



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 2023”

November 24th - 25th 2023

TÂRGU-JIU

ROMANIA

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Assoc. prof. PhD Viorica Mariela UNGUREANU, "Constantin Brâncuşi" University of Târgu-Jiu
Lecturer PhD Olga AMARIEI, Babeş-Bolyai University of Cluj-Napoca
Lecturer PhD Lenuţa CÎNDEA, Babeş-Bolyai University of Cluj-Napoca
Lecturer PhD Cornel HAȚIEGAN, Babeş-Bolyai University of Cluj-Napoca
Lecturer PhD Andrea Amalia MINDA, Babeş-Bolyai University of Cluj-Napoca
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Lecturer PhD Mihaela Dorica STROIA, Babeş-Bolyai University of Cluj-Napoca
Lecturer PhD Cristian TUFÎȘI, Babeş-Bolyai University of Cluj-Napoca

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Lecturer PhD Adriana TUDORACHE
Lecturer PhD Cătălina IANĂȘI
Lecturer PhD Marian IONESCU

CONFERENCE SCHEDULE

Friday, November 24th, 2023

9⁰⁰ - 10⁰⁰ - Registration

10⁰⁰ - 10³⁰ - Opening ceremony (Conference room: A016 Engineering Faculty UCB)

10³⁰ -10⁴⁵ - Coffee break

10⁴⁵ - 14³⁰ - Conference sessions (works presentations by sections)

15⁰⁰ - 16³⁰ - Lunch

17⁰⁰ - 20⁰⁰ - Conference sessions (works presentations by sections)

THE SECTIONS OF THE CONFERENCE

1. Control system, electronics, information technology and cyber security
2. Environmental engineering and sustainable development
3. Engineering and management in public alimentation and agrotourism
4. Energy and Power engineering
5. Mechanical engineering, materials and manufacturing systems
6. Quality management

Saturday, November 25th, 2023

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 24. 11. 2023

Hours: 10⁴⁵ – 14⁰⁰

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

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

1. THE DYNAMIC BEHAVIOR OF THE TRUSS TREATED IN THE FINITE ELEMENT ANALYSIS OF TRUSS ELEMENTS WHICH ARE DEFINED AS TRUSS OR BEAM

Dan Alexandru Pîrșan, Babeș-Bolyai University, Cluj-Napoca, Romania

2. FUZZY CONTROLLER FOR ADJUSTING THE WELDING SPEED OF A WELDING ROBOT

Mihaela Molnar, Babes -Bolyai University, Cluj Napoca, Romania

Eugen Răduca* (corresponding author), Babes -Bolyai University, Cluj Napoca, Romania

Cornel Hațiegan, Babes -Bolyai University, Cluj Napoca, Romania

3. ANALYSIS AND DIAGNOSIS OF OPTICAL CABLE AND UTP CABLE USED FOR DATA TRANSMISSION IN TELECOMMUNICATIONS

Mihaela Molnar, Babes -Bolyai University, Cluj Napoca, Romania

Eugen Răduca* (corresponding author), Babes -Bolyai University, Cluj Napoca, Romania

Cristinel Popescu, „Constantin Brâncuși” University from Târgu Jiu, România

Cătălin-Alexandru Radu, Rcs&Rds, Oravița, Romania

4. ANDROID APPLICATION FOR DIGITIZING CONTRAVENTION DOCUMENTS

D. Anghel, “Politehnica” University of Bucuresti, Splaiul Independenței, Bucuresti,

România, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

M.D. Stroia* (corresponding Author), Babeș-Bolyai University of Cluj-Napoca, Reșița, România

C. Hațiegan, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

A.C. Timofte, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

5. APPLICATION BASED ON CRYPTOLOGY ALGORITHMS, FOR HIDING TEXT MESSAGES INSIDE PICTURES

M.D. Stroia, Babeş-Bolyai University of Cluj-Napoca, Reşiţa, ROMÂNIA

C. Popescu, "Constantin Brâncuşi" University from Târgu Jiu, Romania

C. Haţiegan* (corresponding Author), Babeş-Bolyai University of Cluj-Napoca, Reşiţa, România

C.C. Boraci, Babeş-Bolyai University of Cluj-Napoca, Reşiţa, România

6. PHOTOVOLTAIC PANEL FAILURE DETECTION. PART I: PERFORMANCE DEGRADATION CONDITIONS

Bogdan Diaconu, University "Constantin Brâncuşi" from Târgu Jiu, Romania

Lucica Anghelescu, University "Constantin Brâncuşi" from Târgu Jiu, Romania

Mihai Cruceru, University "Constantin Brâncuşi" from Târgu Jiu, Romania

7. PHOTOVOLTAIC PANEL FAILURE DETECTION. PART II: A COMPUTER VISION-BASED MACHINE LEARNING APPROACH FOR AUTOMATED IDENTIFICATION OF VISUALLY OBSERVABLE PHOTOVOLTAIC PANELS FAILURE CONDITIONS

Bogdan Diaconu, University "Constantin Brâncuşi" from Târgu Jiu, Romania

Mihai Cruceru, University "Constantin Brâncuşi" from Târgu Jiu, Romania

Lucica Anghelescu, University "Constantin Brâncuşi" from Târgu Jiu, Romania

8. INSTRUMENTS FOR MEASURING RIVER FLOW

Florin Grofu, University "Constantin Brâncuşi" from Târgu Jiu, Romania

9. DIGITAL MODELS FOR SUSTAINABLE DEVELOPMENT OF SMES

Corina Ana Borcoşi, University "Constantin Brâncuşi" from Târgu Jiu, Romania

10. PERSPECTIVES OF EDUCATION IN THE DIGITALIZATION ERA

Corina Ana Borcoşi, University "Constantin Brâncuşi" from Târgu Jiu, Romania

Ilie Borcoşi, University "Constantin Brâncuşi" from Târgu Jiu, Romania

11. FUZZIFICATION AND DEFUZZIFICATION OF ACTIONS IN THE GROUPOIDS FRAMEWORK

Mădălina Buneci, University "Constantin Brâncuşi" from Târgu Jiu, Romania

Conference room: A015

Date 24. 11. 2023

Hours: 17⁰⁰ - 19³⁰

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

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

12. EVOLUTION OPERATORS ON BANACH SPACES OF OPERATOR VALUED, MEASURABLE FUNCTIONS

Iulia Iarina Ungureanu, Technical University of Cluj Napoca, Romania

Viorica Mariela Ungureanu, University “Constantin Brâncuși” from Târgu Jiu, Romania

13. GENERALIZED RICCATI EQUATIONS DEFINED ON ORDERED BANACH SPACES OF MEASURABLE FUNCTIONS

Viorica Mariela Ungureanu, University “Constantin Brâncuși” from Târgu Jiu, Romania

14. TREATMENT AND VALUATION SLUDGE IN WASTEWATER TREATMENT PLANTS

Lenuța Costache (Bira), National University of Science and Technology Politehnica Bucharest, Romania

Iosif Tempea, National University of Science and Technology Politehnica Bucharest, Romania

15. CONTRIBUTIONS ON THE USE OF MOBILE ROBOTS IN WASTEWATER TREATMENT PLANTS

Lenuța Costache (Bira), National University of Science and Technology Politehnica Bucharest, Romania

Iosif Tempea, National University of Science and Technology Politehnica Bucharest, Romania

16. AI TECHNOLOGIES IN STEM EDUCATION: A SYSTEMATIC REVIEW

Gheorghe Gîlcă, University “Constantin Brâncuși” from Târgu Jiu, Romania

Alina-Elena Lupulescu (Machidon), University of Petroșani, Petroșani, România

17. THE IMPACT OF THE CONNECTIVITY REVOLUTION - HOW IOT IS TRANSFORMING THE WAY WE INTERACT WITH TECHNOLOGY

Roxana-Elena Stăniloiu (Stan), University of Petroșani, Petroșani, România

18. SOFTWARE TOOLS USED FOR RESEARCH AND PROTOTYPING A GOUGH-STEWART PLATFORM

Alina-Elena Lupulescu (Machidon), University of Petroșani, Petroșani, România and University “Constantin Brâncuși” from Târgu Jiu, Romania

Gîlcă Gheorghe, University “Constantin Brâncuși” from Târgu Jiu, Romania

19. MONITORING ECG HEART RATE WITH AD8232 MODULE

Marian Ionescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Ilie Borcoși, University “Constantin Brâncuși” from Târgu Jiu, Romania

Constanța Rădulescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Section 2

Environmental engineering and sustainable development

Conference room: A014

Date 24. 11. 2023

Hours: 10⁴⁵ - 14⁰⁰

Chairman: Prof. PhD. Cristinel Racocanu, “Constantin Brâncuși” University from Târgu Jiu

Technical secretariat: Lecturer PhD. Lucica Anghelescu, “Constantin Brâncuși” University from Târgu Jiu

1. INTEGRATION OF THE EQUIPMENT FOR RENEWABLE ENERGIES IN THE ELECTRICITY DISTRIBUTION NETWORKS

C. M. Muscai, National University of Science and Technology Politehnica Bucharest, Romania

M.D. Stroia, Babeș-Bolyai University, Reșița, Romania.

C. Popescu, “Constantin Brâncuși” University from Târgu Jiu, Romania

C. Hațiegan* (corresponding author), Babeș-Bolyai University, Reșița, Romania

2. A FEW ISSUES ABOUT EFFICIENCY AND COST OF HEAT PUMPS INTEGRATION IN ENERGY SYSTEM OF BUILDINGS

Andrea Amalia Minda, Babeș-Bolyai University, Cluj Napoca, Romania

Olga Amariei* (corresponding author), Babeș-Bolyai University, Cluj Napoca, Romania

Mircea Vasile Ambro, Technical University, Cluj Napoca, Romania

Lolea Marius Savu, University of Oradea, Oradea, Romania

Emeric Remus Szabo, University of Oradea, Oradea, Romania

Kristijan Cincar, West University Timișoara, Romania

3. STUDY ON THE ECOLOGICAL SOLUTIONS FOR SUSTAINABLE AVIATION

Ioana Cătălina Enache, National University of Science and Technology Politehnica Bucharest, Romania

Oana Roxana Chivu, National University of Science and Technology Politehnica Bucharest, Romania

Georgiana Petre, National University of Science and Technology Politehnica Bucharest, Romania

Felix Raduica, National University of Science and Technology Politehnica Bucharest, Romania

4. GAINING THE ABILITY TO CONVERT INSTEAD OF STORAGE FOR UNUSED PRODUCTS

Răzvan Bogdan Itu, University of Petroșani, Petroșani, Romania
Diana Marchiș, University of Petroșani, Petroșani, Romania
Eugen Traistă, University of Petroșani, Petroșani, Romania

5. EVALUATION OF THE SUBSIDENCE PHENOMENON IN THE CONTEXT OF CLOSED UNDERGROUND COAL MINE UNITS

Răzvan Bogdan Itu, University of Petroșani, Petroșani, Romania
Lorinț Csaba, University of Petroșani, Petroșani, Romania
Adrian Florea, University of Petroșani, Petroșani, Romania

6. STUDY OF THE POSSIBILITY OF EXPANDING THE PASSIVE HOUSE CONCEPT IN THE NORTHERN AREA OF EUROPE

D. Tataru, University of Petrosani, Petrosani, Romania

7. DETERMINATION OF ASH CONCENTRATION OF COAL FROM THE QUARRIES IN OLTENIA BY RADIOMETRIC MEASUREMENTS

Stanci A., University of Petrosani, Petrosani, Romania

8. SOLUTIONS TO REDUCE CO₂ POLLUTION OF THE ATMOSPHERE IN THE JIU VALLEY THROUGH THE CONSTRUCTION OF PASSIVE HOUSES

A. C. Tataru, University of Petrosani, Petrosani, Romania

9. IDENTIFICATION OF THE MAIN POLLUTANTS OF THE WEST JIU RIVER

A. C. Tataru, University of Petroșani, Petroșani, Romania
A. Stanci, University of Petroșani, Petroșani, Romania

10. AIR POLLUTION IN THE OPEN PIT OF LUPOAIA CAUSE BY LIGNITE EXPLOITING

Corina-Maria Iladie, University of Petroșani, Petroșani, Romania

11. DESULPHURIZATION OF COMBUSTION GASES IN ENERGY INSTALLATIONS

Cristinel Racoceanu, University "Constantin Brâncuși" from Târgu Jiu, Romania
Ion-Grigore Bîlteanu, University "Constantin Brâncuși" from Târgu Jiu, Romania
Lucian Constantin Trăncău, University "Constantin Brâncuși" from Târgu Jiu, Romania

Conference room: A014

Date 25. 11. 2022

Hours : 17 - 19⁰⁰

Chairman: Prof. PhD. Cristinel Racocceanu, “Constantin Brâncuși” University from Târgu- Jiu

Technical secretariat: Lecturer PhD. Lucica Anghelescu, “Constantin Brâncuși” University from Târgu- Jiu

12. 330 MW POWER GROUP TURBINE OPERATION STUDY – PERFORMANCE MEASUREMENTS

Cristinel Racocceanu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Dan Curuțu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Dumitru Văduva, University “Constantin Brâncuși” from Târgu Jiu, Romania

13. CONSIDERATIONS REGARDING THE USE OF NON-POLLUTING ENERGY IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT

Adina Tătar, University “Constantin Brâncuși” from Târgu Jiu, Romania

Nicoleta Mihuleț, University “Constantin Brâncuși” from Târgu Jiu, Romania

14. MANAGEMENT OF ANTHROPOGENIC RISK FACTORS AND MEDIA LIFE AND WORK RELATIONS

Delia Nica-Badea*, University “Constantin Brâncuși” from Târgu Jiu, Romania

Aniela Bălăcescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Aurelian Udriștioiu, Titu Maiorescu University, Branch Targu-Jiu, Romania

15. THEORETICAL CONSIDERATIONS REGARDING ENERGY TRANSITION AND SPACE REUTILIZATION: CHALLENGES AND OPPORTUNITIES IN THE OLTENIA MINING BASIN

Sandu-Ovidiu Borugă, University of Petrosani, Petrosani, Romania

Crina Adriana Drăgănescu, University of Petrosani, Petrosani, Romania

16. COMPREHENSIVE OVERVIEW AND STRATEGIES FOR MODERN WASTE MANAGEMENT: ADDRESSING CHALLENGES AND SUSTAINABILITY

Sandu-Ovidiu Borugă, University of Petrosani, Petrosani City, Romania

Crina Adriana Drăgănescu, University of Petrosani, Petrosani, Romania

17. REVERSE OSMOSIS

Adriana Tudorache, University “Constantin Brâncuși” from Târgu Jiu, Romania

Francisc Comarlă, University “Constantin Brâncuși” from Târgu Jiu, Romania

Josef Timmerberg, Jade University, Wilhelmshaven, Germany

Ovidiu Stoicoiu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Section 3

Engineering and management in public alimentation and agrotourism

Conference room: A112

Date 24. 11. 2024

Hours: 10⁴⁵ - 13⁴⁵

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

Technical secretariat: Lecturer PhD. Irina-Ramona Pecingină, “Constantin Brâncuși” University from Târgu Jiu

1. ADVANTAGES OF ESTABLISHING A RURAL *CHAMPIGNON* MUSHROOM BUSINESS

Roxana-Gabriela Popa, University “Constantin Brâncuși” from Târgu Jiu, Romania

2. IMPLEMENTATION OF A STRATEGY FOR THE PROMOTION AND VALUATION OF THE GASTRONOMIC AND CULTURAL POTENTIAL IN THE NOVACI-RANCA-BAIA DE FIER AREA

Irina-Ramona Pecingină, University “Constantin Brâncuși” from Târgu Jiu, Romania

3. THE IMPORTANCE OF INNOVATIVE FOOD TYPES AND BIOACTIVE COMPOUNDS IN FUNCTIONAL FOODS FOR HEALTH

Daniela Cîrîînă, University “Constantin Brâncuși” from Târgu Jiu, Romania

Rodica David, University “Constantin Brâncuși” from Târgu Jiu, Romania

4. CONSIDERATIONS REGARDING RISK ASSESSMENT IN FOOD SAFETY

Daniela Cîrîînă, University “Constantin Brâncuși” from Târgu Jiu, Romania

Rodica David, University “Constantin Brâncuși” from Târgu Jiu, Romania

5. TECHNICAL AND ECONOMIC ANALYSIS OF THE ESTABLISHMENT OF A MICROFACTORY FOR PROCESSING FRUIT INTO JAM

Emil Cătălin Șchiopu, University “Constantin Brâncuși” from Târgu Jiu, Romania

6. ANALYSIS OF WASTEWATER FROM THE MILK INDUSTRY BEFORE AND AFTER PREPARATION AND TREATMENT

Violeta Ramona Cazalbașu, University “Constantin Brâncuși” from Târgu Jiu, Romania

7. TECHNICAL AND ECONOMIC ANALYSIS OF SETTING UP A PIG FARM IN RURAL AREAS

Emil Cătălin Șchiopu, University “Constantin Brâncuși” from Târgu Jiu, Romania

8. ANALYSIS OF WASTE WATER FROM MEAT SAMPLING UNITS

Violeta Ramona Cazalbașu, University “Constantin Brâncuși” from Târgu Jiu, Romania

9. AGRITOURISM IN ROMANIA: A STATISTICAL ANALYSIS OF EVOLUTION AND TRENDS IN 2022

Elena Loredana Stăncioiu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Alin Stăncioiu, University “Constantin Brâncuși” from Târgu Jiu, Romania

10. POTENTIAL AND CONSTRAINTS THAT INFLUENCE THE SUSTAINABLE DEVELOPMENT OF AGRITOURISM IN GORJ

Elena Loredana Stăncioiu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Alin Stăncioiu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Section 4

Energy and Power engineering

Conference room: A010

Date 24. 11. 2023

Hours: 10⁴⁵ - 13⁴⁵

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

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

1. ELECTRICAL ENERGY SUPPLY SOLUTIONS FOR ISOLATED CONSUMERS

Luminita Georgeta Popescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Florin Grofu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Bogdan Diaconu, University “Constantin Brâncuși” from Târgu Jiu, Romania

2. A LITERATURE SURVEY REGARDING BATTERIES USED FOR ELECTRICAL ENERGY STORAGE

Mihai Cruceru, University “Constantin Brâncuși” from Târgu Jiu, Romania

Bogdan Diaconu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Lucica Anghelescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Ion Orbu, University “Constantin Brâncuși” from Târgu Jiu, Romania

3. MATHCAD SIMULATION OF THE DISCHARGE OF A CAPACITOR IN R-L CIRCUIT, AS AN CONTEMPORARY MEANS FOR ONLINE TRAINING OF STUDENTS IN ELECTRICAL ENGINEERING

Georgi Tsonev Velevev, Technical University of Gabrovo, Gabrovo, Bulgaria

Petar Kolev Petrov, Technical University of Gabrovo, Gabrovo, Bulgaria

Adriana Tudorache, University “Constantin Brâncuși” from Târgu Jiu, Romania

Adina Tătar, University “Constantin Brâncuși” from Târgu Jiu, Romania

Mihai Cruceru, University “Constantin Brâncuși” from Târgu Jiu, Romania

4. ELECTRICAL ENERGY STORAGE IN DISTRIBUTED GRIDS. CRITERIA FOR CHOOSING BATTERIES

Mihai Cruceru, University “Constantin Brâncuși” from Târgu Jiu, Romania

Bogdan Diaconu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Lucica Anghelescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Ionuț-Andrei Tănăsescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

5. OPTIMIZING THE PERFORMANCE CHARACTERISTICS OF ELECTROMAGNETS FOR LIFTING LOADS

C. Hațiegan, Babeș-Bolyai University of Cluj-Napoca, România

L. Cîndea* (corresponding author), Babeș-Bolyai University of Cluj-Napoca, România

C. Popescu, University "Constantin Brâncuși" from Târgu Jiu, Romania

I. Virca, "Nicolae Balcescu" Land Forces Academy of Sibiu, România

6. STRAIN ENERGY OF A SIMPLY SUPPORTED CIRCULAR PLATE FROM DYNAMIC BEHAVIOR POINT OF VIEW

Z. I. Praisach, Babeș-Bolyai University, Cluj-Napoca, Romania

I. Harea, Babeș-Bolyai University, Cluj-Napoca, Romania

C. Tufiși, Babeș-Bolyai University, Cluj-Napoca, Romania

D. A. Pîrșan, Babeș-Bolyai University, Cluj-Napoca, Romania

7. ASPECTS REGARDING THE VARIATION OF QUALITY PARAMETERS IN LOW-VOLTAGE ELECTRICAL DISTRIBUTION NETWORKS

Cristinel Popescu, University "Constantin Brâncuși" from Târgu Jiu, Romania

Marius-Eremia Vlaicu-Popa, University "Constantin Brâncuși" from Târgu Jiu, Romania

8. PHOTOVOLTAIC SYSTEM FOR SUPPLYING ELECTRICITY TO AN ISOLATED APIARY IN THE REȘIȚA AREA

Eugen Răduca, Babes -Bolyai University, Cluj Napoca, Romania

Mihaela Molnar*, Babes -Bolyai University, Cluj Napoca, Romania

Cornel Hațiegan, Babes -Bolyai University, Cluj Napoca, Romania

Gheorghe Covaci, Babes -Bolyai University, Cluj Napoca, Romania

9. AUTOMATION AND MONITORING OF AN INTELLIGENT GREENHOUSE

Teodora Lazăr, University of Petroșani, Romania

Dragoș Păsculescu, University of Petroșani, Romania

Florin - Gabriel Popescu, University of Petroșani, Romania

Nicolae-Daniel Fiță, University of Petroșani, Romania

Adina Tătar, University "Constantin Brâncuși" from Târgu Jiu, Romania

Florin Mureșan-Grecu, University of Petroșani, Romania

Dan – Cristian Lazăr, University of Petroșani, Romania

10. MISTAKES IN THE CHOICE OF EQUIPMENT FOR INTERNAL ELECTRICAL INSTALLATIONS AND THEIR CONSEQUENCES

Florin Mureșan-Grecu, University of Petroșani, Romania

Nicolae-Daniel Fiță, University of Petroșani, Romania

Teodora Lazăr, University of Petroșani, Romania

Dragoș Păsculescu, University of Petroșani, Romania

Florin- Gabriel Popescu, University of Petroșani, Romania

Conference room: A010

Date 24. 11. 2023

Hours: 17 - 18⁴⁵

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

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

11. COMBINED CYCLE POWER PLANT OPERATION. PART I: THE INFLUENCE OF AMBIENT FACTORS

Lucica Anghelescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Bogdan Diaconu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Mihai Cruceru, University “Constantin Brâncuși” from Târgu Jiu, Romania

George Anghelescu, Atos Global Delivery Center SRL Timișoara, Romania

Logigan Silviu, University “Constantin Brâncuși” from Târgu Jiu, Romania

12. COMBINED CYCLE POWER PLANT OPERATION. PART II: FORECASTING MODELS FOR ASSESSING THE INFLUENCE OF THE AMBIENT FACTORS

Lucica Anghelescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Bogdan Diaconu, University “Constantin Brâncuși” from Târgu Jiu, Romania

Mihai Cruceru, University “Constantin Brâncuși” from Târgu Jiu, Romania

George Anghelescu, Atos Global Delivery Center SRL Timișoara, Romania

13. STUDY ON THE DIRECT STARTING OF AN ASYNCHRONOUS MOTOR WITH SHORT-CIRCUITED ROTOR

E. Spunei, Babes-Bolyai University, Cluj-Napoca, Romania

A. D. Gheța, Babes-Bolyai University, Cluj-Napoca, Romania

A. A. Minda* (corresponding author), Babes-Bolyai University, Cluj-Napoca, Romania

14. PARAMETERISATION OF A DIESEL GENERATOR SET

N. I. Soanda, Babeș-Bolyai University, Cluj-Napoca, Romania

E. Spunei* (corresponding author), Babeș-Bolyai University, Cluj-Napoca, Romania

S.G. Matasaru, SC. Endress Group SRL, Bocsa, Romania

C. Popescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

15. PROPOSALS FOR IMPROVING THE QUALITY OF ELECTRICITY IN COAL MINES

Alina-Daniela Handra, Petroleum Gas University of Ploiești, Ploiesti, România

Cristina Pupăză, University of Petroșani, Petroșani, România

Liliana Samoilă, University of Petroșani, Petroșani, România

Section 5

Mechanical engineering, materials and manufacturing systems

Conference room: A016

Date 24. 11. 2023

Hours : 10⁴⁵ - 14¹⁵

Chairman: Prof. PhD. Cătălin Iancu, University “Constantin Brâncuși” from Târgu Jiu, ROMANIA

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

1. STUDY OF TEMPERATURE INFLUENCE ON THE EIGEN FREQUENCIES OF A FLAT RECTANGULAR PLATE WITH ALL EDGES SIMPLY SUPPORTED

C. Hațiegan, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

C. O. Hamat* (corresponding author), Babeș-Bolyai University of Cluj-Napoca, Reșița, România

C. Popescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

C. Cocar, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

2. STUDY OF DEFECT INFLUENCE ON THE EIGEN FREQUENCIES OF A FLAT RECTANGULAR PLATE WITH ALL EDGES SIMPLY SUPPORTED, AT VARIOUS TEMPERATURES

C. Hațiegan, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

Z.I. Korka, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

C. Popescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

M.D. Stroia* (corresponding author), Babeș-Bolyai University of Cluj-Napoca, Reșița, România

C. Cocar, Babeș-Bolyai University of Cluj-Napoca, Reșița, România

3. DESIGN AND EVALUATION OF A TUNED MASS DAMPER FOR VIBRATION CONTROL IN GUIDED COLUMN-SPRING SYSTEMS

Alexandra-Teodora Aman, Babeș-Bolyai University, Cluj-Napoca, Romania

Zeno-Iosif Praisach, Babeș-Bolyai University, Cluj-Napoca, Romania

Cristian Tufisi * (corresponding author), Babeș-Bolyai University, Cluj-Napoca, Romania

4. RESEARCH ON THE DIMENSIONING OF CRANE HOOKS BY FINITE ELEMENT ANALYSIS

Lenuța Cîndea, Babeș-Bolyai University, Cluj-Napoca, Romania

Cristinel Popescu, University "Constantin Brâncuși" from Târgu Jiu, Romania

I. Virca, "Nicolae Balcescu" Land Forces Academy of Sibiu, România

Cornel Hațiegan (corresponding author), Babeș-Bolyai University, Cluj-Napoca, Romania

5. MATERIAL - DESIGN - PRODUCT

Florin Ciofu, "Lucian Blaga" University of Sibiu, Romania

6. ANALYSIS OF THE VARIATION OF VIBRATION AMPLITUDE WHEN WORKING WITH INTELLIGENT SHEARING TOOLS

Mădălin Tomescu, Lucian Blaga University of Sibiu, Romania

Mihaela Oleksik, Lucian Blaga University of Sibiu, Romania

7. PERFORMANCE ANALYSIS OF THE USE OF CUTTING TOOLS WITH OPTIMAL FUNCTIONAL GEOMETRY FROM THE POINT OF VIEW OF THE QUALITY OF THE SURFACES PROCESSED BY CUTTING

Mădălin Tomescu, Lucian Blaga University of Sibiu, Romania,

Mihaela Oleksik, Lucian Blaga University of Sibiu, Romania,

8. STUDY ON THE CAPABILITY OF THE BRAKE PAD BREAK TEST PROCESS

Olga-Ioana Amariei, Babeș-Bolyai University of Cluj-Napoca, Romania

Codruța-Oana Hamat* (corresponding author), Babeș-Bolyai University of Cluj-Napoca, Romania

Denis-Gladius Durle, Babeș-Bolyai University of Cluj-Napoca, Romania

Marius Lolea, University of Oradea, Romania

Daniel-Mihai Amariei, Reșița Student Culture House, Romania

9. CASE STUDY - PROCESS CAPABILITIES ANALYSIS FOR THE LANDMARK „CAR LOCK”

Liviu Marius Cîrțînă, University "Constantin Brâncuși" from Târgu Jiu, Romania

Constanța Rădulescu, University "Constantin Brâncuși" from Târgu Jiu, Romania

Mihai Constantin Vîrțanu, Autoliv Romania, University "Constantin Brâncuși" from Târgu Jiu, Romania

10. THE KINEMATIC ANALYSIS OF A CAR WHEELS LOCKING MECHANISM DURING TRANSPORT IN A MULTI-STOREY CAR PARKING LOT ABOVE DÂMBOVIȚA RIVER

Edward Rășchitor, National University of Science and Technology Politehnica Bucharest, Romania

Carmen Elisabeta Radu, National University of Science and Technology Politehnica Bucharest, Romania

11. ON PRECISION CUTTING OF METAL SHEETS

Alin Stăncioiu, University “Constantin Brâncuși” from Târgu Jiu, Romania
Elena Loredana Stăncioiu, University of Petrosani, Romania

12. INDUSTRY 5.0: A REVOLUTIONARY APPROACH IN INDUSTRIAL ENGINEERING

Alin Stăncioiu, University “Constantin Brâncuși” from Târgu Jiu, Romania
Elena Loredana Stăncioiu, University of Petrosani, Romania

Conference room: A016

Date 24. 11. 2023

Hours : 17⁰⁰ - 19¹⁵

Chairman: Prof. PhD. Cătălin Iancu, “Constantin Brâncuși” University from Târgu Jiu

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

13. ABOUT MOTORS IN MOTION STUDIES IN SOLIDWORKS

Cătălin Iancu, University “Constantin Brâncuși” from Târgu Jiu, Romania

14. STUDY OF COMPOSITE MATERIALS WITH RUBBER MATRICES AND FA AND PVC ADDITIVES USING FINITE ELEMENT ANALYSIS

Sabin Cristinel Dimulescu, S.C. DSC DIMECOSAB S.R.L. Gorj, Romania,
Ionela Magdalena Rotaru, Lucian Blaga University of Sibiu, Romania

15. CONSIDERATIONS REGARDING THE SPUTTERING METHOD OF DEPOSITION OF THIN LAYERS

Nicoleta-Maria Mihut, “University “Constantin Brâncuși” from Târgu Jiu, Romania
Adina Milena Tătar, University “Constantin Brâncuși” from Târgu Jiu, Romania

16. CONSIDERATION ABOUT SINTERED DEFORMED MATERIALS THROUGH MECHANICAL TESTING IN CRYOGENIC

Cristina Ionici, University “Constantin Brâncuși” from Târgu Jiu, Romania
Crinela Serban, University “Constantin Brâncuși” from Târgu Jiu, Romania

17. OPTIMIZING THE TECHNOLOGICAL PARAMETERS OF THE DRYING PROCESS OF CEREAL SEEDS AND TECHNICAL PLANTS

C. Cernăianu, University of Craiova, Craiova, România
E. Stăncuț, University of Craiova, Craiova, România

18. THE INFLUENCE OF APPLIED LOADS ON A COMPOSITE MATERIAL HARDNESS

Minodora Maria Pasăre, University “Constantin Brâncuși” from Târgu Jiu, Romania

19. TECHNIQUES FOR WORKING WITH STUDENTS IN THE FIELD OF ENGINEERING

Cătălina Ianăși, University “Constantin Brâncuși” from Târgu Jiu, Romania

Section 6

Quality management

Conference room: A113

Date 24. 11. 2023

Hours: 10⁴⁵ – 14¹⁵

Chairman: Prof. PhD. Liviu Marius Cîrîţină, “Constantin Brâncuşi” University from Târgu Jiu

Technical secretariat: Lecturer PhD. Constanţa Rădulescu, “Constantin Brâncuşi” University from Târgu Jiu

1. STANDARDIZATION AS TOOL TO ENHANCE EDUCATIONAL ACCREDITATION

Tzvetelin Gueorguiev, University of Ruse “Angel Kanchev”, Bulgaria

Cristinel Popescu, University “Constantin Brâncuşi” from Târgu Jiu, Romania

2. THEORETICAL RESEARCH ON METHODS OF CONSTRUCTION OF URBAN LANDFILLS TO IMPROVE THE QUALITY OF ENVIRONMENTAL COMPONENTS

Bogdan Ivan, National University of Science and Technology Politehnica Bucharest, Romania

Oana Roxana Chivu, National University of Science and Technology Politehnica Bucharest, Romania

Marilena Gheorghe, National University of Science and Technology Politehnica Bucharest, Romania

Cătălina Enache, National University of Science and Technology Politehnica Bucharest, Romania

Dan Nitoi, National University of Science and Technology Politehnica Bucharest, Romania

Alin Țăpârdea, Politehnica University Timișoara, Romania

Demetrius Dubic (Petrescu), National University of Science and Technology Politehnica Bucharest, Romania

Eugenia Bulboacă, National University of Science and Technology Politehnica Bucharest, Romania

Marilena Gheorghe, National University of Science and Technology Politehnica Bucharest, Romania

3. BUILDING A PROMISING FUTURE THROUGH INNOVATION AND STEM EDUCATION

Cornelia Victoria Anghel-Drugărin, Babeş-Bolyai University, Cluj-Napoca, Romania

Nicoleta Mirea, Politehnica University, Research Centre for Engineering and Management, Timișoara, Romania

4. CONSIDERATIONS REGARDING THE APPLICATION OF THE MEVAR METHODOLOGY

Costinel Bulboacă, National University of Science and Technology Politehnica Bucharest, Romania

Eugenia Bulboacă, National University of Science and Technology Politehnica Bucharest, Romania

Oana Roxana Chivu, National University of Science and Technology Politehnica Bucharest, Romania

Marilena Gheorghe, National University of Science and Technology Politehnica Bucharest, Romania

Cătălina Enache, National University of Science and Technology Politehnica Bucharest, Romania

Dan Nitoi, National University of Science and Technology Politehnica Bucharest, Romania

Alin Țăpîrdea, Politehnica University Timișoara, Romania

Demetrius Dubic (Petrescu), National University of Science and Technology Politehnica Bucharest, Romania

5. STUDENT COMPETITIONS AND SKILLS DEVELOPMENT OF FUTURE ENGINEERS

Gina-Maria Moraru, "Lucian Blaga" University of Sibiu, Romania

6. ISSUES FACING THE ENVIRONMENTAL ENGINEERING FIELD OF STUDY

Gina-Maria Moraru, "Lucian Blaga" University of Sibiu, Romania

Remus-Constantin Butănescu-Volanin, "Lucian Blaga" University of Sibiu, Romania

7. STRATEGIC ENGINEERING IN THE FRAMEWORK SMALL AND MEDIUM-SIZED ENTERPRISES. CASE STUDY AT GEROM INTERNATIONAL PETROSANI

Cristina Pupăză, University of Petroșani, Petroșani, România

Alina-Daniela Handra, Petroleum Gas University of Ploiești, Ploiesti, România

8. ENTREPRENEURIAL EDUCATION IN TECHNICAL UNIVERSITY PROGRAMS

Stefan Ghimisi, University "Constantin Brâncuși" from Târgu Jiu, Romania

9. ASPECTS REGARDING THE OPTICAL PRINCIPLES OF BIOCHEMISTRY ANALYZERS WITH DRY REAGENTS

Constanța Rădulescu, University "Constantin Brâncuși" from Târgu Jiu, Romania

Daniela Cîrîțînă, University "Constantin Brâncuși" from Târgu Jiu, Romania

10. THE INTEGRATION OF SUSTAINABILITY AND DURABILITY FACTORS IN THE MCP AND NPD

Liviu Marius Cîrțînă, University “Constantin Brâncuși” from Târgu Jiu, Romania

Daniela Cîrțînă, University “Constantin Brâncuși” from Târgu Jiu, Romania

Constanța Rădulescu, University “Constantin Brâncuși” from Târgu Jiu, Romania

11. COMPETITIVE STRATEGIES APPLIED IN THE FIELD OF UNCONVENTIONAL TECHNOLOGIES

Alin Nioață, University “Constantin Brâncuși” from Târgu Jiu, Romania

12. QUALITY MANAGEMENT IN MARKET ECONOMY

Vasile Cumpănașu, University “Constantin Brâncuși” from Târgu Jiu, Romania