



**“VASILE ALECSANDRI” UNIVERSITY OF BACAU, FACULTY OF ENGINEERING, ROMANIA**  
**“GHEORGHE ASACHI” UNIVERSITY OF IAȘI, ROMANIA**  
**POLITEHNICA UNIVERSITY OF BUCHAREST, ROMANIA**  
**ROMANIAN ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCES “GHEORGHE IONESCU – ȘIȘEȘTI”**  
**POLITECNICO UNIVERSITY OF TORINO, ITALY**  
**“ANGEL KANCHEV” UNIVERSITY OF RUSE, BULGARIA**  
**WARSAW UNIVERSITY OF TECHNOLOGY, POLAND**  
**UNIVERSITY OF CADIZ, SPAIN**  
**ROMANIAN ASSOCIATION OF MANAGERS AND ECONOMIC ENGINEERS**  
**THE ROMANIAN ENVIRONMENT ASSOCIATION – 1998 (ARM)**  
**ASOCIAȚIA „De Sprîjin Academica”**

# The 21<sup>st</sup> International Conference of Constructive Design and Technological Optimization in Machine Building Field

## OPROTEH 2026

## PROGRAM

**BACAU**  
**MAY 20-22, 2026**

## SCIENTIFIC COMMITTEE

A. Astolfi - University Politecnico di Torino, Italy	K. H. Adjallah - École Nationale d'Ingénieurs de Metz, France
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I. C. Roșca - "Transilvania" University of Brașov, Romania	V. Păunoiu - "Dunarea de Jos" University of Galati, Romania
I. Țenu - Academy of Agricultural and Forestry Sciences "Gheorghe Ionescu Sisesti", Romania	V. V. Jinescu - National University of Science and Technology POLITEHNICA Bucharest, Romania
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J. A. Lopez Ramirez - University of Cadiz, Spain	V. Zichil - "Vasile Alecsandri" University of Bacau, Romania
J. L. Cueto Ancela - University of Cadiz, Spain	K. Jamrozak - Wroclaw University of Science and Technology, Poland
J. M. L. de Luzuriaga Fernández - University of Zaragoza, Spain	Sid Ahmed Elhabiri - University of Abou Bekr Belkaïd Tlemcen, Algeria
Keniche Assia - University of Abou Bekr Belkaïd Tlemcen, Algeria	

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**Prof. Ph.D. Mirela PANAINTE-LEHADUS**

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Lect. Ph.D. Nicoleta PLATON  
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Lect. Ph.D. Sorin VERNICA  
Lect. Ph.D. Ioana PLEȘCĂU  
Lect. Ph.D. Irina ALEXA  
Lect. Ph.D. Mădălina BARBU



## CONFERENCE PROGRAM

<b>WEDNESDAY 20 MAY 2026</b>		
17 <sup>00</sup> -19 <sup>00</sup>	Welcome & Registration	Building D Central hall, first floor
19 <sup>00</sup>	Dinner	"Vasile Alecsandri" University of Bacau Restaurant
<b>THURSDAY 21 MAY 2026</b>		
08 <sup>00</sup> -10 <sup>00</sup>	Welcome & Registration	Building D Central hall, first floor
10 <sup>00</sup> -10 <sup>10</sup>	Official opening of the conference organized on the occasion of the 50th anniversary of higher technical education at the "Vasile Alecsandri" University of Bacău	"Vasile Alecsandri" University of Bacau AULA, building D
10 <sup>15</sup> -12 <sup>00</sup>	Plenary lectures	"Vasile Alecsandri" University of Bacau AULA, building D
12 <sup>00</sup> -12 <sup>30</sup>	Tedeum service, officiated by His Holiness Ioachim, Archbishop of Roman and Bacău and a council of priests	Building D Central hall, first floor
13 <sup>00</sup> -15 <sup>00</sup>	Lunch	"Vasile Alecsandri" University of Bacau Restaurant
15 <sup>00</sup> -18 <sup>00</sup>	Plenary lectures, Section lectures & Poster sessions	Buildings B/D Central hall
15 <sup>00</sup> -17 <sup>00</sup>	Workshop: "Technology transfer and entrepreneurship: developing partnerships between the university and the economic environment" (Technology Transfer Center and Student Entrepreneurial Society) - Entrepreneurship and Innovation HUB	Building B Hall B11
20 <sup>00</sup>	Gala Diner	EMD Restaurant
<b>FRIDAY 22 MAY 2026</b>		
09 <sup>00</sup> – 11 <sup>30</sup>	Plenary and section lectures & Poster sessions	Buildings B/D Central hall
11 <sup>30</sup> – 12 <sup>00</sup>	Coffee break	Buildings B/D Central hall
12 <sup>00</sup> – 14 <sup>00</sup>	Section lectures & Poster sessions Closing ceremony	Buildings B/D
14 <sup>00</sup> – 15 <sup>30</sup>	Lunch	"Vasile Alecsandri" University of Bacau Restaurant
15 <sup>30</sup> – 18 <sup>00</sup>	Bacau city tour (free program)	

***Welcome to the 21<sup>st</sup> International Conference of Constructive Design and  
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FACULTY OF ENGINEERING***

**PLENARY LECTURES**

**THURSDAY 21 MAY 2026 10<sup>15</sup> – 12<sup>00</sup>**

**CHAIRPERSONS: PROF. PH.D. VALENTIN NEDEFF  
PROF. PH.D. CAROL SCHNAKOVSKY  
PROF. PH.D. MIRELA PANAINTE-LEHADUS**

**1. *RECENT ADVANCES IN THE DECADEMIATION OF PHOSPHATE  
FERTILIZERS: REVISITING A PERSISTENT CHALLENGE***

*CHRISTOPHE VIAL – UNIVERSITÉ CLERMONT AUVERGNE, CLERMONT  
AUVERGNE INP, CNRS, INSTITUT PASCAL, CLERMONT-FERRAND, FRANCE*

**2. *POC FOR A SYSTEM TO MONITOR LOADS ACTING ON THE CHASSIS  
OF A HIGH-MOBILITY WHEELED VEHICLE***

*MARIUSZ KOSOBUDZKI - FACULTY OF MECHANICAL ENGINEERING,  
DEPARTMENT OF FUNDAMENTALS OF MACHINE DESIGN AND  
MECHATRONIC SYSTEMS, WROCLAW UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, POLAND*

**3. *PROLONGING THE FUNCTIONALITY OF BIOLOGICALLY ACTIVE  
COMPOUNDS IN FOOD COMPOSITIONS***

*ALEXEI BAERLE – TECHNICAL UNIVERSITY OF MOLDOVA, CHISINAU,  
REPUBLIC OF MOLDOVA*

**4. *RISKS AND OPPORTUNITIES IN USING MESOPOROUS PLATFORMS  
FOR EMERGING APPLICATIONS***

*ANTON FICAI - FACULTY OF CHEMICAL ENGINEERING AND  
BIOTECHNOLOGIES, NATIONAL UNIVERSITY OF SCIENCE AND  
TECHNOLOGY POLITEHNICA BUCHAREST, ACADEMY OF ROMANIAN  
SCIENTIST, BUCHAREST, ROMANIA*

**5. *DISEASE AS A DYNAMIC SYSTEM: FROM EMERGENT GEOMETRY  
TO CLINICAL ARTIFICIAL INTELLIGENCE TOWARD A  
STRUCTURAL PARADIGM IN MEDICINE***

*CALIN BUZEA - NATIONAL INSTITUTE OF RESEARCH AND DEVELOPMENT  
FOR TECHNICAL PHYSICS ȘI CLINICAL EMERGENCY HOSPITAL “PROF. DR.  
NICOLAE OBLU” IASI*

**6. FROM GENERAL CONSIDERATIONS TO A CONCRETE CASE ON  
RHEOLOGY AS A POWERFUL RESEARCH METHOD IN CHEMICAL  
ENGINEERING AND MEDICAL SCIENCES**

**TANASE DOBRE - CHEMICAL AND BIOCHEMICAL ENGINEERING  
DEPARTMENT, NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY  
POLITEHNICA BUCHAREST, TECHNICAL SCIENCES ACADEMY OF  
ROMANIA, BUCHAREST, ROMANIA**

*Welcome to the 21<sup>st</sup> International Conference of Constructive Design and  
Technological Optimization in Machine Building Field*

## ***OPROTEH 2026***



### **CONFERENCE SECTIONS**

- A. Optimization of Manufacturing Processes and Systems & Computer Aided Design and Manufacturing
- B. Optimization of Technologies and Equipment from Process Industries
- C. Optimization in Environmental Engineering and Environmental Protection
- D. Mechatronics & Robotics
- E. Economic Engineering
- F. Chemical & Food Engineering
- G. Industrial Power Engineering & Computer Science

**For all the Conference Sections, the POSTERS can be visited during  
MAY 20-22 on the Central Hall (Building D).**

## **A. OPTIMIZATION OF MANUFACTURING PROCESSES AND SYSTEMS & COMPUTER AIDED DESIGN AND MANUFACTURING**

### **BUILDING B HALL BI29**

**THURSDAY 21 MAY 2026 15<sup>00</sup> – 18<sup>00</sup>**

**FRIDAY 22 MAY 2026 09<sup>00</sup> – 11<sup>30</sup>**

**CHAIRPERSONS: PROF. PH.D. DUMITRU NEDELICU  
PROF. PH.D. CATALIN FETECU  
PROF. PH.D. NICUSOR BAROIU**

#### **A.1. STUDY OF AN OPEN-CIRCUIT HYDROSTATIC SYSTEM: ANALYSIS, PARAMETERS AND ELECTRICAL CONTROL**

*BAROIU NICUSOR, MOROSANU GEORGIANA-ALEXANDRA, TEODOR VIRGIL-GABRIEL*

#### **A.2. MECHANICAL BEHAVIOR OF 3D-PRINTED WOOD-FIBER BIOCOMPOSITE LATTICE STRUCTURES: EFFECT OF MODELING STRATEGY**

*NASTASE MIHAITA, FETECU CATALIN, STAN FELICIA*

#### **A.3. MULTI-OUTPUT MODELING AND GENETIC ALGORITHM OPTIMIZATION OF ELECTRODEPOSITED NI-P-Y<sub>2</sub>O<sub>3</sub> COMPOSITE COATINGS**

*BELLOUFI ABDERRAHIM, ABDESSELAM YASSINE, ABDELKRIM MOURAD, REZGUI IMANE*

#### **A.4. POROSITY AND TOPOGRAPHY OF BICOMPONENT 3D PRINTED SAMPLES**

*OANCEA (CATANA) MARIA, DUMITRU NEDELICU, TAMPU CATALIN, HERGHELEGIU EUGEN*

#### **A.5. A STUDY OF OXIDATIVE STABILITY OF WASTE COOKING OIL USED AS DIELECTRIC IN EDM OF C120 HEAT-TREATED TOOL STEEL**

*RADU MARIA-CRINA, HERGHELEGIU EUGEN, TAMPU CATALIN, TAMPU RALUCA, CHIRITA BOGDAN-ALEXANDRU, RADU PETRICA*

#### **A.6. COMPARATIVE ANALYSIS OF METALLIC MATERIALS UNDER SALINE AND MICROBIOLOGICAL CORROSION**

*ROSU ANA-MARIA, VARTOLOMEI NICOLETA, MIRILA DIANA CARMEN, GRIGORAS COSMIN CONSTANTIN, BALC EMANUEL, BALC DANIEL, TITU AUREL MIHAIL*

#### **A.7. INFLUENCE OF MILLING PARAMETERS ON SURFACE TOPOGRAPHY AND RESIDUAL STRESSES IN Ti-6Al-4V ALLOY**

*TAMPU NICOLAE CATALIN, TAMPU RALUCA IOANA, HERGHELEGIU EUGEN, CHIRITA BOGDAN ALEXANDRU, NITA BOGDAN*

#### **A.8. RECENT DEVELOPMENTS IN JET ELECTRODEPOSITION: MECHANISMS, PERFORMANCE, AND COMPUTATIONAL APPROACHES**

*ABDESSELAM YASSINE, TAMPU CATALIN, BELLOUFI ABDERRAHIM, REZGUI IMANE, ABDELKRIM MOURAD, CHIRITA BOGDAN, HERGHELEGIU EUGEN, SCHNAKOVSKY CAROL, TAMPU RALUCA*

#### **A.9. EFFECTS OF EMULSION CONCENTRATION USED IN MQL LUBRICATION SYSTEM APPLIED TO MILLING THIN-WALLED PARTS MADE BY ALUMINIUM ALLOYS**

*RADU PETRICA, SCHNAKOVSKY CAROL, TAMPU CATALIN, HERGHELEGIU EUGEN, RADU MARIA-CRINA, CHIRITA BOGDAN-ALEXANDRU*

**A.10. INFLUENCE OF FRICTION MATERIAL COMPOSITION ON BRAKE PAD WEAR BEHAVIOR: A ZYGO-BASED SURFACE TOPOGRAPHY STUDY**

*TAMPU NICOLAE CATALIN, TAMPU RALUCA IOANA, NITA BOGDAN, SCHNAKOVSZKY CAROL, CHIRITA BOGDAN ALEXANDRU, HERGHELEGIU EUGEN*

**A.11. INFLUENCE OF MQL LUBRICANT QUANTITY ON AIRBORNE PARTICULATE EMISSIONS AND SURFACE QUALITY IN MILLING OF AL 6061-T6**

*TAMPU NICOLAE CATALIN, HERGHELEGIU EUGEN, OLARU IONEL, RAVEICA IONEL CRINEL, CIUBOTARIU VLAD ANDREI, RADU MARIA CRINA, RADU PETRICA, SCHNAKOVSZKY CAROL*

**A.12. THE IMPACT OF NEW CNC TECHNOLOGIES ON INDUSTRIAL PRODUCTIVITY**

*BELECCIU CRISTINA, HERGHELEGIU EUGEN*

**A.13. OPTIMIZATION OF ELECTRICAL DISCHARGE MACHINING (EDM) PARAMETERS FOR METALLIC MATERIALS: INFLUENCE ON MATERIAL REMOVAL RATE AND SURFACE ROUGHNESS**

*HERGHELEGIU EUGEN, SCHNAKOVSZKY CAROL, RADU MARIA CRINA, CHIRITA BOGDAN ALEXANDRU, RAVEICA IONEL CRINEL, OLARU IONEL, NITA BOGDAN*

**A.14. INFLUENCE OF ABRASIVE WATER JET CUTTING PARAMETERS ON SURFACE QUALITY OF COPPER, BRASS AND BRONZE ALLOYS**

*HERGHELEGIU EUGEN, RADU MARIA CRINA, CHIRITA BOGDAN ALEXANDRU, NITA BOGDAN, SCHNAKOVSZKY CAROL, RAVEICA IONEL CRINEL, TAMPU RALUCA IOANA, TAMPU NICOLAE CATALIN*

**A.15. COMPARATIVE STUDY OF FILLING SHAPES AND 3D PRINTING PARAMETERS ON THE PERFORMANCE OF PLA SAMPLES**

*NITA BOGDAN, TAMPU RALUCA IOANA, HERGHELEGIU EUGEN, SCHNAKOVSZKY CAROL, TAMPU NICOLAE CATALIN*

**A.16. STUDIES CONCERNING USING ARTIFICIAL INTELLIGENCE IN TECHNICAL HIGHER EDUCATION**

*RAVEICA IONEL CRINEL, RAVEICA GABRIELA*

**A.17. LEAN AND INDUSTRY 4.0 PRINCIPLES TOWARD INDUSTRY 5.0: A CONCEPTUAL FRAMEWORK AND EMPIRICAL INSIGHTS FROM MANUFACTURING INDUSTRY- A LITERATURE REVIEW**

*RAVEICA IONEL CRINEL, OLARU IONEL*

**A.18. OPTIMIZING THE DESIGN OF AN ORTHOSIS FOR SMARTPHONE USERS. INVESTIGATION OF BIOMECHANICAL SUPPORT NEEDS OF AFFECTED PATIENTS WITH PAINFUL HAND CONDITION**

*CULEA CATALINA MIHAELA*

**A.19. FLUID FLOW ANALYSIS OF COOLING SYSTEMS EMPLOYING VARIOUS NOZZLE GEOMETRIES IN CUTTING OPERATIONS**

*OLARU IONEL, RAVEICA IONEL CRINEL*

**A.20. THE CURRENT STATE OF EDM: AN OVERVIEW OF TECHNOLOGICAL INNOVATIONS, SUSTAINABILITY AND DIGITALIZATION**

*CRETU ANDREI, SCHNAKOVSZKY CAROL*

**A.21. RESEARCH ON SOLVING A TECHNOLOGICAL MANUFACTURING PROBLEM OF THE EXHAUST PROTECTION SYSTEM FOR THE S-70M BLACK HAWK HELICOPTER ENGINE**

*BALABAN RĂDUCU GABRIEL, RAVEICA CRINEL IONEL*

**A.22. A REVIEW REGARDING NON-DESTRUCTIVE EVALUATION OF METALLIC SURFACES USED IN ELECTRONIC CIRCUITS BY X-RAY METHODS**

*HAIVEI RAZVAN, TAMPU NICOLAE CATALIN*

**A.23. QUALITY CONTROL OF PLASTIC WATER STORAGE TANKS FOR POTABLE WATER APPLICATIONS**

*SAVIN GEORGIANA ALEXANDRA, TAMPU NICOLAE CATALIN*

**A.24. INTELLIGENT OPTIMIZATION OF ABRASIVE WATER JET MACHINING PARAMETERS USING ARTIFICIAL NEURAL NETWORKS**

*POP ALEXANDRU, TAMPU NICOLAE CATALIN*

**CHAIRPERSONS: PROF. PH.D. VIOREL PAUNOIU  
PROF. PH.D. ABDERRAHIM BELLOUFI  
PROF. PH.D. FLORIN SUSAC**

**A.25. EFFECT OF RASTER ANGLE ON THE MECHANICAL BEHAVIOR OF 3D PRINTED THERMOPLASTIC POLYURETHANE**

*SAAD SALMA, TAWK CHARBEL, ISSA JIMMY, RAHME PIERRE*

**A.26. EVALUATION OF CUTTING TEMPERATURE IN THE MILLING OF Ti48AL2CR2NB ALLOY USED FOR AERONAUTICAL APPLICATIONS**

*VÁZQUEZ-GÓMEZ AVIER, MIGUEL VALENTÍN, GARCÍA-MARTÍNEZ ENRIQUE, MARTÍNEZ-MARTÍNEZ ALBERTO, CARMEN MANJABACAS MARÍA, COELLO JUANA*

**A.27. EXPERIMENTAL STUDY ON THE EFFECT OF BALL BURNISHING ON SURFACE QUALITY AND CORROSION RESISTANCE**

*ABDELKRIM MOURAD, BELLOUFI ABDERRAHIM, REZGUI IMANE, ABDESSALAM YACINE, BOUREBBOUA AMOR, BENDIFALLAH MOUARD*

**A.28. INTEGRATION OF ARTIFICIAL INTELLIGENCE IN THE COMPUTER-AIDED DESIGN PROCESS**

*CRĂCIUN PAUL MIHAI, UNGUREANU NICOLAE STELIAN*

**A.29. SYNTHESIS ON THE CONSTRUCTION AND CONTROL OF TECHNOLOGICAL PARAMETERS IN RECIRCULATING AQUACULTURE SYSTEMS**

*NISTORENCU MIRCEA, PAUNOIU VIOREL, BAROIU NICUSOR, HERGHELEGIU EUGEN*

**A.30. STUDY OF MATERIAL FORMABILITY AND SURFACE ROUGHNESS OF SPIF-ED PARTS MADE BY TITANIUM ALLOY**

*COBOT LIDIA-DIANA, MARTÍNEZ-MARTÍNEZ ALBERTO, GARCIA-MARTÍNEZ ENRIQUE, RADU MARIA-CRINA*

**A.31. RESEARCH ON PHYSICAL PROPERTIES OF 3D PRINTED PARTS**

*OLARU IONEL, RAVEICA IONEL CRINEL*

**A.32. STRUCTURAL ANALYSIS OF BIODEGRADABLE POLYESTER ELEMENTS MANUFACTURED BY FDM**

*CIUBOTARIU VLAD ANDREI, CHIRITA BOGDAN-ALEXANDRU, RAVEICA CRINEL IONEL*

**A.33. THE INFLUENCE OF ROLLING TECHNOLOGICAL PARAMETERS ON THE PERFORMANCE OF THE SURFACE LAYER OBTAINED BY BURNISHING – A REVIEW**

*ILIE MIHAELA, ILIE DUMITRU, NEDELICU DUMITRU*

**A.34. ANALYSIS OF THE CURRENT STATE AND PERFORMANCE OF BUILDING-INTEGRATED SOLAR THERMAL SYSTEMS**

*BELECCIU CRISTINA, LUPU ANA-GEORGIANA, PINTILEI BOGDAN-MIHAI, POPESCU ARISTOTEL*

**A.35. ANALYSIS OF THE EFFECTS OF THE MACHINING PARAMETERS ON THE CUTTING FORCES DURING FACE MILLING OF A MAGNESIUM ALLOY**

*CHIRITA BOGDAN ALEXANDRU, HERGHELEGIU EUGEN, TAMPU NICOLAE CATALIN, GRIGORAS COSMIN CONSTANTIN, RADU MARIA CRINA, COT ELENA MIHAELA*

**A.36. STUDIES AND RESEARCH ON THE USE OF 3D PRINTED BIODEGRADABLE MATERIALS FOR BIOLOGICAL FILTRATION IN RECIRCULATING AQUACULTURE SYSTEMS**

*BASLIU VASILE, CRETU MIRELA, CEOROMILA ALINA MIHAELA*

**A.37. EXPERIMENTAL RESEARCH ON THE IMPACT OF CUTTING PARAMETERS ON SURFACE QUALITY IN THE MACHINING OF TITANIUM ALLOYS**

*COT ELENA MIHAELA, CHIRITA BOGDAN ALEXANDRU, HERGHELEGIU EUGEN, NITA BOGDAN*

**A.38. EXPERIMENTAL ASPECTS REGARDING THE DETERMINATION OF THE RESULTANT OF CUTTING FORCES AND MOMENTS DURING FINISH GRINDING OF HARD MINERAL MATERIALS WITH DIAMOND DISCS**

*VALEA PETRE, LAZAR TUDOR*

**A.39. RESEARCH METHODOLOGIES FOR INVESTIGATING THE THEORETICAL PREMISES UNDERLYING TECHNOLOGICAL INFLUENCE ON PRESCHOOLERS' PSYCHOSOCIAL DEVELOPMENT**

*TAMPU RALUCA IOANA, GRIGORAS MADALINA NICOLETA, MARIN ELENA-RODICA, NEDELICU CRISTINA, BOACA DIANA*

**A.40. A REVIEW REGARDING ELECTRICAL DISCHARGE MACHINING (EDM) OF TITANIUM ALLOYS**

*CRETU ANDREI, SCHNAKOVSKY CAROL*

**A.41. A RESEARCH STUDY ON OCCUPATIONAL RISK ASSESSMENT AND PREVENTION MEASURES IN INDUSTRIAL ENVIRONMENTS**

*MARIAN IULIA COSTINA, HERGHELEGIU EUGEN, TAMPU NICOLAE CATALIN*

**A.42. OCCUPATIONAL HEALTH AND SAFETY AUDIT: METHODOLOGIES AND BEST PRACTICES FOR ENHANCING COMPLIANCE**

*CHILEA GABRIEL, HERGHELEGIU EUGEN*

**A.43. THE IMPACT OF ARTIFICIAL INTELLIGENCE ON OCCUPATIONAL HEALTH AND SAFETY IN THE ROMANIAN ENERGY SECTOR: FROM PREVENTION TO PREDICTION**

*LAZAR VALENTIN, SCHNAKOVSKY CAROL*

**A.44. A STUDY ON FLUID FLOW SIMULATION IN THE COOLING SYSTEMS OF MACHINE TOOLS**

*TOFAN NICOLAE, OLARU IONEL*

**A.45. OPTICAL SURFACE PROFILOMETRY OF COMPOSITE MATERIALS USING THE ZYGO ZEGAGE™ INTERFEROMETRIC SYSTEM: A REVIEW**

*TAMPU NICOLAE CATALIN, NEDELICU DUMITRU, CARAUSU CONSTANTIN, MAZURCHEVICI SIMONA NICOLETA, SCHNAKOVSKY CAROL, CHIRITA BOGDAN ALEXANDRU, HERGHELEGIU EUGEN*

**A.46. ANALYSIS OF THE INFLUENCE OF PRINTING GEOMETRY ON THE SURFACE QUALITY CHARACTERISTICS OF POLYMER PARTS MANUFACTURED BY ADDITIVE TECHNOLOGIES**

*NITA ANDREEA, HERGHELEGIU EUGEN*

## **B. OPTIMIZATION OF TECHNOLOGIES AND EQUIPMENT FROM PROCESS INDUSTRIES**

### **BUILDING D HALL DP12**

**THURSDAY 21 MAY 2026 15<sup>00</sup> – 18<sup>00</sup>**

**FRIDAY 22 MAY 2026 09<sup>00</sup> – 11<sup>30</sup>**

**CHAIRPERSONS: PROF. PH.D. MARIUSZ KOSOBUDZKI  
ASSOC. PROF. PH.D. NICOLETA SPOREA  
PROF. PH.D. ARISTOTEL POPESCU**

#### **B.1. OPTIMIZATION OF DEOILING UNITS AT THE PRODUCTION WATER TREATMENT STATION OF THE OHANET OIL AND GAS FIELD, ALGERIA**

*GHEZALI KATIA, SAHBI OMNIA, BENCHOHRA ASMA, BARSAN NARCIS*

#### **B.2. ULTRASOUND-ASSISTED ENZYMATIC EXTRACTION OF BANANA JUICE: IMPACT ON YIELD AND QUALITY**

*BORA SANDHAN*

#### **B.3. ASSESSMENT AND OPTIMIZATION OF THE ENERGY CONSUMPTION OF MATERIAL HANDLING TRANSPORT IN A PALLET WAREHOUSE WITH CONSIDERATION OF TRANSFER POINTS**

*ZAJAC PAWEL*

#### **B.4. POC FOR A SYSTEM TO MONITOR LOADS ON THE CHASSIS OF A HIGH-MOBILITY WHEELED VEHICLE**

*KOSOBUDZKI MARIUSZ*

#### **B.5. INCREASING THE EFFICIENCY OF THERMAL AGENT DISTRIBUTION IN TUNNEL DRYING INSTALLATIONS**

*BALAN MIHAIL, ŢISLINSCAIA NATALIA, VIŞANU VITALI, MELENCIUC MIHAIL, POPESCU VICTOR,  
BALAN TATIANA*

#### **B.6. INNOVATIVE MICROWAVE-ASSISTED DRYING PROCESS FOR SEA BUCKTHORN SEEDS IN A SUSPENDED LAYER**

*BALAN TATIANA, POPESCU VICTOR*

#### **B.7. DRYCONTROL MONITOR**

*BALAN MIHAIL, ŢISLINSCAIA NATALIA, VIŞANU VITALI, MELENCIUC MIHAIL, POPESCU VICTOR,  
BALAN TATIANA, GIDEI, IGOR*

#### **B.8. VALORIZATION OF BREWING INDUSTRY WASTE WITHIN THE CIRCULAR ECONOMY FRAMEWORK**

*VIŞANU VITALI, GHENDOV-MOŞANU ALIONA, TARNĂ RUSLAN, BALAN MIHAIL, MELENCIUC  
MIHAIL, BALAN TATIANA*

#### **B.9. MICROWAVE PENETRATION DEPTH MODELING IN THE DEHYDRATION OF CAPILLARY- POROUS MEDIA**

*ŢISLINSCAIA NATALIA, GHENDOV-MOŞANU ALIONA, VIŞANU VITALI, MELENCIUC MIHAIL, GIDEI  
IGOR, BALAN TATIANA, POPESCU VICTOR, BALAN MIHAIL*

#### **B.10. ENHANCING THE EFFICIENCY OF THE DEHYDRATION PROCESS IN SYSTEMS POWERED BY RENEWABLE ENERGY SOURCES**

*GIDEI IGOR, VIŞANU VITALI, BALAN TATIANA, POPESCU VICTOR, BALAN MIHAIL*

- B.11. OPTIMIZATION OF PEACH DEHYDRATION THROUGH FORCED CONVECTION METHODS**  
*VISANU VITALI, POPESCU VICTOR, BALAN TATIANA, GIDEI IGOR, MELENCIUC MIHAIL, BALAN MIHAIL*
- B.12. DETERMINATION OF STRESSES AND STRAINS IN CYLINDRICAL SHELLS SUBJECTED TO INTERNAL PRESSURE**  
*DOBRIȚA MARINA-ANDREEA, ȚUȚUIANU ALEXANDRA, PETRE ALIN-MIHAI, SPOREA NICOLETA, TOMESCU GHEORGHİȚA, IGNAT MADALINA*
- B.13. OPTIMIZATION OF THE STRUCTURAL SOLUTION FOR SUPPORTING A COLUMN-TYPE PRESSURE VESSEL**  
*SPOREA NICOLETA, TOMESCU GHEORGHİȚA, IGNAT MADALINA, PETRE MIHAI - ALIN*
- B.14. ON PROMOTING AN ADVANCED TECHNICAL MODEL OF FRONT-FACE MOBILE SEALING**  
*DURBACĂ ION, IATAN RADU, CATANĂ CĂȚĂLINA, CHERCIU IONUȚ*
- B.15. A METHOD FOR APPLYING AN ANALYTICAL CALCULATION APPROACH TO THE APPLIED STUDY OF THERMALLY INSULATED TECHNOLOGICAL PIPES**  
*DURBACĂ ION, CASTRAVETE ȘTEFAN, POPA ANA MARIA, FLINTAȘU (OPREA) GEORGIANA-DANIELA*
- B.16. EVALUATION OF THE EFFICIENCY OF SEPARATING POLLUTANT PARTICLES AND GASEOUS EMISSIONS GENERATED IN INDUSTRIAL TECHNOLOGICAL PROCESSES USING BAG FILTERS**  
*DURBACĂ ION, DOBRESCU (NIȚĂ) MIHAELA LUMINIȚA, MARE RAMONA*
- B.17. STUDY ON THE DEVELOPMENT OF A MECHANICAL CLAMPING AND BAR FEEDING SYSTEM FOR CONTINUOUS CHROMIUM PLATING PROCESSES**  
*PICU ADRIAN, PETRE IVONA CAMELIA, NEGREA ALEXIS*
- B.18. STRUCTURAL AND MECHANICAL PROPERTIES OF CARBIDE-REINFORCED CU-FE COMPOSITE COATINGS PRODUCED BY ELECTRIC ARC SPRAYING**  
*TOMA GABRIELA, CÎRLAN CODRIN-DUMITRU, LEVĂRDĂ EDMOND, MUNCILA ALINA, CHICET DANIELA-LUCIA, TOMA ȘTEFAN LUCIAN*
- B.19. MAGNETO-INDUCTIVE TESTING OF CABLES IN ROPEWAY INSTALLATIONS**  
*PAȘALĂU OLIMPIU-ȘTEFAN, CIUCHE CONSTANTIN, MOȘNEGUȚU EMILIAN*
- B.20. LIQUID PENETRANTS — NDT METHOD FOR IDENTIFYING SURFACE DISCONTINUITIES**  
*UMBRARESCU ADRIAN SORIN, PASALAU IONEL, NECHIFOR (MITITELU) RODICA*
- B.21. GENERALISED KINEMATIC ANALYSIS OF A LEVER PRESS MECHANISM FOR FOOD APPLICATIONS**  
*MOȘNEGUȚU EMILIAN, BONTAȘ, OVIDIU, PANAINTE-LEHĂDUȘ, MIRELA, MIRILĂ DIANA, JASIŃSKI MARCIN, SPOREA NICOLETA, PETRE IVONA CAMELIA, FARCAȘ MATEI, CHIȚIMUȘ, DANA, VRÎNCEANU PAULA GRETA*
- B.22. LABORATORY APPLICATIONS FOR STUDYING THE OPERATION OF CENTRIFUGAL PUMPS**  
*BARSAN NARCIS, PRZYDATEK GRZEGORZ, TOMOZEI CLAUDIA, JAMROZIAK KRZYSZTOF, CHITIMUS DANA, PANAINTE-LEHADUS MIRELA, IRIMIA OANA, MOSNEGUTU EMILIAN, VRÎNCEANU PAULA GRETA*
- B.23. INTELLIGENT MODELING APPROACHES FOR CHARACTERIZING POLLUTANT TRANSPORT MECHANICS AND SPATIAL DISTRIBUTION IN POROUS AQUIFEROUS MEDIA**  
*CHITIMUS ALEXANDRA-DANA, AMARIEI PETRUT, NEDEFF VALENTIN, IRIMIA OANA, MOSNEGUTU EMILIAN, BARSAN NARCIS, VRÎNCEANU PAULA GRETA*

**B.24. TECHNOLOGICAL OPTIMIZATION OF INDUSTRIAL SORTING PROCESSES USING VIBRATING SIEVE**

*TOMOZEI CLAUDIA, PANAINTE LEHADUS MIRELA, NEDEFF VALENTIN, MOSNEGUTU EMILIAN, BARSAN NARCIS, IRIMIA OANA, CHITIMUS DANA, NITA DRAGOS*

**B.25. VALORIZATION OF SIDERITIC TAILINGS IN THE STEEL INDUSTRY WITHIN THE CONTEXT OF CIRCULAR ECONOMY**

*BOBORA ADRIANA, SOCALICI ANA*

**B.26. INTAKE TEMPERATURE IMPACT ON POWER AND EMISSIONS IN DRIFT COMPETITION**

*BIRTOK BANEASA CORNELIU*

**B.27. OCCUPATIONAL HEALTH AND SAFETY RISK ASSESSMENT IN A LOGGING OPERATION**

*PANAITE ELENA-FLORENTINA, PANAINTE-LEHADUȘ MIRELA, TOMOZEI CLAUDIA-MANUELA, IRIMIA OANA*

**B.28. EVALUATION OF THE TEXTURE OF SOFT PLANT-BASED PRODUCTS USING SENSORY ANALYSIS**

*PANAINTE-LEHADUS MIRELA, MOSNEGUTU EMILIAN-FLORIN, BARSAN NARCIS, CHIȚIMUȘ DANA-ALEXANDRA, MIRILĂ DIANA-CARMEN*

**B.29. PRODUCT DESIGN AND PROCESS OPTIMIZATION OF A MODULAR ROBOTIC UNIT FOR CONTROLLED MICROGREEN CULTIVATION**

*PROCOP IONUT, STRATULAT COSMIN, SOLEA RĂZVAN*

**B.30. STUDY OF THE PROPERTIES OF APS COATINGS DEPOSITED ON AGRICULTURAL PLOUGH COMPONENTS**

*MUNTEANU CORNELIU, NAZAR BORIS, LUPU FABIAN CEZAR, ISTRATE BOGDAN, IANUȘ GEL*

## C. OPTIMIZATION IN ENVIRONMENTAL ENGINEERING AND ENVIRONMENTAL PROTECTION

### BUILDING D HALL DP12

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ASSOC. PROF. PH.D. DAN IANCULESCU  
ASSOC. PROF. PH.D. NARCIS-MIHAI DUTEANU**

#### **C.1. IMPLEMENTING THE CIRCULAR ECONOMY IN WOOD WASTE MANAGEMENT: A CASE STUDY ON PALLET RECYCLING AND REUSE**

*IRIMIA OANA, ANTIP DIANA, CHITIMUS ALEXANDRA-DANA, TOMOZEI CLAUDIA, PANAINTE-LEHADUS MIRELA, MOSNEGUTU EMILIAN-FLORIN, BARSAN NARCIS*

#### **C.2. THE GENETIC AND BREEDING VALUE OF ROMANIAN TOMATO LINES UNDER THE CONDITIONS OF THE REPUBLIC OF MOLDOVA**

*MIHNEA NADEJDA, LUPASCU GALINA, AMBĂRUS SILVICA*

#### **C.3. BEHAVIORAL ASSESSMENT OF CEFTAZIDIME AND POLYSTYRENE MICROPLASTICS IN ZEBRAFISH USING THE NOVEL TANK TEST**

*CIAUSU RAMONA-ALEXANDRA, CHELARU IONUT-ALEXANDRU, ANDRONIC GABRIEL ANDREI, POPA NICOLETA, URECHE DOREL, CIOBICA ALIN STELIAN, NICOARA MIRCEA NICUSOR*

#### **C.4. PHARMACEUTICAL MIXTURES IN AQUATIC SYSTEMS: DEVELOPMENTAL DISRUPTION BY IBUPROFEN AND VALPROIC ACID IN ZEBRAFISH LARVAE**

*CHELARU IONUT-ALEXANDRU, CIAUSU RAMONA-ALEXANDRA, POPA NICOLETA, URECHE CAMELIA, ANDRONIC GABRIEL ANDREI, URECHE DOREL, CIOBICA ALIN STELIAN, NICOARA MIRCEA NICUSOR*

#### **C.5. CHEMICAL PARTITIONING, MOBILITY, BIOAVAILABILITY AND RISK OF TRACE ELEMENTS IN SEDIMENTS FROM A HYDROSYSTEM IN SOUTHERN TOGO**

*KAMILOU OURO-SAMA, DHEOULABA SOLITOKÉ HODABALO, GNON TANOUAYI, BARSAN NARCIS, MOSNEGUTU EMILIAN-FLORIN, FÈGBAWÈ BADANARO, NEDEFF VALENTIN, GNANDI KISSAO*

#### **C.6. THE INFLUENCE OF ENVIRONMENTAL FACTORS ON AQUACULTURE (ESPECIALLY PONDS) FROM THE PERSPECTIVE OF RISK ASSESSMENT THROUGH THE HACCP SYSTEM**

*SARION CRISTINA, GRIGORAȘ MĂLINA-ANDREEA, DANIEL SORIN DAN, GHEORGHITĂ VLAD*

#### **C.7. A MULTIDIMENSIONAL ANALYSIS OF FOOD WASTE: SOCIOECONOMIC IMPLICATIONS, AND MITIGATION MECHANISMS**

*SARION CRISTINA, PANAINTE-LEHADUS MIRELA, TOMOZEI CLAUDIA*

#### **C.8. FROM BIOMASS TO BIOMEDICAL MATERIALS: PH-CONTROLLED ITACONIC ACID POLYMERIZATION FOR ADVANCED DRUG DELIVERY SYSTEMS**

*AYDEMİR NECAT ALPEREN, KOSACA MEHTI, TOSUNER ZULFIYE VELIOGLU, UREK RAZIYE OZTURK, YILMAZ ONUR, YILMAZ CATALINA NATALIA*

#### **C.9. RESEARCH ON THE INTERACTION OF COMMON WHEAT WITH FUSARIUM LATERITIUM NEES**

*LUPASCU GALINA, CRISTEA NICOLAE, MIHNEA NADEJDA*

**C.10. OPTIMIZATION OF PACKAGING MANAGEMENT UNDER EUROPEAN CRITICAL RAW MATERIALS POLICIES**

*ȚUȚUIANU ALEXANDRA, PETRE ALIN-MIHAI, SPOREA NICOLETA, IGNAT MADALINA*

**C.11. OPTIMIZATION OF FLEXIBLE PLASTIC SORTING PROCESSES WITHIN INDUSTRIAL SYSTEMS**

*ȚUȚUIANU ALEXANDRA, DOBRIȚA MARINA-ANDREEA, SPOREA NICOLETA, TOMESCU, GHEORGHÎȚA*

**C.12. OPTIMIZATION OF GREEN-SYNTHEZED IRON NANOPARTICLES FOR ENHANCED DEFENSIVE ENZYME ACTIVITY AND ANTIBACTERIAL CONTROL OF RALSTONIA SOLANACEARUM IN ENVIRONMENTAL SYSTEMS**

*HAMZAH BASIL MOHAMMED, SADIK SHALAL OMAR*

**C.13. EVALUATION OF THE EFFICIENCY OF AMMONIUM REMOVAL FROM RURAL WASTEWATER BY CHEMICAL TREATMENTS**

*OANA IRIMIA, GAȘPAR ENIKO, MOSNEGUTU EMILIAN-FLORIN, STANCIU MIRELA-AURORA*

**C.14. LOCAL PRODUCERS - TRUE AMBASSADORS OF MOLDOVAN GASTRONOMIC TOURIS**

*ALEXANDRU NISTIRIUC, AURICA CHIRSANOVA, VITALIE GUȚU*

**C.15. STUDY ON THE IMPACT OF AIR QUALITY IN THE CITY OF BACĂU IN TERMS OF PM<sub>2.5</sub> AND PM<sub>10</sub> EMISSIONS**

*RADU CIPRIAN, PANAINTE - LEHADUS MIRELA, TOMOZEI CLAUDIA-MANUELA, NEDEFF, FLORIN-MARIAN, TIMOFTE ADRIAN, PAVAL ANCUȚA, CAPSA DOINA*

**C.16. ADAPTATION OF ITALIAN GRAPE VARIETIES IN THE CONTEXT OF CLIMATE CHANGE IN THE REPUBLIC OF MOLDOVA**

*SCLIFOS ALIONA, COVACI ECATERINA, CHIȚAN VIORICA, BALANUȚĂ ELENA*

**C.17. STUDY ON THE ASSESSMENT OF THE IMPACT OF THE BACAU MUNICIPAL WASTEWATER TREATMENT PLANT ON THE WATER QUALITY OF THE BISTRIȚA RIVER**

*CIOBANU FLORIN, PANAINTE - LEHADUS MIRELA, BARSAN NARCIS, TOMOZEI CLAUDIA-MANUELA, IRIMIA OANA, ZAHARIA ANDREI*

**C.18. SOCIO-TECHNICAL OPTIMIZATION FRAMEWORKS IN ENVIRONMENTAL ENGINEERING: A SYSTEMATIC REVIEW OF MULTI-OBJECTIVE DECISION-MAKING APPROACHES FOR SUSTAINABLE SYSTEMS**

*AURICA SORINA NICOLETA, GAVRILOAIA MĂRIUCA-ROXANA, SARION CRISTINA VALENTINA*

**C.19. EXPANDING THE SPECTRUM OF ACTION OF THE BACTERIUM PSEUDOMONAS FLUORESCENS STRAIN AP-33 (V-3481) FOR THE PROTECTION OF PLANTS AGAINST DISEASES IN MOLDOVA**

*SCERBACOVA TATIANA, STINGACI AURELIA*

**C.20. COMPARATIVE ANALYSIS OF AHP AND FUZZY LOGIC FOR LAND USE SUITABILITY: A CASE STUDY OF THE KARTAL QUARRY AREA (ISTANBUL)**

*ÇERMIKLI BEYZA, TARAKÇI ELIF, DURANAY RECEP*

**C.21. THE OIL CONTENT IN WALNUT KERNELS OF SOME MOLDAVIAN CULTIVARS**

*HARCIUC OLEG*

**C.22. BIOPESTICIDES IN THE PROTECTION OF FRUIT TREES AGAINST PEST ORGANISMS: EFFICACY AND ENVIRONMENTAL SAFETY**

*STINGACI AURELIA, SCERBACOVA TATIANA, STINGACI GRIGORE*

**C.23. SEASONAL ANALYSIS OF THE COMPOSITION OF MUNICIPAL WASTE IN BACAU COUNTY**

*MOSNEGUTU EMILIAN-FLORIN, TOMOZEI CLAUDIA-MANUELA, IRIMIA OANA, BARSAN NARCIS, STANGACIU OANA ANCUȚA, PRZYDATEK GRZEGORZ, AMARIEI PETRUȚ*

**C.24. PRACTICAL APPROACHES TO SLAUGHTERHOUSE WASTEWATER TREATMENT USING CHEMICAL ADDITIVES**

*BARSAN NARCIS, PRZYDATEK GRZEGORZ, IANCULESCU DAN, JAMROZIAK KRZYSZTOF, CHITIMUS DANA, MOSNEGUTU EMILIAN-FLORIN, ZAHARIA ANDREI*

**C.25. PERFORMANCE OF AN ADSORPTION-BASED TREATMENT APPLIED ONTO ZOOTECHNICAL FARM EFFLUENTS USING STRAW-ACTIVATED CARBON ADSORBENTS**

*HAIVAS CRISTINA ALEXANDRA, ZAHARIA CARMEN*

**C.26. EVOLUTION OF MANGANESE REMOVAL METHODS IN DRINKING WATER: FROM CONVENTIONAL PROCESSES TO EMERGING SOLUTIONS**

*PLACINTA CATALIN MARIAN, NEDEFF VALENTIN, TOMOZEI CLAUDIA-MANUELA, PANAINTE-LEHADUS MIRELA, MOSNEGUTUEMILIAN-FLORIN, BARSAN NARCIS, ZAHARIA ANDREI*

**C.27. CASCADE VALORIZATION OF LIGNOCELLULOSIC BIOMASS: COMBINATION OF BIOREFINERY AND BIOENERGY FOR A DOUBLE VALORIZATION OF FRAMIRE SAWDUST**

*NGANKO JUNIOR MAIMOU, APPIAH KOUASSI ESAIE KOUADIO, TOURE ALPHA OUSMANE, PAUL MAGLOIRE EKOUN KOFFI, BARSAN NARCIS, CLAUDINE TIOGUE TEKOUNEGNING, BIWOLE JEAN JALIN EYINGA, BENJAMIN YAO KOUASSI, PROSPER GBAHA, LAURE NGAHANE EMILIENCE, NEDEFF VALENTIN*

**C.28. ANALYSIS OF THE OLFATORY IMPACT OF EMISSIONS GENERATED BY CIVIL AND MILITARY ROAD TRAFFIC**

*BANCILA TEODOR CONSTANTIN, TOMOZEI CLAUDIA-MANUELA, NEDEFF VALENTIN, DUNCA EMILIA, PANAINTE-LEHADUS MIRELA, CHITIMUS ALEXANDRA-DANA, IRIMIA OANA*

**C.29. AIR QUALITY MONITORING AND IMPROVEMENT MEASURES IN THE BARLETA INDUSTRIAL AREA**

*TOMOZEI CLAUDIA-MANUELA, BANCILA TEODOR CONSTANTIN, DUNCA EMILIA, NEDEFF FLORIN-MARIAN, PANAINTE-LEHADUS MIRELA, IRIMIA OANA, ZAHARIA ANDREI*

**C.30. HYDROCHLORIC ACID REGENERATION BY VARIOUS PROCESS OPTIONS AS A LOW COST AND ECOLOGICAL ALTERNATIVES**

*CREȚU ROMICĂ, BUTAN SIMONA, BOUNEGRU ALEXANDRA VIRGINIA*

**C.31. FIREPROOFING TECHNOLOGIES OF WOOD USING INORGANIC COMPOUNDS**

*TOBA MADALINA, FICAI DENISA, MOTELICA LUDMILA, SPOIANA ANGELA, TRUSCA ROXANA DOINA, DUMBRAVA ANDREEA STEFANIA, PERICLEANU RADU, GHEORGHE-BARBU IRINA, OPREA OVIDIU CRISTIAN, FICAI ANTON*

**C.32. SUSTAINABLE CONSOLIDATION OF STONES BY USING ECOFRIENDLY APATITE FROM ORGANIC CALCIUM SALTS AND PHOSPHATE PRECURSOR**

*MARES IOANA, FICAI DENISA, MOTELICA LUDMILA, SPOIALA ANGELA, TRUSCA ROXANA DOINA, OPREA OVIDIU CRISTIAN, FIERASCU RADU CLAUDIU, FIERASCU IRINA, FISTOS TOMA, BAROI ANDA MARIA, MATEI ROXANA IOANA, COMAN MADALIN VASILE, FICAI ANTON*

**C.33. ENVIRONMENTAL APPLICATIONS OF FUNGAL BIOMASS IN DYE ADSORPTION AND CATALYTIC OZONATION PROCESSES**

*MIRILĂ DIANA-CARMEN, OANCEA MIHAELA, ELHABIRI SID AHMED, KENICHE ASSIA, DRAGOȘ-ALEXANDRU NIȚĂ, ROȘU ANA-MARIA, NEDEFF FLORIN-MARIAN*

**C.34. PROCESS SIMULATION OF BIOGAS PRODUCTION FROM SPENT COFFEE GROUNDS – A SIMPLIFIED FLOWSHEET**

*DUMITRU AURAȘ-MARIUS, ISOPENCU GABRIELA OLIMPIA, LAVRIC VASILE*

**C.35. CLIMATIC DRIVERS OF QUALITY CHANGES IN LONG-TERM STORED WHEAT: A COMPARATIVE MULTI-YEAR ANALYSIS**

*POEȚELEA DIANA PETRONELA, MOSNEGUTU EMILIAN-FLORIN, TOMOZEI CLAUDIA-MANUELA, BARSAN NARCIS, GASPAR ENIKO*

**C.36. OPTIMIZING THE COLLECTION OF HOUSEHOLD WASTE FROM THE ECOLOGICAL ISLANDS WITHIN THE MUNICIPALITY OF GALATI**

*MURARIU GABRIEL, MUNTEANU DAN, MOCANU GEORGE – DANUT, CALINESCU VIOREL*

**C.37. THE PRELIMINARY DEVELOPMENT STAGE OF AN AUTONOMOUS DRONE INTERCEPTION SYSTEM, GUIDED BY ARTIFICIAL INTELLIGENCE**

*MURARIU GABRIEL, SIEBER SERGIU, COELHO DURVAL, ARAMA CATALIN*

**C.38. STUDY ON METHODS FOR IDENTIFYING URBAN HEAT ISLANDS – CASE STUDY – THE SOUTHERN AREA OF ROMANIA**

*MURARIU GABRIEL, DRASOVEAN ROMANA, FRASINA SORIN, DORFOTEI, CORNELIU, MUNTEANU DAN*

**C.39. THE EVALUATION OF THE ROLE OF THE VARFU CAMPULUI DAM AND RESER-VOIR IN INTEGRATED WATER RESOURCES MANAGEMENT**

*POPESCU CATALIN, ANGHEL CRISTIAN GABRIEL, IANCULESCU DAN*

**C.40. NUMERICAL ANALYSIS AND HYDRAULIC CONSIDERATIONS OF TECHNICAL FISH-PASSES DESIGNED FOR TROUT SPECIES IN MOUNTAINOUS AREAS**

*IANCULESCU DAN, ANGHEL CRISTIAN GABRIEL*

**C.41. ANALYSIS OF PHYSICAL-MECHANICAL PARAMETERS OF THE EQUIPMENT ON THE SECONDARY MEAT PROCESSING FLOW**

*GRIGORE ION MIHAITA, VOICU GHEORGHE*

**C.42. OVERVIEW ON AZO DYE AND COLOR REMOVAL PERFORMANCE BY STATIC BIOSORPTION TREATMENT USING DEAD ALGAE-BASED BIOMASS**

*ZAHARIA CARMEN, ORTOVAN CRINUTA LARISA, AFRASINEI MARIUS ALEXANDRU, HAIVAS CRISTINA ALEXANDRA*

**C.43. THE IMPACT OF TOURISM'S CARBON FOOTPRINT ON HEALTH AND SUSTAINABLE SOLUTIONS**

*PAVAL ANCUTA, PANAINTE-LEHADUS MIRELA, TOMOZEI CLAUDIA-MANUELA, CHITIMUS ALEXANDRA-DANA, CIOBANU FLORIN*

**C.44. SIMULATION OF A MATHEMATICAL MODEL FOR SOIL BIOREMEDIATION**

*ARDELEANU ELENA ROXANA, LUNGU OTILIA*

**C.45. STUDY AND RESEARCH ON DOMESTIC WASTEWATER TREATMENT PLANTS**

*PĂDURARU IONEL IONUȚ, TEOHARI DAN CONSTANTIN, NEDEFF FLORIN MARIAN*

**C.46. ADVANCED MEMBRANE TREATMENT FOR WATER REUSE IN THE FOOD INDUSTRY**

*ZAHARIA ANDREI, NEDEFF VALENTIN, RĂDUCANU DUMITRA*

**C.47. CIRCULAR ECONOMY IN STANDARDS AND IN ACTION**

*GUEORGUIEV TZVETELIN, IRIMIA OANA*

**C.48. DISEASE AS A DYNAMIC SYSTEM: FROM EMERGENT GEOMETRY TO CLINICAL ARTIFICIAL INTELLIGENCE TOWARD A STRUCTURAL PARADIGM IN MEDICINE**

*BUZEA CĂLIN GHEORGHE, AGOP MARICEL, DOBRECI LUCIAN*

**C.49. MONITORING INVASIVE SPECIES IN URBAN ECOSYSTEMS THROUGH EDUCATION AND COMMUNITY ENGAGEMENT**

*ROTARU MIHAELA, STANCA-MOISE CRISTINA, MOISE GEORGE*

**C.50. EVALUATION OF HEAVY METAL TRANSLOCATION FROM INDUSTRIAL SOILS INTO HYDROPHILIC PLANTS**

*CHITIMUS ALEXANDRA-DANA, NEDEFF VALENTIN, MOSNEGUTU EMILIAN, BARSAN NARCIS, AMARIEI PETRUT, VRINCEANU PAULA GRETA*

**C.51. MICROBIOLOGICAL EVALUATION AND ANTIMICROBIAL RESISTANCE PROFILE OF WATER IN THE MOLDOVA NOUĂ AREA, ROMANIA, IN THE CONTEXT OF MINING ACTIVITIES**

*NICOLETA SORINA NEMEȘ, PETRU NEGREA, NARCIS DUȚEANU, DELIA MUNTEAN, ALEXANDRU-MIHAI CRĂCIUN, PETRONELA CHEACHIR*

**C.52. A THEORETICAL RELATIONAL FRAGMENTATION FRAMEWORK FOR SS7 SECURITY, AI RESISTANCE AND ENERGY EFFICIENCY IN 4G/5G NETWORKS**

*URSU-BUDACA ELENA-DIANA, PRUTEANU EUSEBIU*

**C.53. RISKS AND OPPORTUNITIES IN USING MESOPOROUS PLATFORMS FOR EMERGING APPLICATIONS**

*FULGHECI ANA-MARIA, VASILE DAN-ADRIAN, DUMITRESCU RUCSANDRA, DRAGUT NATALIA, MOTELICA LUDMILA, SPOIALA ANGELA, OPREA OVIDIU-CRISTIAN, FICAI DENISA, FICAI ANTON*

**C.54. SIMULATION OF SURFACE WATER QUALITY AT AN AGRO-INDUSTRIAL SITE (SOUTH-EAST OF THE CÔTE D'IVOIRE) USING ARTIFICIAL NEURAL NETWORKS**

*N'GUESSA YAPO JEAN CLÉMENT, EBLIN SAMPAN GEORGES, KONIEN KOUAME ARMEL, DIBI BROU*

**C.55. THE INFLUENCE OF CLIMATE CHANGE ON THE EFFICIENCY OF WASTEWATER TREATMENT PLANTS**

*DIMA CORNELIA VERONICA, VOICU GHEORGHE*

**C.56. PERSPECTIVES ON WATER QUALITY MANAGEMENT IN URBAN AREAS: A CASE STUDY OF BACĂU CITY, ROMANIA**

*POPESCU EDUARD-MARIAN, BARSAN NARCIS, PRZYDATEK GRZEGORZ, IANCULESCU DAN, CHITIMUS DANA, MOSNEGUTU EMILIAN*

**C.57. THE HYDROLOGICAL REGIME OF THE BISTRITA RIVER AND THE IMPACT OF CLIMATE CHANGE ON THE OPERATION OF HYDRO-ENGINEERING STRUCTURES**

*CIOBANU FLORIN, PANAINTE-LEHADUS MIRELA, BARSAN NARCIS, IRIMIA OANA, TOMOZEI CLAUDIA-MANUELA, NEDEFF FLORIN-MARIAN, ZAHARIA ANDREI*

**C.58. ADAPTIVE REUSE OF MINING GALLERIES FOR CONTROLLED ENVIRONMENT AGRICULTURE: AN AEROPONIC PILOT STUDY IN THE JIU VALLEY**

*ITU RĂZVAN BOGDAN, SOICA ALEXANDRA, VÎLCEANU FLORIN, IUCAL ILIE, PRAPORGESCU GABRIEL*

**C.59. CLIMATE CHANGE AND MARINE POLLUTION BY MICROPLASTICS: ECOLOGICAL, STRATEGIC, AND PUBLIC HEALTH IMPLICATIONS**

*BOȘNEAGU ROMEO*

**C.60. FROM WASTE TO STRENGTH: DEVELOPMENT OF GYPSUM-BASED ECO-COMPOSITES REINFORCED WITH METALLIC CHIPS**

*ITU RAZVAN BOGDAN, SOICA ALEXANDRA, VILCEANU FLORIN, IUCAL ILIE, PRAPORGESCU GABRIEL*

**C.61. ASSESSMENT OF CO<sub>2</sub> EMISSIONS OF BUILDING-INTEGRATED PHOTOVOLTAIC (BIPV) SYSTEMS IN ROMANIA IN THE CONTEXT OF THE ENERGY TRANSITION**

*ARSENI ȘTEFANA, IRIMIA OANA, GASPAR ENIKO, PANAINTE-LEHADUȘ MIRELA, CHIȚIMUȘ ALEXANDRA-DANA*

**C.62. ASSESSING THE PHYSICO-CHEMICAL AND SENSORY QUALITY OF SELECTED ORGANIC WINES FROM THE REPUBLIC OF MOLDOVA**

*UNGUREANU CLAUDIA-VERONICA, FLOREA LILIANA, HORINCAR GEORGIANA, RADUCANU DUMITRA, GEORGESCU ANA-MARIA*

**C.63. PHENOLOGICAL OBSERVATIONS ON PLUM (PRUNUS DOMESTICA L.) AND ITS REGIONAL DEVELOPMENT PERSPECTIVES**

*RADUCANU DUMITRA, TIU TEODORA, UNGUREANU CLAUDIA, GEORGESCU ANA MARIA, BADALUTA NICOLETA, CHITIMUS ALEXANDRA-DANA*

**C.64. ADVANCED TREATMENT OF SYNTHETIC HOSPITAL WASTEWATER: REMOVAL OF KETOPROFEN VIA B-CYCLODEXTRIN COMPLEXATION AND UV PHOTODEGRADATION**

*KENICHE ASSIA, ELHABIRI SID AHMED*

**C.65. OPTIMIZATION OF A PHOSPHONIC ACID-FUNCTIONALIZED DOWEX 50W X8 RESIN FOR ENHANCED ORGANIC DYE REMOVAL: A COMPARATIVE STUDY FOR ENVIRONMENTAL PROTECTION**

*ELHABIRI SID AHMED, KENICHE ASSIA, ROSU ANA-MARIA, MIRILA DIANA-CARMEN*

**C.66. COMPARATIVE ASSESSMENT OF MINE WATER QUALITY AND GEOCHEMICAL PROCESSES IN TAILINGS FACILITIES: INSIGHTS FROM ILBA AND BOZANTA SITES**

*ENACHE ANDREI DAN, GUȘAT DOREL, UNGUREANU MIORIȚA*

**C.67. ASSESSMENT OF TRACE METAL CONTAMINATION AND FOOD SAFETY RISKS IN EDIBLE INSECT LARVAE COLLECTED IN TOGO**

*BADANARO FÈGBAWÈ, OURO-SAMA KAMILOU, VALENTIN VALENTIN, BARSAN NARCIS*

**C.68. STUDY ON THE RECOVERY POSSIBILITIES OF PETROLEUM WASTE FROM SENEGAL IN A CIRCULAR ECONOMY CONTEXT**

*MBENGUE ASSANE, NGOM BABA, NEDEFF VALENTIN*

**C.69. COMPARATIVE STUDY OF ALUMINIUM 6 AND IRON ELECTRODES IN THE TREATMENT OF SYNTHETIC WATER CONTAMINATED WITH FLUORIDE BY ELECTROCOAGULATION**

*SEDOU MOUDASSIROU, ALFA-SIKA MANDE SEYF-LAYE, NEDEFF VALENTIN*

**C.70. SAHARAN DUST IN EASTERN ROMANIA UNDER PERSISTENT ANTICYCLONIC REGIME CONDITIONS DURING 14-18 APRIL 2025**

*DIANA-CORINA BOSTAN, ADRIAN TIMOFTE, MIRELA PANAIT-LEHĂDUȘ, FLORIN MARIAN NEDEFF, SORIN BOSTAN, ANA CAZACU*

**C.71. HOUSEHOLD WASTE MANAGEMENT IN THE CITY OF BOUAKE: RECYCLING AND ENERGY RECOVERY FROM FOOD AND PLASTIC WASTE**

*AUGOU OVO SANDRINE FLORA, MOSNEGUTU EMILIAN, BARSAN NARCIS, IRIMIA OANA*

## **D. MECHATRONICS & ROBOTICS**

### **BUILDING D HALL DI131 (SENATE)**

**THURSDAY 21 MAY 2026 15<sup>00</sup> – 18<sup>00</sup>**

**FRIDAY 22 MAY 2026 09<sup>00</sup> – 11<sup>30</sup>**

**CHAIRPERSONS: PROF. PH.D. AUREL MIHAIL TITU  
ASSOC. PROF. PH.D. VLAD-ANDREI CIUBOTARIU  
LECTURER PH.D. COSMIN CONSTANTIN GRIGORAS**

#### **D.1. ON THE ELECTRONIC TRANSPORT MECHANISM IN POLYCRYSTALLINE CDO THIN FILMS**

*RUSU DRAGOS-IOAN*

#### **D.2. OXIDE COMPOSITION IMPACT OVER DUCTILITY AND IMPACT FORCES OF POLYLACTIC ACID (PLA) MIXES**

*CIUBOTARIU ADRIAN, LOBANOVA MARINA*

#### **D.3. STATISTICAL STUDY ON AI IMPROVEMENTS OF MULTI DOF ROBOTS**

*LOBANOVA MARINA, CIUBOTARIU ADRIAN*

#### **D.4. MACHINE TOOLS VERSUS INDUSTRIAL ROBOTS IN INDUSTRY 5.0 - A COMPARATIVE REVIEW OF THEIR ROLES IN MODERN MANUFACTURING**

*TAMPU CATALIN, GRIGORAS COSMIN C-TIN, ZICHIL VALENTIN, CALIMAN RADU*

#### **D.5. INTEGRATING MODERN MANAGEMENT PRINCIPLES INTO THE OPTIMIZATION OF MECHATRONIC AND NVH SYSTEMS TO ENHANCE PERFORMANCE IN THE AUTOMOTIVE INDUSTRY**

*TITU AUREL MIHAIL, BALC DANIEL, ROSU ANA-MARIA, BALC EMANUEL*

#### **D.6. A RISK-BASED APPROACH TO OPTIMIZING INCOMING INSPECTION IN AUTOMOTIVE PRODUCTION**

*TITU AUREL MIHAIL, COVACI CLAUDIU ALEXANDRU, ROSU ANA-MARIA, BALC EMANUEL, BALC DANIEL*

#### **D.7. ASSESSMENT OF STRUCTURAL INTEGRITY AND TRANSIENT IMPACT BEHAVIOR OF A 7075-T6 ALLOY MECHATRONIC ARM THROUGH EXPLICIT NUMERICAL ANALYSIS**

*CIUBOTARIU VLAD-ANDREI, GRIGORAS COSMIN CONSTANTIN, HERGHELEGIU EUGEN*

#### **D.8. TOPOLOGICAL AND STRUCTURAL OPTIMIZATION OF THE TRIPTERON 3-DOF PARALLEL MANIPULATOR TO INCREASE MASS EFFICIENCY AND RANGE**

*CIUBOTARIU VLAD-ANDREI, ZICHIL VALENTIN, GRIGORAȘ COSMIN CONSTANTIN, ANDRIOAIA DRAGOȘ ALEXANDRU*

#### **D.9. IMPLEMENTATION OF AN AUTONOMOUS ROBOTIC PLATFORM FOR HYBRID ROUTE NAVIGATION**

*CIUBOTARIU VLAD-ANDREI, GRIGORAȘ COSMIN CONSTANTIN*

#### **D.10. ASYNCHRONOUS MOTOR SPEED CONTROL BY LABVIEW WITHIN A SCADA INTERFACE**

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*PUIU PETRU GABRIEL, ANDRIOAIA ALEXANDRU DRAGOS*

#### **D.11. PREDICTIVE MAINTENANCE SYSTEM FOR A ROBOTIC ARM**

*ANDRIOAIA ALEXANDRU DRAGOS*

#### **D.12. STUDY ON ENERGY OPTIMIZATION OF CASTING FURNACES**

*CALIMAN RADU, OLARU IONEL*

**D.13. ASPECTS REGARDING THE USE OF ARTIFICIAL COLD IN CONSTRUCTION WORKS**

*CALIMAN RADU, OLARU IONEL*

**D.14. GENERAL KINEMATIC MODELING OF A FIVE-ELEMENT DOUBLE-ACTING MECHANISM DESIGNED FOR MECHATRONIC APPLICATIONS**

*MOSNEGUTU EMILIAN, CIUBOTARIU VLAD ANDREI, GRIGORAȘ COSMIN CONSTANTIN, ZICHIL VALENTIN*

**D.15. REAL-TIME FAULT DETECTION IN INDUSTRIAL ACTUATORS USING EDGE AI AND TINYML**

*GRIGORAS COSMIN CONSTANTIN, ZICHIL VALENTIN, CIUBOTARIU VLAD ANDREI, EMILIAN MOSNEGUTU*

**D.16. INTEGRATION OF IOT AND AI FOR PREDICTIVE MAINTENANCE IN SMART FACTORIES**

*GRIGORAS COSMIN CONSTANTIN, ZICHIL VALENTIN, CIUBOTARIU VLAD ANDREI*

**D.17. AUGMENTED AND VIRTUAL REALITY IN THE DESIGN AND MAINTENANCE OF MECHATRONIC SYSTEMS**

*GRIGORAS COSMIN CONSTANTIN, ZICHIL VALENTIN, CIUBOTARIU VLAD ANDREI*

**D.18. APPLICATION OF CAVE SYSTEMS FOR ROBOTIC MOTION ASSESSMENT IN IMMERSIVE VIRTUAL ENVIRONMENTS**

*GRIGORAS COSMIN CONSTANTIN, CIUBOTARIU VLAD ANDREI, ZICHIL VALENTIN*

**D.19. HEATMAP VISUALIZATION FROM SCRATCH DETECTION MODELS FOR FAILURE PREVENTION IN INDUSTRIAL EQUIPMENT**

*GRIGORAS COSMIN CONSTANTIN, ZICHIL VALENTIN, CIUBOTARIU VLAD ANDREI*

**D.20. SECURING AGRICULTURAL MECHATRONIC PRODUCTION LINES THROUGH 8-LAYER ARCHITECTURES**

*LUCA MIRCEA, PACURARU CIPRIAN, CIUBOTARIU VLAD ANDREI*

**D.21. AUTOMATION OF WOOD PANEL HANDLING AND SORTING PROCESSES THROUGH MULTI-ARTICULATED MECHATRONIC SYSTEMS**

*MIHALCEA STEFAN, LUCA MIRCEA, CIUBOTARIU VLAD ANDREI*

**D.22. COMPARATIVE ANALYSIS AND MATLAB/SIMULINK MODELING OF DC STATIC CONTACTORS USING CONVENTIONAL AND GATE TURN-OFF THYRISTORS**

*BANU IOAN-VIOREL, ANDRIOAIA DRAGOS, POPA SORIN, PUIU PETRU GABRIEL*

**D.23. ANALYSIS OF MECHATRONIC FOOD INSPECTION SYSTEMS THROUGH NUMERICAL SIMULATION**

*ANDRONIC FLORIN, LUCA MIRCEA, CIUBOTARIU VLAD ANDREI*

## **E. ECONOMIC ENGINEERING**

### **BUILDING D HALL DI131 (SENATE)**

**THURSDAY 21 MAY 2026 15<sup>00</sup> – 18<sup>00</sup>**

**FRIDAY 22 MAY 2026 09<sup>00</sup> – 11<sup>30</sup>**

**CHAIRPERSONS: PROF. PH.D. VALENTIN ZICHIL  
PROF. PH.D. NICOLAE STELIAN UNGUREANU  
ASSOC. PROF. PH.D. CATALIN DROB**

#### **E.1. THE IMPORTANCE OF DATA MANAGEMENT IN MODERN COMPANIES. STRATEGIES AND GOOD PRACTICES FOR ORGANIZATIONAL TRANSFORMATION**

*LUNGU FLORIN, SZAKACS ZSOLT-SANDOR*

#### **E.2. THE IMPORTANCE OF SES SKILLS IN THE MANAGERIAL ENVIRONMENT**

*LUNGU FLORIN, PURA SORINA*

#### **E.3. THE ANALYSIS OF HUMAN RESOURCES. A WAY TO IMPROVE THE OVERALL PERFORMANCE OF INDUSTRIAL ORGANIZATIONS**

*DUMITRU RADU STANCIU*

#### **E.4. SOME ASPECTS OF THE QUALITY OF THE MANAGEMENT AND ENTREPRENEURSHIP EDUCATION IN ROMANIA**

*DUMITRU RADU STANCIU*

#### **E.5. ORGANIZATIONAL CULTURE FOR KNOWLEDGE SHARING**

*DUMITRU RADU STANCIU*

#### **E.6. THE IMPACT OF INTEGRATING ESG PRINCIPLES INTO ORGANIZATIONAL COMMUNICATION ON ONLINE VISIBILITY AND ENGAGEMENT IN THE INDUSTRIAL ENVIRONMENT**

*TIMIRAȘ LAURA CĂTĂLINA, DROB CĂTĂLIN, NICHIFOR BOGDAN VASILE, STÂNGACIU OANA ANCUȚA, ZAIȚ LUMINIȚA IULIA*

#### **E.7. DEMOGRAPHIC PROJECTIONS OF THE RESIDENT POPULATION IN BACAU COUNTY FOR THE HORIZON YEARS 2040, 2060, AND 2080**

*STÂNGACIU OANA ANCUȚA, MĂGIRESCU DANIELA*

#### **E.8. A FIVE-DIMENSIONAL CONCEPTUAL MODEL FOR IMPROVING RESEARCH PROJECT IMPLEMENTATION MANAGEMENT IN SMES**

*ION COSMIN-LUCIAN, UNGUREANU NICOLAE-STELIAN*

#### **E.9. ECONOMIC IMPACT OF STATISTICAL PROCESS CONTROL IN THE MANUFACTURING OF AEROSPACE COMPONENTS: A CASE STUDY ON AIRCRAFT DOOR HINGES**

*TAMPU CATALIN, PLESCAU IOANA, DROB CĂTĂLIN*

#### **E.10. CAPITAL MARKET DEVELOPMENT AND ECONOMIC GROWTH IN ROMANIA**

*DROB CĂTĂLIN, ZICHIL VALENTIN, PLESCAU IOANA*

#### **E.11. ASYMMETRIC EFFECTS OF FOREIGN DIRECT INVESTMENT ON REGIONAL GROWTH: EVIDENCE FROM ROMANIAN DEVELOPMENT REGIONS**

*DROB CĂTĂLIN, ZICHIL VALENTIN, PLESCAU IOANA*

#### **E.12. QUANTIFYING THE INTANGIBLE: THE IMPACT OF ORGANIZATIONAL CULTURE ON FINANCIAL PERFORMANCE AND ASSET VALUATION IN VOLATILE MARKETS**

*SOLOMON DANIELA CRISTINA, FERARU-PREPELIȚĂ ANDREEA, BUCUR IULIA-ANDREEA, DRAGOMIRESCU SIMONA-ELENA, OLARIU IOANA, NIMINEȚ LIVIANA ANDREEA*

**E.13. MANUFACTURING TECHNOLOGIES AS A KEY DRIVER FOR EUROPEAN ECONOMIC RESILIENCE**

*BUCUR IULIA-ANDREEA, NIMINEȚ LIVIANA ANDREEA, SOLOMON DANIELA CRISTINA,  
DRAGOMIRESCU SIMONA-ELENA, FERARU-PREPELIȚĂ ANDREEA, OLARIU IOANA*

**E.14. BEYOND THE BOTTOM LINE: THE SOCIO-ECONOMIC IMPACT OF ETHICAL LEADERSHIP ON RESILIENCE IN INDUSTRIAL MANUFACTURING**

*FERARU-PREPELIȚĂ ANDREEA, NIMINEȚ LIVIANA ANDREEA, OLARIU IOANA,*

**E.15. CULTURAL CAPITAL AS ECONOMIC CATALYST: A MULTI-LEVEL ANALYSIS OF SOCIAL NORMS WITHIN CORPORATE FRAMEWORKS**

*DRAGOMIRESCU SIMONA-ELENA, BUCUR IULIA-ANDREEA, SOLOMON DANIELA CRISTINA*

**E.16. ARTIFICIAL INTELLIGENCE IN MARKETING RESEARCH: OPPORTUNITIES, LIMITATIONS, AND MANAGERIAL IMPLICATIONS**

*TIMIRAȘ LAURA CĂTĂLINA, DANU MARCELA CORNELIA, NICHIFOR BOGDAN VASILE, ZAIȚ  
LUMINIȚA IULIA*

**E.17. CONSTRUCTIVE-FUNCTIONAL AND FEM ANALYSIS OF AN OIL UOP 12 C1 PUMP**

*ROTARU MIHAELA, ISARIE CLAUDIU LAURENTIU, GRECU VALENTIN*

## F. CHEMICAL & FOOD ENGINEERING

### BUILDING D HALL DP18

**THURSDAY 21 MAY 2026 15<sup>00</sup> – 18<sup>00</sup>**

**FRIDAY 22 MAY 2026 09<sup>00</sup> – 11<sup>30</sup>**

**CHAIRPERSONS: PROF. PH.D. ELVIRA VRABIE  
PROF. PH.D. MARIA TURTOI  
PROF. PH.D. ILEANA-DENISA NISTOR**

#### F.1. ENTROPY CONTROL IN THE PROLONGATION OF FUNCTIONAL PROPERTIES OF BIOLOGICALLY ACTIVE COMPOUNDS IN FOOD COMPOSITIONS

*ALEXEI BAERLE*

#### F.2. OPTIMIZING PHENOLIC EXTRACTION AND FERMENTATION DYNAMICS IN AUTOCHTHONOUS RED WINES THROUGH THE SOFT SYSTEM® APPROACH

*ALEXANDRA ARSENI, NATALIA VLADEI, RODICA STURZA, LARISA NECULA, GEORGETA MOGA, ELENA BALANUȚĂ, NICU CRUDU*

#### F.3. INFLUENCE OF RAW MATERIALS ON THE MICROBIOME AND ORGANOLEPTIC DEFECTS OF NATURAL VINEGARS

*ALINA BOIȘTEAN, SILVIA RUBȚOV, AURICA CHIRSANOVA*

#### F.4. INFLUENCE OF SALT ON FERMENTATION, GLUTEN STRUCTURE, AND TEXTURAL CHARACTERISTICS OF BREAD

*OLGA BOESTEAN, GEORGIANA GABRIELA CODINĂ, CORINA CARACACI, IURIE RUMEUS, ALIONA GHENDOV-MOSANU*

#### F.5. LIPOSOMAL ENCAPSULATION AS AN ADVANCED STRATEGY FOR PRESERVING BIOACTIVE COMPOUNDS FROM PLANT-BASED MATRICES

*TATIANA CAPCANARI, EUGENIA COVALIOV, OXANA RADU, VIOLINA POPOVICI*

#### F.6. VALORIZATION OF ALFALFA FOR INNOVATIVE FOOD INDUSTRY APPLICATIONS

*IANA CIUGUREANU, VIORICA BULGARU, ANGELA GUREV, ALIONA GHENDOV-MOSANU*

#### F.7. OPTIMIZATION OF TECHNOLOGICAL PARAMETERS OF A FUNCTIONAL SEA BUCKTHORN SAUCE

*EUGENIA COVALIOV, TATIANA CAPCANARI, OXANA RADU*

#### F.8. THE INFLUENCE OF SEA BUCKTHORN POMACE POWDER ON THE CHEMICAL AND MICROBIOLOGICAL STABILITY OF GLAZED CHEESE DURING STORAGE

*IRINA DIANU, TATIANA CUȘMENCO, ARTUR MACARI, ALEXEI BAERLE, IULIANA SANDU, NATALIA NETREBA*

#### F.9. NON-TARGET GC-MS ANALYSIS OF MIGRATING COMPOUNDS FROM PET FOOD PACKAGING INTO LIPID-RICH FOOD MATRICES

*DMITRI LAZACOVICI, VERONICA DRAGANCEA, RODICA STURZA, ALIONA GHENDOV-MOȘANU*

#### F.10. EFFECT OF EXTRACTION CONDITIONS ON THE CIELAB COLOR PARAMETERS OF ALFALFA (MEDICAGO SATIVA L.) PROTEIN CONCENTRATE

*ALIONA GHENDOV-MOȘANU, IANA CIUGUREANU, ANGELA GUREV, VIORICA BULGARUDANA*

#### F.11. MULTIVARIATE ANALYSIS OF PHYSICO-CHEMICAL AND ANTIOXIDANT PROPERTIES OF ENCAPSULATED JOSTABERRY EXTRACT

*ALIONA GHENDOV-MOSANU, VIORICA BULGARU, ANGELA GUREV, VERONICA DRAGANCEA, RODICA STURZA*

**F.12. BIOLOGICAL VALUE OF MICROCAPSULES WITH PHYTOCHEMICALS FROM JOSTABERRY DURING STORAGE**

*ANGELA GUREV, VERONICA DRAGANCEA, VIORICA BULGARU, ALIONA GHENDOV-MOSANU*

**F.13. ADAPTATION OF ACID HYDROLYSIS-SOXHLET EXTRACTION METHOD FOR TOTAL FAT DETERMINATION IN GLUTEN-FREE MUFFINS FORMULATED WITH WAX-BASED OLEOGELS AS BUTTER REPLACERS**

*NATALIA NETREBA, SORINA ROPCIUC, MIRCEA ADRIAN OROIAN, VIORICA BULGARU*

**F.14. BIOPROTECTIVE YEASTS AS AN ALTERNATIVE TO SULFITES IN WHITE MUST PRESERVATION**

*NICOLAI CUPCEA, SILVIA RUBȚOV, RODICA STURZA*

**F.15. THE INFLUENCE OF CLIMATE CHANGE ON TRADITIONAL EUROPEAN CUISINE**

*ALEXANDRU NISTIRIUC, ELENA NIREAN*

**F.16. NUTRITIONAL AND MICRONUTRIENT PROFILING OF A FUNCTIONAL COMPOSITION BASED ON PUMPKIN AND SEA BUCKTHORN POWDERS**

*DANIELA PALADI, NINA MIJA*

**F.17. IN VITRO ANTIOXIDANT ACTIVITY OF LIPOSOMAL GRAPE POMACE EXTRACTS**

*VIOLINA POPOVICI, RAISA DRUTA, IURIE SUBOTIN, RODICA STURZA*

**F.18. FERMENTED PSEUDOCEREALS AS A PROMISING MATRIX FOR FUNCTIONAL PLANT-BASED DAIRY ALTERNATIVES**

*OXANA RADU, EUGENIA COVALIOV, TATIANA CAPCANARI*

**F.19. COMPARATIVE STUDY OF THE TECHNOLOGICAL QUALITY OF PASTA OBTAINED USING TRITICALE FLOUR, BLONDE AND DARK FERMENTED BREWER'S SPENT GRAIN**

*IURIE RUMEUS, ALIONA GHENDOV-MOSANU, MIRCEA-ADRIAN OROIAN, OLESEA ȘAITAN, SORINA ROPCIUC, GEORGIANA GABRIELA CODINĂ*

**F.20. RESEARCH ON DETERMINING THE QUALITATIVE PROPERTIES OF MEAT SNACKS WITH VEGETABLE ADDITIONS**

*IULIANA SANDU, ADRIANA DABIJA, IRINA DIANU, NATALIA NETREBA, ANCUȚA CHETRARIU, MIRCEA ADRIAN OROIAN, DANIELA COJOCARI, ARTUR MACARI*

**F.21. THE PREDISPOSITION OF ORANGE WINES TO THE PINKING TEST**

*ALIONA SCLIFOS, IURIE SCUTARU, ALEXANDRA ARSENIU, MARIA KURTEVA*

**F.22. TESTING THE ANTIRADICAL POTENTIAL AND ANTIOXIDANT STABILITY OF WHITE WINES FROM LOCAL GRAPES VARIETIES**

*IURIE SCUTARU, ALIONA SCLIFOS, CRISTINA DAVIDESCU*

**F.23. EATING BEHAVIOR PROFILES, PHYSICAL ACTIVITY, AND SELF-PERCEIVED HEALTH DURING THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY OF STUDENTS AND ACADEMIC STAFF AT THE TECHNICAL UNIVERSITY OF MOLDOVA**

*RODICA SIMINIUC, DINU ȚURCANU, SERGIU SIMINIUC*

**F.24. CULTURAL FOOD IDENTITY, PLACE ATTACHMENT, AND SUSTAINABLE TOURISM SUPPORT: A CROSS-SECTIONAL ATTITUDINAL STUDY IN THE REPUBLIC OF MOLDOVA**

*RODICA SIMINIUC, ALINA BOIȘTEAN, ALEXANDRU NISTIRIUC, AURICA CHIRSANOVA*

**F.25. PHTHALATE CONTAMINATION IN ENVIRONMENTAL MATRICES AND EFFICIENT REMOVAL USING METAL OXIDE-FUNCTIONALIZED APPLE WASTE BIOCHAR**

*RODICA STURZA, DMITRI LAZACOVICI, ALIONA GHENDOV-MOSANU, ILDIKO LUNG, ADINA STEGARESCU, OCSANA OPRİȘ, MARIA – LOREDANA SORAN*

**F.26. DIFFERENTIAL IMPACT OF SULFUR DIOXIDE ON PHENOLIC EXTRACTION AND STABILITY IN LOCAL RED WINES UNDER VARIABLE CONDITIONS**

*NATALIA VLADEI, ALEXANDRA ARSENI*

**F.27. MIXING AND PASTING BEHAVIOR OF WHEAT DOUGH WITH SALT AND SALT SUBSTITUTE ANALYZED BY MIXOLAB DEVICE**

*IURIE RUMEUS, GEORGIANA GABRIELA CODINĂ, SILVIU-GABRIEL STROE, CORINA CARACACI, OLGA BOESTEAN, ALIONA GHENDOV-MOSANU*

**F.28. PRODUCTION OF RAW DISTILLATES WITH INCREASED AROMATIC QUALITIES THROUGH THE UNITARY DISTILLATION PROCESS**

*ECATERINA COVACI, ANATOL BALANUȚA, ALIONA SCLIFOS*

**F.29. UTILIZATION OF RED GRAPE POMACE EXTRACT IN THE PRODUCTION A FERMENTED FUNCTIONAL BEVERAGE WITH HIGH BAS CONTENT**

*ECATERINA COVACI, NADEJDA BOTEZAT*

**F.30. NATURAL SURFACTANTS OBTAINED FROM PLANT AND PROTEIN RESOURCES FOR ECO-FRIENDLY FOOD SURFACE DECONTAMINATION APPLICATIONS**

*IRINA FIERASCU, ANDA MARIA BAROI, ROXANA IOANA MATEI, TOMA FISTOS<sup>1</sup>, IRINA ELENA CHICAN, CRISTINA EMANUELA ENASCUTA, SORIN MARIUS AVRAMESCU, RADU CLAUDIU FIERASCU*

**F.31. INNOVATIVE AND CONVENTIONAL APPROACHES FOR THE EXTRACTION AND CHARACTERIZATION OF BIOACTIVE COMPOUNDS FROM BEE PRODUCTS**

*CRISTINA EMANUELA ENASCUTA, ELENA-EMILIA SIRBU, ANDA MARIA BAROI, TOMA FISTOS, IOANA RALUCA SUICA-BUNGHEZ, GRIGORE PSENOVSCHI, MANUEL DRUGULESCU, RADU CLAUDIU FIERASCU, VASILE LAVRIC*

**F.32. EFFECTS OF PROCESS FACTORS ON THE ULTRASOUND-ASSISTED EXTRACTION OF BIOACTIVE COMPOUNDS FROM SEA BUCKTHORN FRUITS**

*IONELA OTILIA BACIU, OANA CRISTINA PÂRVULESCU, MIHAELA TOCIU, NICOLETA CHIRA, MONICA MAREȘ, ALEXANDRA MOCANU*

**F.33. THE EFFECT OF THERMAL PROCESSING ON FUNCTIONAL PROPERTIES OF YELLOW PEA FLOUR**

*LIVIA PATRASCU, INA VASILEAN, DANIELA ȚIULEANU, MARIA TURTOI, IULIANA APRODU*

**F.34. FROM GENERAL CONSIDERATIONS TO A CONCRETE CASE ON RHEOLOGY AS A POWERFUL RESEARCH METHOD IN CHEMICAL ENGINEERING AND MEDICAL SCIENCES**

*TĂNASE DOBRE*

**F.35. INFLUENCE OF BOVINE COLLAGEN AND KONJAC GLUCOMANNAN ON THE RHEOLOGICAL PROPERTIES OF DOUGH**

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*MARIANA POPESCU, ANCUȚA CHETRARIU, ADRIANA DABIJA*

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*ELENA COJAN, SIMONA COJOCARU, SABĂU SEBASTIAN, ANDREEA-MĂDĂLINA SILION HODEA, CONSTANTINA RADA HULEA, DANIELA MIHĂILĂ, GEORGESCU ANA-MARIA, ROȘU ANA-MARIA, MIRILĂ DIANA-CARMEN, SILION MIHAELA, ILEANA-DENISA NISTOR*

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## G. INDUSTRIAL POWER ENGINEERING & COMPUTER SCIENCE

### BUILDING D HALL DP17

**THURSDAY 21 MAY 2026 15<sup>00</sup> – 18<sup>00</sup>**

**FRIDAY 22 MAY 2026 09<sup>00</sup> – 11<sup>30</sup>**

**CHAIRPERSONS: PROF. PH.D. RÓBERT ISTÓK  
ASSOC. PROF. PH.D. VEACESLAV SPRINCEAN  
ASSOC. PROF. PH.D. CORNEL POPESCU**

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*VERNICA SORIN-GABRIEL, GRIGORE ROXANA-MARGARETA, BANU IOAN-VIOREL, DINU IULIAN, LIVINȚI PETRU*

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