10. DIGITALIZATION AND SOCIAL EDUCATION**

Corina Ana BORCOȘI, *Scientific Researcher II, PhD, „Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

Luminița Georgeta POPESCU, *Prof. PhD Eng., „Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

Mercedes CHACON, *Prof. PhD Eng., „Costa Rica” University, COSTA RICA*

Ilie BORCOȘI, *Assoc. Prof. PhD Eng., „Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

**11. APPLICATION FOR CREATING A QUIZ GAME IN C#**

Gîlcă Gheorghe, *Lecturer Phd., “Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

Lupulescu (Machidon) Alina-Elena, *PhD Stud. Eng., “Constantin Brâncuși” University from Târgu Jiu, University of Petroșani, Petroșani, ROMÂNIA*

**12. TRAJECTORY CONTROL FOR A MOBILE ROBOT USING A PID ALGORITHM**

Gîlcă Gheorghe, *Lecturer Phd., “Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

Lupulescu (Machidon) Alina-Elena, *PhD Stud. Eng., “Constantin Brâncuși” University from Târgu Jiu, University of Petroșani, Petroșani, ROMÂNIA*

**13. FUZZIFICATION AND DEFUZZIFICATION OF IRREVERSIBLE DYNAMICS THROUGH ALGEBRAIC STRUCTURES**

Mădălina Roxana Buneci, *“Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

**14. CONTROL OF ROBOTIC uHANDBIT STRUCTURE USING ULTRASONIC PROXIMITY SENSOR HC-SR04**

Lecturer PhD. Eng., Marian IONESCU, *“Constantin Brâncuși” University from Târgu-Jiu, ROMANIA,*

Assoc. Prof. Ph.D. Eng., Ilie BORCOSI, *“Constantin Brâncuși” University from Târgu-Jiu, ROMANIA*

15. **A BINARY SEARCH TREE DATA STRUCTURE, THE SCAPEGOAT TREE**

Lupulescu (Machidon) Alina-Elena, *PhD Stud. Eng.*, „Constantin Brâncuși”  
University from Târgu Jiu, University of Petroșani, Petroșani, ROMÂNIA  
Gîlcă Gheorghe, *Lecturer PhD Eng.*, „Constantin Brâncuși” University from  
Târgu Jiu, ROMANIA

16. **APPLICATIONS OF CYBER-PHYSICAL SYSTEMS IN THE REAL WORLD**

PhD student Eng. Sabin Florin POP, *University of Petrosani, ROMANIA*

## Section 2

### *Food, agriculture and rural development*

Conference room: HUB

Date 29. 11. 2024

Hours: 1100 – 1400

Chairman: Prof. PhD. Popa Roxana-Gabriela, “Constantin Brâncuși” University from Târgu Jiu

Technical secretariat: Lecturer PhD. Emil Cătălin ȘCHIOPU, “Constantin Brâncuși” University from Târgu Jiu

- 1. CALENDULA OFFICINALIS CULTURE – BUSINESS WITH LOW INVESTMENT, EFFICIENT PRODUCTION AND HIGH PROFIT**  
Popa Roxana–Gabriela, *Constantin Brâncuși University from Tg Jiu, ROMANIA*
- 2. MICROENCAPSULATION TECHNOLOGIES OF BIOLOGICALLY ACTIVE COMPOUNDS FROM PLANT PRODUCTS**  
Daniela Cîrțină, „*Constantin Brâncuși“ University of Târgu-Jiu, Romania*
- 3. HEAVY METALS BIOACCUMULATION IN SOIL AND PLANTS. CASE STUDY: LIGNITE THERMAL POWER PLANTS FROM SE REGION OF ROMANIA**  
NICA-BADEA DELIA \*, *CONSTANTIN BRANCUSI UNIVERSITY, TÂRGU JIU, ROMÂNIA*  
TUFAN TEODORA GABRIELA \*, *SC ONCOPAT DIAGNOSTIC SRL, CLUJ NAPOCA, ROMÂNIA*  
UDRIȘTIOIU AURELIAN, *TITU MAIORESCU UNIVERSITY OF BUCHAREST, ROMÂNIA*
- 4. STARTING A BUSINESS BY SETTING UP A GREENHOUSE FOR GROWING ORNAMENTAL PLANTS**  
Irina-Ramona PECINGINĂ, “*Constantin Brâncuși” University from Târgu Jiu, ROMANIA*

5. **EMPOWERING RURAL COMMUNITIES: THE IMPACT OF DIGITAL TECHNOLOGIES AND ECO-FRIENDLY PRACTICES IN GORJ COUNTY'S AGRITOURISM**  
Elena-Loredana STĂNCIOIU, „Constantin Brâncusi” University of Targu-Jiu”  
Aniela BĂLĂCESCU, „Constantin Brâncusi” University of Targu-Jiu”
6. **SETTING UP A TROUT FARM - AN OPPORTUNITY FOR RURAL ECONOMIC DEVELOPMENT**  
Emil Cătălin ȘCHIOPU, „Constantin Brâncusi” University of Targu-Jiu”
7. **PRODUCTION AND EXPLOITATION OF TRADITIONAL CLAY POTS - AN ALTERNATIVE FOR SUSTAINABLE DEVELOPMENT OF RURAL AREAS**  
Emil Cătălin ȘCHIOPU, „Constantin Brâncusi” University of Targu-Jiu”
8. **ESTABLISHMENT AND DESIGN OF A CATTLE FARM-SOLUTION FOR RURAL DEVELOPMENT**  
Cazalbașu Violeta- Ramona, „Constantin Brâncusi” University of Targu-Jiu”
9. **RECOVERY OF MILK AS BUTTER BY TRADITIONAL METHODS**  
Cazalbașu Violeta- Ramona, „Constantin Brâncusi” University of Targu-Jiu”

## Section 3

### ENERGY AND ENVIRONMENT

Conference room: 014

Date 29. 11. 2024

Hours: 1100 – 1400

Chairman: Assoc. prof. PhD.eng. Cristinel Popescu, “Constantin Brâncuși”  
University from Târgu Jiu

Technical secretariat: Lecturer PhD.eng. Adriana Comarlă, “Constantin  
Brâncuși” University from Târgu Jiu

1. **ENERGY CONSUMPTION AND AIR POLLUTION IN THE JIU VALLEY: ANALYZING INDUSTRIAL IMPACT AND SUSTAINABLE SOLUTIONS**

Alexandra Soica, *University of Petrosani, Petrosani, ROMANIA*

Razvan Bogdan Itu, *University of Petrosani, Petrosani, ROMANIA*

Bogdan Ioan Marc, *University of Petrosani, Petrosani, ROMANIA*

2. **DEGRADATION MECHANISMS IN LITHIUM-ION BATTERIES: A CRITICAL ANALYSIS OF PERFORMANCE DECLINE IN ELECTRIC VEHICLES**

Lucica Anghelescu, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*

Bogdan Diaconu, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*

Mihai Cruceru, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*

Mircea Iovi, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA (student)*

Narcis Manta, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA(student)*

3. **DEGRADATION MECHANISMS IN LITHIUM-ION BATTERIES: A CRITICAL ANALYSIS OF PERFORMANCE DECLINE IN ELECTRIC VEHICLES -part 2**

Lucica Anghelescu, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*

Bogdan Diaconu, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*

Mihai Cruceru, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*

Enache Alin, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA(student)*

Eduard Cîndea, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA(student)*

4. **LIME EXPLAINABILITY REVEALS IMPLICIT ASSOCIATIONS IN DEEP CONVOLUTIONAL ARCHITECTURES**  
 Bogdan Diaconu, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*  
 Lucica Anghelescu, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*  
 Mihai Cruceru, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA*  
 Bâca Gheorghe, *University “Constantin Brâncuși” of Tg-Jiu, ROMANIA(student)*
  
5. **FUNDAMENTAL MECHANISMS OF ELECTROSTATIC DEDUSTING - DIFFUSION CHARGING OF PARTICLES IN ELECTROFILTERS**  
 Andrei Cristian Rada, *University of Petrosani, Petrosani, ROMANIA*
  
6. **ANALYSIS OF THE ELECTRICITY PRICE IN ROMANIA BETWEEN 2021 AND 2024**  
 Alina Handra, *Petroleum-Gas University of Ploiesti, Ploiesti, ROMANIA*  
 Liliana Samoila, *University of Petrosani, Petrosani, ROMANIA*
  
7. **VIRTUAL INSTRUMENT FOR DIMENSIONING A TOROIDAL TRANSFORMER**  
 Andrei Cristian Rada, *University of Petrosani, Petrosani, ROMANIA*  
 Alina Handra, *Petroleum-Gas University of Ploiesti, Ploiesti, ROMANIA*  
 Liliana Samoila, *University of Petrosani, Petrosani, ROMANIA*
  
8. **DESIGN AND IMPLEMENTATION OF A 10.5 MW BIOMASS POWER PLANT IN FRENCH GUINEA: TECHNOLOGICAL SOLUTION AND ENERGY IMPACT**  
 Alina-Daniela Handra, *Petroleum-Gas University of Ploiesti, Ploiesti, ROMANIA*
  
9. **THE SCADA SYSTEM FOR THE CONTROL AND MONITORING OF A MICRO-HYDROPOWER PLANT**  
 C. Hațiegan, *Babeș-Bolyai University, Reșița, ROMANIA*  
 M.D. Stroia\*(*corresponding author*), *Babeș-Bolyai University, Reșița, ROMANIA*  
 C. Popescu, *“Constantin Brâncuși” University of Târgu Jiu, ROMANIA*  
 M.F. Preduș, *Babeș-Bolyai University, Reșița, ROMANIA*
  
10. **ASSESSMENT OF MECHANICAL STORAGE TECHNOLOGIES USED IN ENERGY SYSTEMS**  
 Cruceru Mihai, *University Constantin Brancusi, Targu Jiu, Romania*  
 Diaconu Bogdan, *University Constantin Brancusi, Targu Jiu, Romania*  
 Anghelescu Lucica, *University Constantin Brancusi, Targu Jiu, Romania*



Conference room: 014

Date 29. 11. 2024

Hours: 15<sup>00</sup> – 18<sup>00</sup>

Chairman: Assoc. prof. PhD.eng. Cristinel Popescu, “Constantin Brâncuși”  
University from Târgu Jiu

Technical secretariat: Lecturer PhD.eng. Adriana Comarlă, “Constantin  
Brâncuși” University from Târgu Jiu

**11. INFLUENCE OF EVAPORATION ON ENERGY AND ECONOMIC  
LOSSES OF PUMPED HYDRO ENERGY STORAGE**

Cruceru Mihai, *University Constantin Brancusi, Targu Jiu, Romania*

Diaconu Bogdan, *University Constantin Brancusi, Targu Jiu, Romania*

Anghelescu Lucica, *University Constantin Brancusi, Targu Jiu, Romania*

**12. POSSIBILITIES OF INCREASING THE ENERGY PERFORMANCE OF  
HYDROELECTRIC PLANTS FROM BIHOR COUNTY BY  
INTEGRATING THE FLOATING PHOTOVOLTAIC PANELS**

Andrea Amalia Minda, *Babeş-Bolyai University of Cluj Napoca, ROMANIA*

Olga-Ioana Amariei, *Babeş-Bolyai University of Cluj Napoca, ROMANIA*

Daniela Negrea, *University of Oradea, ROMANIA*

Marius Lolea, *University of Oradea, ROMANIA*

Kristijan Cincar, *West University of Timișoara, ROMANIA*

Marius Susa, *Petroleum and Gas University of Ploiești, ROMANIA*

**13. ANALYSIS AND INCREASE OF ELECTRICITY AVAILABILITY OF  
PHOTOVOLTAIC PANELS APPLYING FUZZY LOGIC CONTROL**

Andrea Amalia Minda, *Babeş-Bolyai University, Cluj Napoca, ROMANIA*

Amariei Olga-Ioana, *Babeş-Bolyai University, Cluj Napoca, ROMANIA*

Daniela Negrea, *University of Oradea, Oradea, ROMANIA*

Marius Lolea, *University of Oradea, Oradea, ROMANIA*

Kristijan Cincar, *West University of Timișoara, Timișoara, ROMANIA*

**14. STUDY ON THE ECOLOGICAL FUNCTIONING OF 330 MW ENERGY  
GROUPS USING FOSSIL FUELS**

Cristinel Racoceanu, *”Constantin Brâncuși” University of Târgu Jiu, ROMANIA*



15. **ELECTRIC CIRCUIT SIZING SOFTWARE FOR POWERING ASYNCHRONOUS MOTORS WITH SHORT-CIRCUIT ROTOR**  
 C.M. Muscai, *Babeş-Bolyai University, Reşiţa, ROMANIA*  
 L.B. Protea, *Polytechnic University of Bucharest, Faculty of Electrical Engineering, Bucuresti, ROMANIA*  
 C.Popescu, *“Constantin Brâncuşi” University of Târgu Jiu, ROMANIA*  
 C. Haţiegan, *Babeş-Bolyai University, Reşiţa, ROMANIA*  
 M.D. Stroia\* (corresponding author), *Babeş-Bolyai University, Reşiţa, ROMANIA*
16. **IMPROVING THE ENERGY EFFICIENCY OF ELECTRICAL SYSTEMS USING HIGH FREQUENCY POWER TRANSFORMERS**  
 Adina TĂTAR, *Constantin Brancusi University of Targu-Jiu, Faculty of Engineering, ROMÂNIA*
17. **CONSIDERATION ON THE DEVELOPMENT OF THE PUMPED STORAGE HYDROELECTRIC SYSTEM**  
 IONICI CRISTINA, *University “Constantin Brâncuşi , Tg-Jiu, Romania*  
 IANASI CĂTĂLINA, *University “Constantin Brâncuşi , Tg-Jiu, Romania*  
 Master student Răduţiu Răzvan , I TAPE  
 Students: Bărboianu Mihai , Țîrcă Ana, IV MEn
18. **CMS IN THE DIGITALIZATION OF FIXED ASSET MANAGEMENT**  
 M.D. Stroia, *Babeş-Bolyai University, Reşiţa, ROMANIA*  
 C. Haţiegan\*(*corresponding author*), *Babeş-Bolyai University, Reşiţa, ROMANIA*  
 C. Popescu, *“Constantin Brâncuşi” University of Târgu Jiu, ROMANIA*  
 C.M. Muscai, *Babeş-Bolyai University, Reşiţa, ROMANIA*
19. **MODERN TECHNOLOGIES TO REDUCE SULPHUR OXIDE EMISSIONS**  
 Phd. Vlaicu Popa Marius Eramia, *Oltenia Energy Complex*
20. **ENERGY TRANSITION IN GERMANY**  
 Adriana Comarlă, *University „Constantin Brâncuşi” in Targu Jiu, ROMANIA*  
 Josef Timmerberg, *Jade University, Wilhelmshaven, GERMANY*  
 Daniela Cîrţînă, *University „Constantin Brâncuşi” in Targu Jiu, ROMANIA*  
 Francisc Comarlă, *University „Constantin Brâncuşi” in Targu Jiu, ROMANIA*

## SECTION 4

### *Mechanical engineering, Materials and manufacturing system, Quality management*

Conference room: A016

Date 29. 11. 2024

Hours: 1100 – 1400

Chairman: Prof. PhD. Liviu Marius CÎRȚÎNĂ, “Constantin Brâncuși” University from Târgu Jiu

Technical secretariat: Lecturer PhD. Alin STĂNCIOIU, “Constantin Brâncuși” University from Târgu Jiu

- 1. CAPABILITIES OF MEANS USED IN MEASUREMENT PROCESSES. CASE STUDY**  
Prof. PhD. eng. LIVIU MARIUS CÎRȚÎNĂ, „Constantin Brâncuși” University of Tg-Jiu, ROMANIA  
Lecturer PhD. eng. CONSTANȚA RĂDULESCU, „Constantin Brâncuși” University of Tg-Jiu, ROMANIA
- 2. THE EVOLUTION OF ENTREPRENEURSHIP EDUCATION THROUGH PRACTICAL APPLICATION**  
Stefan Ghimisi, Constantine Brâncuși University of Târgu Jiu, ROMÂNIA
- 3. RESEARCH ON WASTEWATER COLLECTION AND TREATMENT**  
Letitia Ghimisi, National University of Science and Technology POLITEHNICA Bucharest, ROMÂNIA
- 4. MECHANISMS USED TO UNLOAD CONTAINERS WITH GARBAGE RESIDUES**  
Assoc. Prof. Ovidiu ANTONESCU, University Politehnica of Bucharest  
PhD Stud. Dana VALEANU, University Politehnica of Bucharest  
Prof. Daniel STRIMBEANU, “Nicolae Balcescu” Technological High School of Bals  
Prof. Păun ANTONESCU, University Politehnica of Bucharest

**5. QUALITY MANAGEMENT STRATEGIES IN RESEARCH-DEVELOPMENT PROJECTS IN THE AUTOMOTIVE**

A. Epureanu, *National University of science and Technology Politehnica Bucharest, Bucharest, ROMANIA*

D. Sillion, *National University of science and Technology Politehnica Bucharest, Bucharest, ROMANIA*

O. Chivu, *National University of science and Technology Politehnica Bucharest, Bucharest, ROMANIA*

D. Nitoi, *National University of science and Technology Politehnica Bucharest, Bucharest, ROMANIA*

C. Enache, *National University of science and Technology Politehnica Bucharest, Bucharest, ROMANIA*

N. Merloi, *National University of science and Technology Politehnica Bucharest, Bucharest, ROMANIA*

**6. EVALUATION OF THE POSSIBILITIES OF ULTRASONIC CONTROL OF WELDED JOINTS**

A. Epureanu, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

D. Sillion, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

V. Mustață (Udriștoiu), *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

A. Popescu\*, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

D. Nitoi\*, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

C. Radu, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

**7. IMPROVING HEALTH AND SAFETY WORKING CONDITIONS IN A WIRE DRAWING PRODUCTION UNIT**

A. Cringureanu (Tănase), *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

D. Nitoi, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

A. Popescu\* (Simionescu), *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

N. Merloi (Ene), *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

A. Otomega, *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

V. Mustață (Udriștoiu), *National University of Science and technology Politehnica Bucharest, Bucharest, ROMANIA*

8. **STUDY ON THE SITUATION OF OCCUPATIONAL ACCIDENTS ON CONSTRUCTION SITES IN ROMANIA**  
Drd. Mădălina-Giulia BOBOCEA, *National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA*  
Drd. Elena-Cristina DEDIU, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*  
Drd. Andrei IACOB, *National University of Science and Technology POLITEHNICA Bucharest, Bucharest, ROMANIA*  
Conf. dr. ing. Claudia BORDA, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*  
Sl. dr. ing. Constantin RADU, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*
9. **THE HEALTH RISKS THAT ASBESTOS FROM OLD BUILDINGS POSES**  
Constantin LUCA, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Oana Roxana CHIVU, *Prof. PhD. eng., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*  
Marilena GHEORGHE, *Ph.D. Eng., Lecturer, Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*  
Cornelia LUCHIAN, *Ph.D. Eng., Lecturer, Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*  
Marin ZAMFIR, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*
10. **STUDY REGARDING THE USE OF BANKS SUPPORT SYSTEMS IN THE FIELD OF CONSTRUCTION**  
Adrian MOISE, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Oana Roxana CHIVU, *Prof. PhD. eng., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*  
Marilena GHEORGHE, *Ph.D. Eng., Lecturer, Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

Claudia BORDA, *Prof. PhD. eng., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

Andrei IACOB, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*

**11. THE IMPACT OF GASES PRODUCED BY FIRES AT CULTURAL-MUSICAL EVENTS HELD IN UNCONVENTIONAL SPACES**

Drd. Nicoleta MERLOI, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Dr. ing. Mihaela Helstern, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Prof.dr.ing. Dan Florin NITOI, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Drd. Giulia Madalina BOBOCEA , *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Claudia BORDA, *Prof. PhD. eng., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

**12. THE EVOLUTION OF STRESS IN THE ERA OF DIGITIZATION OF WORK**

Andrei BUJOR, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*

Constantin BUJOR, *Ph.D. Eng., Lecturer, Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

Nicoleta ENE (MERLOI), *Ph.D. student., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

Giulia BOBOCEA, *Ph.D. student., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

Marinela MARINESCU, *Ph.D. Eng., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*

**13. INCREASED SAFETY IN CAR REPAIR SHOPS**

Alexandru CANA, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*

Adrian MOISE, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*

Andrei IACOB, *National University of Science and Technology POLITEHNICA Bucharest*

*Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*

Stefan ȚEPURE, *National University of Science and Technology POLITEHNICA Bucharest*

*Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*

Catalina ENACHE, *National University of Science and Technology POLITEHNICA Bucharest*

Claudia BORDA, *Ph.D. National University of Science and Technology POLITEHNICA Bucharest*

**14. INTEGRATION OF AN IMES SYSTEM INTO AN AUTOMATED WELDING PROCESS**

Demetrius PETRESCU (DUBIC) *National University of Science and Technology POLITEHNICA Bucharest*

Oana- Roxana CHIVU *National University of Science and Technology, POLITEHNICA Bucharest*

Anamaria Ioana FEIER *University Politehnica Timișoara,*

Alin ION ȚĂPIRDEA *National University of Science and Technology, POLITEHNICA Bucharest*

Claudia BORDA *National University of Science and Technology, POLITEHNICA Bucharest*

**15. INTEGRATING NON-EU WORKFORCE INTO ROMANIA'S WIND INDUSTRY**

Elena-Cristina DEDIU, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Mădălina-Giulia BOBOCEA, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Oana-Roxana CHIVU, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

Anamaria Ioana FEIER, *University Politehnica Timișoara*

Andrei IACOB, *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*

16. **COMPARATIVE ANALYSIS OF INSTRUMENTAL METHODS FOR IDENTIFYING XENOBIOTICS FOR SOIL POLLUTION REDUCTION**  
Tamara LEONTE, *National University of Science and Technology POLITEHNICA Bucharest*  
Liviu CÎRȚĂNĂ, *National University of Science and Technology POLITEHNICA Bucharest*  
Alexandru CANA, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Adrian MOISE, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Stefan ȚEPURE, *National University of Science and Technology POLITEHNICA Bucharest*  
Catalina ENACHE, *National University of Science and Technology POLITEHNICA Bucharest*
17. **EVALUATION OF THE LEVEL OF PSYCHOSOCIAL RISK AND THE IMPACT OF STRESS ON WORKERS' HEALTH**  
Nicoleta ADOCHITEI (PRESURA) *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*  
Liviu CÎRȚĂNĂ *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*  
Eugenia BULBOACA *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*  
Cornelia LUCHIAN *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*  
Adrian MOISE *National University of Science and Technology POLITEHNIC, Bucharest, ROMANIA*
18. **EFFECTS OF GSM ANTENNAS ON LIVING ORGANISMS**  
Marin ZAMFIR, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Oana Roxana CHIVU, *Prof. PhD. eng., Faculty of Industrial Engineering and Robotics, National University of Science and Technology POLITEHNICA Bucharest*  
Andrei IACOB, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Alex ȚĂPÎRDEA, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*  
Constantin LUCA, *Ph.D. student, National University of Science and Technology POLITEHNICA Bucharest*



**19. ANALYSIS OF THE LOADS OF THE TELESCOPIC CRANE ARM WITH A LOAD OF 5000KG**

Lenuța Cîndea, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*

Cornel Hațiegan, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*

Cristinel Popescu, *Constantin Brâncuși University of Tg-Jiu, ROMÂNIA*

Florin Grofu, *Constantin Brâncuși University of Tg-Jiu, ROMÂNIA*

**20. PLASMA JET ARC MODELING AND SIMULATION**

Lenuța Cîndea, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*

Cornel Hațiegan, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*

Cristinel Popescu, *Constantin Brâncuși University of Tg-Jiu, ROMÂNIA*

Florin Grofu, *Constantin Brâncuși University of Tg-Jiu, ROMÂNIA*

**21. VALIDATION OF THE MODAL NUMERICAL ANALYSIS WITH THE ANALYTICAL METHOD FOR A SS-C-SS-C RECTANGULAR PLATE**

Băcescu N., *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*

Atinge G., *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*

Praisach Z.I., *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*

Turiac R.-R., *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*



Conference room: A016

Date 29. 11. 2024

Hours: 1500 – 1800

Chairman: Prof. PhD. Oana Roxana CHIVU, National University of Science and Technology POLITEHNICA Bucharest

Technical secretariat: Lecturer PhD. Cătălina IANĂȘI, “Constantin Brâncuși” University from Târgu Jiu

22. **COUPLED ANALYSIS OF CHARACTERISTICS OF ELECTROMAGNETIC DC CRANES FOR TRACTION**  
Cornel Hațiegan, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*  
Lenuța Cîndea, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*  
Cristinel Popescu, *Constantin Brâncuși University of Tg-Jiu, ROMÂNIA*  
Florin Grofu, *Constantin Brâncuși University of Tg-Jiu, ROMÂNIA*
23. **STUDY REGARDING THE INFLUENCE OF THE PRINTING SPEED ON THE DIMENSIONAL ACCURACY OF FDM PRINTED PLA SPECIMENS**  
Deian Ardeljan, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Sebastian Grollmusz, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Raul-Rusalin Turiac, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Nicoleta Băcescu, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Relu-Costel Ciubotariu, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Doina Frunzăverde, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*
24. **THE USE OF COLD ACETONE VAPORS TO SMOOTH THE SURFACE ROUGHNESS OF PARTS OBTAINED BY THE FDM METHOD FROM PLA AND ABS**  
Turiac Raul-Rusalin, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Korka Zoltan-Iosif\* (*corresponding author*), *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*  
Ardeljan Deian Dorel, *Babeș-Bolyai University, Cluj-Napoca, ROMANIA*
25. **METHOD OF STATISTICAL CONTROL OF PART SIZES IN LARGE SERIES AND MASS PRODUCTION**  
Ana-Maria Budai, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*  
Mihaela Molnar \*, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*  
Cristinel Popescu, „*Constantin Brâncuși*” *University of Târgu-Jiu, ROMÂNIA*  
Cornel Hațiegan, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*

26. **THE DYNAMIC BEHAVIOR OF CLAMPED-CANTILEVER PIPE IN COMPARATIVE ANALYSIS WITH A DOUBLE-CLAMPED PIPE USING FINITE ELEMENT MODAL ANALYSIS**  
 Ștefan Popescu, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*  
 Gilbert-Rainer Gillich, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*  
 Zeno-Iosif Praisach, *Babeș-Bolyai University of Cluj-Napoca, ROMÂNIA*
27. **A FUTURE APPROACH TO MATERIAL RECYCLING**  
 Lecturer PhD. eng. Florin CIOFU, *Engineering Faculty, "Lucian Blaga" University of Sibiu*
28. **THE RECOVERY OF GLASS AND SILICON FROM PHOTOVOLTAIC PANELS AT THE END OF THEIR SERVICE LIFE**  
 Lecturer PhD. eng. Florin CIOFU, *Engineering Faculty, "Lucian Blaga" University of Sibiu*  
 Student Victor GAȘPAR, *Engineering Faculty, "Lucian Blaga" University of Sibiu*
29. **QUALITY TOOLS USED IN TRAINING FUTURE ENGINEERS**  
 Gina-Maria Moraru, *"Lucian Blaga" University of Sibiu, ROMANIA*
30. **THE APPLICABILITY OF UV RADIATION IN STERILIZATION**  
 Mihut Nicoleta-Maria, *Assoc. prof. PhD, "Constantin Brâncuși" University of Târgu Jiu, ROMANIA*
31. **TECHNIQUES OF MICROSTRUCTURAL ANALYSIS OF COMPOSITE MATERIALS**  
 Minodora-Maria Pasăre, *"Constantin Brancusi" University of Tg-Jiu, ROMANIA*
32. **STUDY ON THE MECHANISM WITH ACCESS BARS IN A ROBOTIC PARKING LOT**  
 Edward RĂȘCHITOR, *Student – Ph.D. Candidate: Eng National University of Science and Technology POLITEHNICA Bucharest*  
 Carmen Elisabeta RADU, *Student – Ph.D. Candidate: Eng National University of Science and Technology POLITEHNICA Bucharest*

33. **CAD APPLICATIONS IN DESIGNING AND MANUFACTURING DEVICES WITH ECCENTRIC**  
 Lecturer PhD. eng. *CONSTANȚA RĂDULESCU, Engineering Faculty, „Constantin Brâncuși” University of Tg-Jiu, ROMANIA*  
 Prof. PhD. eng. *LIVIU MARIUS CÎRȚÎNĂ, Engineering Faculty, „Constantin Brâncuși” University of Tg-Jiu, ROMANIA*
34. **CAM APPLICATIONS IN THE DESIGN AND MANUFACTURE OF ECCENTRIC DEVICES**  
 Lecturer PhD. eng. *CONSTANȚA RĂDULESCU, Engineering Faculty, „Constantin Brâncuși” University of Tg-Jiu, ROMANIA*  
 Prof. PhD. eng. *LIVIU MARIUS CÎRȚÎNĂ, Engineering Faculty, „Constantin Brâncuși” University of Tg-Jiu, ROMANIA*
35. **OPTIMIZING THE 3D PRINTING PROCESS FROM CAD MODELING TO OBTAINING THE FINISHED PART**  
 Lecturer PhD Eng. *Stăncioiu Alin, Constantin Brâncuși University of Targu-Jiu, ROMANIA*  
 Assist. Eng. *Stăncioiu Elena-Loredana, Constantin Brâncuși University of Targu-Jiu, ROMANIA*
36. **THE EFFICIENCY OF THE ADDITIVE MANUFACTURING METHOD IN MAKING PROTOTYPES AND FINISHED PRODUCTS**  
 Lecturer PhD Eng. *Stăncioiu Alin, Constantin Brâncuși University of Targu-Jiu, ROMANIA*  
 Assist. Eng. *Stăncioiu Elena-Loredana, Constantin Brâncuși University of Targu-Jiu, ROMANIA*
37. **ASPECTS OF DESIGN ACTIVITY IN THE FIELD OF MECHANICAL ENGINEERING**  
*Catalina Ianasi, “Constantin Brancusi” University of Tg-Jiu, Romania*
38. **APPLICABLE MANAGEMENT SYSTEMS IN THE FIELD OF UNCONVENTIONAL TECHNOLOGIES**  
 Lecturer PhD. eng. *Alin NIOAȚĂ, Engineering Faculty, ”Constantin Brâncuși” University of Tg-Jiu, ROMANIA*

39. **EFFECTIVE STRATEGIC FORMULATION FOR COMPETITIVE BUSINESSES IN GORJ COUNTY**  
David Rodica, *MBA, Constantin Brâncuși University from Targu Jiu*  
PhD. Cumpănașu Vasile, *Constantin Brâncuși University from Targu Jiu*
40. **QUALITY MANAGEMENT OF THE RESEARCH ACTIVITIES IN UNIVERSITIES: NAVIGATING CHALLENGES AND EMBRACING INNOVATION**  
David Rodica, *MBA, Constantin Brâncuși University from Targu Jiu*  
PhD. Cumpănașu Vasile, *Constantin Brâncuși University from Targu Jiu*
41. **STUDY OF MODAL IDENTIFICATION OF COMPOSITE MATERIALS WITH RUBBER MATRIX AND FA AND PVC INSERTS**  
Dr.Eng. Dimulescu Sabin Cristinel, *Constantin Brancusi University of Targu-Jiu, Gorj, Romania,*  
Eng. Wetternek Mihaela, *Resita Technical College, Romania*
42. **INDUSTRY 5.0 AND ITS IMPACT ON THE COMMUNITY, FROM THE ENGINEERS' PERSPECTIVE**  
Gina-Maria Moraru, *“Lucian Blaga” University of Sibiu, ROMANIA*

