

CONFERENCE PROGRAM

THURSDAY, NOVEMBER 09, 2023

RECEIVING GUESTS

FRIDAY, NOVEMBER 10, 2023

09⁰⁰ – 10⁰⁰ REGISTRATION - BUILDING B, ROOM 214

10⁰⁰ – 10¹⁰ OPENING CEREMONY (ON-SITE / ON-LINE)

10¹⁰ – 14⁰⁰ PAPER PRESENTATIONS (ON-SITE / ON-LINE)

14⁰⁰ - 15³⁰ LUNCH

15³⁰ - 19⁰⁰ PAPER PRESENTATIONS (ON-SITE / ON-LINE)

SATURDAY, NOVEMBER 11, 2023

10⁰⁰ - 17⁰⁰ WORKSHOP: NEW TRENDS IN TECHNOLOGIES, MACHINE
MANUFACTURING AND INTEGRATED PRODUCTION SYSTEMS (ON-SITE / ON-
LINE)

**SECTION 1. MANUFACTURING SYSTEMS AND TECHNOLOGIES.
MATERIALS SCIENCE AND ENGINEERING.**

ON-LINE: <https://meet.google.com/msp-trqi-tiv>

TOPICS: Manufacturing Technologies; Cold Forming Technologies; Welding Technologies; Nonconventional Technologies; Manufacturing Systems; Mechatronics, Robotics and Flexible Manufacturing; Computer-Aided Design, Computer Aided Manufacturing

Session chairs:

Costel MIRONEASA

Valery WOLFF

Laurențiu SLĂTINEANU

Romeo IONESCU

Irina BEȘLIU-BĂNCESCU

1. KPI INDICATORS AND OBJECTIVES OF INTEGRATED MANAGEMENT SYSTEMS IN INDUSTRIAL COMPANIES IN ROMANIA

Lucian ISPAS¹, Costel MIRONEASA^{1*}

¹ Ștefan cel Mare“ University of Suceava
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2. THE INFLUENCE OF TEMPERATURE ON THE MECHANICAL PROPERTIES AT COPPER ALLOYS WELDING

Lucian ISPAS¹, Ioan TAMAȘAG^{1*}, Claudiu Marian PICUS¹, Marius Constantin TODIRCĂ¹, Robert-Adrian CHIȚAN¹

¹ Ștefan cel Mare“ University of Suceava
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3. ADVANCED PET PLASTIC BOTTLE UPCYCLING FOR PRECISION 3D PRINTER FILAMENT

Dorin Mihail Dinulescu^{1*}

¹ Polytechnic University of Bucharest
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4. ADVANCING AUTONOMOUS DRIVING: TAILORED VIRTUAL PLATFORM FOR RIGOROUS ALGORITHM EVALUATION AND COMPLIANCE

Cătălin-Mihai COSTESCU¹, Marius-Dany BIOLARU-STĂNCULESCU¹, Irina GRĂMESCU¹, Dorin-Mihail DINULESCU^{1*}, George-Stelian PETRAN¹

¹ Polytechnic University of Bucharest
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5. A METHOD FOR IMPLEMENTING QUALITY 5.0 WITHIN A SUSTAINABLE FRAMEWORK

Flory Vlad^{1*}, Irina Severin¹

¹ Polytechnic University of Bucharest
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6. MECHANICAL PROPERTIES OF POLY(VINYL CHLORIDE) - POLYMERIC PLASTICIZERS BLENDS

Claudia Tighiceanu^{1*}

¹ „Ștefan cel Mare” University of Suceava, MANSiD Research Center, 13 University Street, 720229, Suceava,
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7. CRYSTALLINITY BEHAVIOUR OF POLYDIMETHYLSILOXANE AND POLYCAPROLACTONE BASED BLOCK COPOLYMERS

Claudia Tighiceanu^{1*}

¹ „Ștefan cel Mare” University of Suceava, MANSiD Research Center, 13 University Street, 720229, Suceava,
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8. STUDY ON THE WELD NUGGET SIZE VARIATION WITH VARIATION OF WELDING PARAMETER CHANGES FOLLOWING THE RESISTANCE SPOT WELDING PROCESS

Dan Birsan^{1*}

¹ „Dunarea de Jos” University of Galati
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9. FINITE ELEMENT MODELLING OF THE SELF-PIERCE RIVETING PROCESS

Dan Birsan^{1*}

¹ „Dunarea de Jos” University of Galati
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10. DESIGN AND FABRICATION OF BALL BURNISHING DEVICE FOR SURFACE FINISH ADAPTABLE ON A PLANT LATHE

Irina Beșliu – Băncescu^{1*}, Ioan Tamașag¹

¹ „Ștefan cel Mare” University of Suceava
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11. UNLOCKING THE POTENTIAL OF HUMAN SKIN TRIBOLOGY IN PRODUCT DESIGN

Gelu-Marius Rotaru^{1*}

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12. PECULIARITIES OF USE OF STRUCTURES WITH SLAB FLOORS IN THE REPUBLIC OF MOLDOVA, UKRAINE, KAZAKHSTAN.

Sîli Anatolie^{1*}

¹Universitatea Tehnică a Moldovei, Facultatea de Urbanism și Arhitectură, bd. Dacia, Chișinău, Republica Moldova

13. WEAR OF DIE PUNCHES FOR VIBRO-PRESSED PAVERS

Delia-Aurora CERLINCĂ^{1*}, Sergiu SPÎNU¹, Traian-Lucian SEVERIN¹, Ștefan JURESCHI¹,

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SECTION 2. APPLIED MECHANICS.

ON-LINE: <https://meet.google.com/rmg-uzcv-aqe>

TOPICS: Mechanical Engineering; Applied Tribology; Analysis and Simulation, Maintenance, Reliability, Life Cycle,

Session chairs:

Ilie MUSCĂ

Viorel PALEU

Ioan MIHAI

Stelian ALACI

Sergiu SPÎNU

1. USING THE RANK CORRELATION METHOD FOR ORDERING THE FACTORS INFLUENCING THE RESULTS OF SOME WEAR TESTS

Ioan SURUGIU^{1*}, Margareta COTEATĂ¹, Ștefan JURESCHI¹, Adelina HRIȚUC¹, Elisaveta CRĂCIUN¹, Irina BEȘLIU-BĂNCESCU², Traian GRĂMESCU¹, Laurențiu SLĂTINEANU¹

¹“Gheorghe Asachi” Technical University of Iasi

²“Ștefan cel Mare” University of Suceava

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2. ELECTRICAL CONDUCTIVITY STUDIES ON IONIC LIQUIDS ENHANCED WITH NANOPARTICLES

Chereches Elena Ionela^{1*}, Chereches Marius Ionut¹, Minea Alina Adriana¹

¹“Gheorghe Asachi” Technical University of Iasi

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3. FOTO-DECOLORIZATION OF ANTIBIOTICS CONTAMINATED WASTEWATER

Elena Niculina Drăgoi¹, Mircea-Teodor Nechita¹, Adrian Cătălin Puițel¹, Gabriel Dan Suditu*

Technical University “Gheorghe Asachi” of Iași

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4. EXPERIMENTAL TEST RIG FOR FATIGUE ANALYSIS IN RUBBER-METAL ELASTIC ELEMENTS SUBJECTED TO UNIAXIAL COMPRESSION AND SHEAR STRESSES

Manolache-Rusu Ioan-Cozmin^{1*}, Suci Cornel-Camil¹, Bădărău-Șuster Helene²

¹“Ștefan cel Mare” University of Suceava

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5. LABORATORY DEVICE FOR MEASURING THE MECHANICAL MOMENT OF INERTIA

Luminita Irimescu^{1*}, Vlaicu Daniel¹

¹“Ștefan cel Mare” University of Suceava

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6. FINITE ELEMENT MODELING OF A THREE PHASE ASYNCHRONOUS MOTOR WITH SQUIRREL CAGE ROTOR

Cornel-Camil SUCIU^{1*}, Ioan-Cozmin MANOLACHE-RUSU¹, Traian-Lucian SEVERIN^{1*}

¹“Ștefan cel Mare” University of Suceava

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7. A SIMPLE METHOD FOR ASSESSING ELASTIC DEFORMATIONS OF SPHERES, WITHOUT CONTACT

Ioan TAMAȘAG^{1*}, Irina BEȘLIU-BĂNCESCU¹, Ilie MUSCĂ¹

¹ Ștefan cel Mare” University of Suceava

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8. STRUCTURES WITH A CLASSIC SKELETON, PARTICULARITIES REGARDING SEISMIC BEHAVIOR

ȘÎLI Anatolie, BURAGA Andrei

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SECTION 3. AUTOMOTIVES / ENVIRONMENTAL ENGINEERING AND SUSTAINABLE DEVELOPMENT.

ON-LINE: <https://meet.google.com/cgy-ukws-xdq>

TOPICS: Automotives, Engineering Management and Leadership; Innovation, Creativity and Industrial Development; Quality Management; Environmental Engineering and Sustainable Development; Learning and Education in Engineering, Materials Science, Metrology

Session chairs:

Helene BĂDĂRĂU-ȘUSTER

Ioan – Cozmin MANOLACHE – RUSU

Constantin DULUCHEANU

Lucian P. GEORGESCU

Petru BULAI

1. Documentation on the constructive and functional features of all-wheel drive vehicles

Ștefan-Constantin LUPESCU¹

¹ Ștefan cel Mare“ University of Suceava

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2. Design and construction of a stand for checking the shape deviations of brake discs

Ștefan-Constantin LUPESCU¹, Ioan-Cozmin MANOLACHE-RUSU^{1*}, Cornel-Camil SUCIU¹

¹ Ștefan cel Mare“ University of Suceava

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3. Preliminary study regarding failure of friction brake components

Ionuț-Cristian ROMĂNU¹

¹ Ștefan cel Mare“ University of Suceava

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4. EXPERIMENTAL TEST RIG FOR VEHICLE BRAKE PAD EVALUATION

**Ionuț-Cristian ROMÂNĂ¹, Ioan - Cozmin MANOLACHE-RUSU^{1*}, Ilie MUSCĂ¹, Stelian ALACT¹,
Marilena GLOVNEA¹, Bădărău-Șuster Helene²**

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5. STUDIES ON NO_x REDUCTION USING EXHAUST GAS PREHEATING IN DIESEL ENGINE TYPE ISUZU 4JB1

Picus Claudiu-Marian^{1*}, Beniuga Marius-Constantin¹, Cezar-Ion Adomnitei^{2,3}

¹ Ștefan cel Mare“ University of Suceava, Department of Mechanics and Technologies

² Integrated Center for Research, Development and Innovation in Advanced Materials, Nanotechnologies and Distributed Systems for Fabrication and Control, Ștefan cel Mare University of Suceava

³ Ștefan cel Mare“ University of Suceava, Department of Computers, Electronics and Automation

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6. THE NEED FOR FRAGMENTATION OF AdBlue DROPS IN SCR SYSTEMS

Claudiu-Marian PICUS^{1*}, Marius-Constantin BENIUGA¹, Ioan MIHAI¹

¹ Ștefan cel Mare“ University of Suceava

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7. THE USE OF REVERSE ENGINEERING FOR THE ELIMINATION OF STRESS CONCENTRATORS IN AUTOMOTIVE PARTS - CASE STUDY

Ioan TAMAȘAG^{1*}, Marius-Constantin BENIUGA^{1*}

¹ Ștefan cel Mare“ University of Suceava,

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8. EXPERIMENTAL STUDY ON THE OPTIMIZATION OF AIR FLOW FOR INTAKE SYSTEMS

Marius-Constantin BENIUGA^{1*}, Ioan TAMAȘAG^{1*}

¹ Ștefan cel Mare“ University of Suceava,

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9. ASESSESSING THE VALORIZATION POTENTIAL OF CORN STALK IN THE CIRCULAR ECONOMY CONTEXT

**Adrian Cătălin Puitel^{1*}, Cătălin Dumitrel Balan¹, Mircea Teodor Nechita¹, Gabriel Dan Suditu¹,
Gabriela-Liliana Ailiesei²**

¹“Gheorghe Asachi” Technical University of Iasi

²“Petru Poni” Institute of Macromolecular Chemistry

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10. ABOUT TIRE -RUNWAY FRICTION MEASUREMENTS

Ionuț – Marius NAZARIE^{1*}, Ilie MUSCĂ^{1*}

¹ Ștefan cel Mare“ University of Suceava,

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11. THE IMPORTANCE OF THE LEGISLATIVE FRAMEWORK IN PROTECTING ARCHITECTURAL MONUMENTS AND ISSUES REGARDING THE PRESERVATION OF HISTORICAL SITES

Manțuc Elena¹, Sîli Anatolie¹

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mun. Chișinău, Republica Moldova

12. NUMERICAL SIMULATION OF ELASTIC ROLLING CONTACT BY CONJUGATE GRADIENT METHOD

Sergiu SPÎNU^{1*}, Delia-Aurora CERLINCĂ¹

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