



**ACADEMIA OAMENILOR DE ȘTIINȚĂ DIN ROMÂNIA**



**Universitatea  
POLITEHNICA din  
București**



**Facultatea Ingineria și  
Managementul Sistemelor  
Tehnologice**



**Departamentul  
Mașini și Sisteme  
de Producție**

# PROGRAM

## Sesiunea științifică de primăvară a Comisiei Productiva-Dacia Renault

**Integration of Research and Innovation in  
Business Environment**

**-29 Mai 2015-**

## **SCIENTIFIC PROGRAM COMMITTEE**

- Adrian Alexandru BADEA, UPB, Academy of Romanian Scientists
- Adrian GHIONEA, University POLITEHNICA of Bucharest
- Adrian OLARU, University POLITEHNICA of Bucharest
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- Sergio CAVALIERI, University of Bergamo, Italy
- Sorin Mihai CROITORU, University POLITEHNICA of Bucharest
- Ștefan VELICU, University POLITEHNICA of Bucharest
- Tiberiu Gabriel DOBRESCU, Director of MSP department, UPB
- Tudor DEACONESCU, University Transilvania of Brașov
- Vlad LAȘCU, Romanian Academy, Solid Mechanics Institute

# PRODUCTICA 2015

" Integration of Research and Innovation in Business Environment "

**Biblioteca Centrală UPB, Sala 2.1, Etaj 2**

**09:30-10:00 PRIMIREA INVITAȚILOR**

**10:00-10:30 PLEN: DESCHIDERE FESTIVĂ, MESAJE DE BUN VENIT**

- **VASILE CÂNDEA** – Președinte AOSR
- **ADRIAN BADEA** – Vicepreședinte AOSR
- **ION BASGAN** – Vicepreședinte AOSR
- **PIERRE BORNE** – Universitatea din Lille, Franța, AOSR
- **CONSTANTIN STROE** – Președinte ACAROM
- **ION CHIUȚĂ** – Președinte al Secției de Științe Tehnice AOSR
- **ANTON HADĂR** – Vicepreședinte al Senatului UPB
- **CRISTIAN DOICIN** – Decan al facultății IMST
- **TIBERIU DOBRESCU** – Director al Departamentului MSP

## PREZENTĂRI ÎN PLEN

**BIBLIOTECA CENTRALĂ UPB, Sala 2.1, Etaj 2, 10:30 – 12:30**

**Moderatori:** Adrian BADEA, Miron ZAPCIU, Anton HADĂR

■ <i>IDENTIFICATION AND CONTROL OF COMPLEX SYSTEMS (t.b.c.)</i> <b>Pierre BORNE</b>
■ <i>STUDY OF POLISHING AISI 316L WITH STRUCTURED ABRASIVE</i> <b>François GOOSSENS, Mehdi CHERIF, Olivier CAHUC</b>
■ <i>STUDY OF THE CUTTING OF FLEXIBLE SHEET MATERIAL USING A VIBRATING BLADE</i> <b>Quentin COSSON-COCHE, Raynald LAHEURTE, Philippe DARNIS, Denis TEISSANDIER, Olivier CAHUC, Didier CHABIRAND</b>
■ <i>3D MODELING OF STRESS FIELDS IN MILLING</i> <b>Wadii YOUSFI, Raynald LAHEURTE, Philippe DARNIS, Olivier CAHUC, Madalina CALAMAZ</b>
■ <i>MODELING OF DRILLING PROCESS ASSISTED BY VIBRATIONS - CONSIDERATION OF DYNAMIC MACHINING SYSTEM</i> <b>Mathieu LADONNE, Mehdi CHERIF, Yann LANDON, Jean Yves K'NEVEZ, Olivier CAHUC</b>
■ <i>PICK AND PLACE MACHINE - VISIONBOT</i> <b>Ionuț BUDIȘTEANU</b>
■ <i>IMPROVE ENERGY EFFICIENCY, USING SIEMENS DRIVES SOLUTIONS</i> <b>Matjaz MLINSEK, Andrei SECELEAN</b>
■ <i>GLOBAL COMPACT NETWORK AND CORPORATE SOCIAL RESPONSIBILITY IN ROMANIA</i> <b>Doru MITRANA, Miruna ZAPCIU</b>

**SECȚIUNEA 1**  
**New Research in Manufacturing Processes**

**13:00 – 15:30**

**BIBLIOTECA CENTRALĂ UPB, Sala 2.1, Etaj 2**

**Moderatori:** Cristian DOICIN, Tiberiu DOBRESCU, Cătălin DUMITRAȘ, Dana TILINĂ

■ ANALYSIS OF THE ADHESIVES CHARACTERISTICS INFLUENCE ON THE ADHESION ABILITY - <b>Lucia ADĂSCĂLIȚA, Viorica CAZAC</b>
■ ANALYSIS OF WATER HARDNESS INFLUENCE ON QUALITY CHARACTERISTICS OF DAMPENING SOLUTION - <b>Lucia ADĂSCĂLIȚA, Viorica CAZAC</b>
■ PROCESS INNOVATION: HOLISTIC SCENARIOS TO REDUCE TOTAL LEAD TIME - <b>Alin POSTEUCĂ , Miron ZAPCIU</b>
■ STUDIES AND RESEARCH ON DESIGN OF EFFICIENCY TECHNOLOGICAL PROCESSES BY ESTIMATING THE RISKS - <b>Alina-Elena BUȘARU, Andreea-Diana MOROȘANU, Mariana GORAN, Gabriel Marius DUMITRU</b>
■ MODELING PROCESS CONTROL BY EDDY CURRENTS OF THERMAL SPRAYED COATINGS - <b>MARIANA GORAN, ALINA-ELENA BUȘARU, MADALINA-ELENA MILITARU, GABRIEL MARIUS DUMITRU</b>
■ RESEARCH OF NDT EXAMINATION OF THE TURBINES ROTORS USING MAGNETIC PARTICLES - <b>Elena- Mădălina MILITARU, Andreea Diana MOROȘANU, Maria Cristina DIJMĂRESCU, Marius Gabriel DUMITRU</b>
■ OVERCOMING DRIFT- METHODS OF MAINTAINING PLATINUM RESISTANCE THERMOMETERS USED IN INDUSTRIAL PROCESSES - <b>Andreea-Diana MOROȘANU, Alina-Elena BUȘARU, Mariana GORAN, Marius Gabriel DUMITRU</b>
■ STUDY OF FLOOR CONVECTOR FUNCTIONING - <b>Marian Cristian RAICU, Professor COORDINATOR: Adrian BADEA</b>
■ INCREASING ENERGY EFFICIENCY FOR A PROCESSING PLANT IN THE CEMENT INDUSTRY. CASE STUDY - <b>Alexandru-Ionuț CHIUȚĂ</b>
■ QUALITY PROBLEM SOLVING IN ASSEMBLY PLANT DURING MASS PRODUCTION – TOOLS FOR IDENTIFYNG AND SOLVING QUALITY PROBLEMS - <b>Dănuț Ion TRANDAFIR, Profesor COORDINATOR Dana TILINĂ</b>
■ THE APPLICATION OF TOTAL PRODUCTIVE MAINTENANCE PRINCIPLES IN THE JUST-IN-TIME PRODUCTION ENVIRONMENT - <b>Răzvan Mugurel BUDICĂ, Bogdan UNGUREANU, Adrian GHIONEA</b>
■ QUALITY CONTROL FOR PREPRESS AND PRINT PROCESS - <b>Răzvan-George RĂCHERU, Professor COORDINATOR: Emilia BĂLAN</b>
■ FINITE ELEMENT ANALYSIS OF MODULAR FIXTURES STRUCTURE ON AXIAL DIRECTION - <b>Cătălin DUMITRAȘ, Dragoș Florin CHITARIU</b>

## SYNTHETIC PRESENTATIONS

**BIBLIOTECA CENTRALĂ UPB, Hol Etaj 2, 13.00**

**Moderatori:** Emilia BĂLAN, Alexandru CHIUȚĂ

<p>■ <i>FORECASTING THE PERFORMANCE OF AN ORGANIZATION: COMPARASION MAMDANI FUZZY LOGIC vs SUGENO</i></p> <p><b>Daniel-Petru GHENCEA, Miron ZAPCIU</b></p>
<p>■ <i>COLOUR CHALLENGES IN SIGNAGE PRINTING ON NON-PAPER LIKE SUBSTRATES</i></p> <p><b>Dorin PIȚIGOI</b> <b>Professor COORDINATOR: Emilia BĂLAN</b></p>
<p>■ <i>STUDIES REGARDING OBTAINING ELECTRICAL ENERGY BY HARVESTING MECHANICAL ENERGY WITH THE HELP OF SPECIAL DEVICES</i></p> <p><b>Alexandru Daniel TUFAN, Alexandru-Iulian TOMA, Miron ZAPCIU, Vlad LAȘCU, Cornel LALA</b></p>
<p>■ <i>IMPLEMENTING THE CONCEPT OF VIRTUAL FACTORY IN ROMANIAN INDUSTRY</i></p> <p><b>Eugen STRĂJESCU, Ionuț SPĂTARU</b></p>
<p>■ <i>METHOD TO DETERMINE THE REMAINING LIFETIME OF A PRESSURE VESSEL</i></p> <p><b>Ionel PĂUNESCU, Paul PĂUNESCU, Ștefan VELICU</b></p>
<p>■ <i>ANALYSIS OF SOME INFLUENCE FACTORS OF THE QUALITY OF FINISHED PIECES PRODUCED BY SPD -METHOD ECAE - BY NUMERICAL SIMULATIONS</i></p> <p><b>Daniel DRAGNEA, Professor COORDINATOR Ștefan VELICU</b></p>
<p>■ <i>CONSIDERATIONS ON VEHICLES STABILITY IMPROVEMENTS THROUGH MODERN TECHNOLOGIES AND DEDICATED SOFTWARE</i></p> <p><b>Tiberiu GIURGIU, Miron ZAPCIU</b></p>
<p>■ <i>KAIZEN MANAGEMENT APPLICATION IN AN AUTOMOTIVE PRODUCTION LINE</i></p> <p><b>Florian TINCULESCU</b></p>
<p>■ <i>THE SURFACE QUALITY UPON CNC MILLING USING FE ANALYSIS</i></p> <p><b>Bogdan-Gabriel ANIȚĂ</b></p>
<p>■ <i>HYDRAULIC PUMPING UNIT OPTIMIZATION</i></p> <p><b>Ioan-Bogdan HODOR, Cătălin Gabriel DUMITRAȘ, Constantin CHIRIȚĂ</b></p>

■ *CONTRIBUTIONS TO REDUCE THE COST OF USING INDUSTRIAL EQUIPMENT BASED ON PREDICTIVE MAINTENANCE*

**Dan Florin NICULESCU, Gherghina STOIAN - GRĂDINARIU**

**Professor COORDINATOR: Miron ZAPCIU, Sorin Mihai CROITORU**

■ *DYNAMIC BEHAVIOR EVALUATION OF THE SPINDLE OF MILLING MACHINE FIRST MCV300*

**Gherghina STOIAN - GRĂDINARIU, Dan Florin NICULESCU**

**Professor COORDINATOR: Miron ZAPCIU, Claudiu Florinel BÎȘU**

■ *PREDICTIVE MAINTENANCE TECHNIQUES FOR ROLLER BEARINGS*

**Sebastian Nicușor PĂRĂOANU**

■ *ANALYSIS OF THE SURFACE QUALITY OBTAINED IN THE CASE OF MILLING-BURNISHING COMBINED PROCESS*

**Cosmin-Constantin GRIGORAȘ, Gheorghe BRABIE**

■ *APPLICATION OF TORSOR CENTRAL AXIS IN MILLING PROCESS*

**Elena Luminița OLTEANU, Claudiu-Florinel BÎȘU**

■ *BIOMIMETIC ACTUATION OF NON-ANTHROPOMORPHIC GRIPPER SYSTEMS*

**Tudor DEACONESCU, Andrea DEACONESCU**

■ *DOMESTIC WATER SUPPLY SYSTEM OF AUTONOMOUS HOUSES*

**Marian-Octavian RADU**

**Professor Coordinator: Constantin IONESCU, Miron ZAPCIU**

■ *INPUT MODELLING USING STATISTICAL DISTRIBUTIONS AND ARENA SOFTWARE*

**Elena Iuliana GINGU (BOTEANU)**

**Professor COORDINATOR: Miron ZAPCIU**

■ *QUALITY MANAGEMENT BEST PRACTICES AT IRASM IRRADIATION CENTRE*

**Ion Bogdan LUNGU, Mihaela MANEA**

■ *OPTIMIZATION OF SUPPLY CHAIN ACTIVITIES WITHIN A COMPANY*

**Petru Eduard LĂZĂRESCU**

**Professor Coordinator: Cristina MOHORA**

■ *CONTROL OF INDUSTRIAL ACTIVITIES IN THE ALUMINIUM CASTING DEPARTMENT*

**Eugen Madălin GALITU**

**Professor Coordinator: Constantin MINCIU**

## SECȚIUNEA 2

### Alliance between University and Industry

**BIBLIOTECA CENTRALĂ UPB, Sala 2.2, Etaj 2, 13:00 – 15:30**

**Moderatori:** Adrian BADEA, George DARIE, Miron ZAPCIU,  
Alexandru MARIN

<p>■ <i>INNOVATION CLUSTER „GREEN ENERGY AND SUSTAINABLE PRODUCTS AND SERVICES”</i></p> <p><b>Corina CONSTANTIN, Christina LEUCUTA</b></p>
<p>■ <i>NATIONAL COLLABORATION BETWEEN HEIs AND SMEs USING A NEW INNOVATION ALLIANCE</i></p> <p><b>ZAPCIU Miron, IONESCU Constantin, TILINĂ Dana</b></p>
<p><b>MASĂ ROTUNDĂ</b></p> <p>■ <i>Dezbateri cu firmele înscrise în consorțiul de tip Cluster</i></p>
<p>■ <i>ANALIZA REȚELELOR INSTITUȚIONALE EUROPENE, DE CERCETARE ȘI DEZVOLTARE TEHNOLOGICĂ, CU APLICATIE PENTRU TARA NOASTRA</i></p> <p><b>Alexandru MARIN, Alexandra HADĂR, Diana Mura BADEA, Gabriel VLADUȚ, Bogdan CIOCĂNEL, Daniela BUCUR, Ion IVAN</b></p>
<p><b>MASĂ ROTUNDĂ</b></p> <p>■ <i>Dezvoltarea capacității de transfer și comercializare a rezultatelor din cercetare în cadrul institutelor și centrelor de cercetare aplicativă din România – implementarea unui model pilot pentru compartimentele de specialitate”, contract 10S/04.02.2015, ANCSI</i></p> <p><b>Director proiect: Prof. Anton HADĂR</b></p>
<p>■ <i>ACADEMIC AND ECONOMIC PARTNERSHIP IN THE STUDENTS’ TRAINING AND SUCCESSFUL INTEGRATION INTO THE LABOUR MARKET IN PRINTING INDUSTRY OF THE REPUBLIC OF MOLDOVA</i></p> <p><b>Viorica CAZAC, Alexandra OSOBA, Lucia ADĂSCĂLIȚA</b></p>
<p>■ <i>PROJECT MANAGEMENT OF EU FUNDED</i></p> <p><b>Andreea Luminița MARINESCU</b></p>
<p>■ <i>THE AUDITING OF FIRMS - THE QUALITY MANAGEMENT SYSTEM</i></p> <p><b>Adrian Sorin BEJAN</b></p>
<p>■ <i>ACHIEVING AN INNOVATIVE ELECTRIC VEHICLE</i></p> <p><b>Albert Mihai SUVAC, Constantin MINCIU</b></p>

### ORGANIZING COMMITTEE

Prof.dr.ing. Miron ZAPCIU, Ș.I.dr.Ing. Dana TILINĂ, Dr.ing. Georgeta ZAPCIU, Ș.I.dr.Ing. Alexandru CHIUȚĂ, Conf.dr.ing. Claudiu BÎȘU, Ș.I.dr.Ing. Dorel ANANIA, Ș.I.dr.Ing. Marius PARASCHIV, Ing. Aurel COSTACHE, Ing. Mihai CĂRUȚAȘU, Drd.Ing. Mihai SINDILE, Drd. Alexandru TUFAN, Drd. Alexandru TOMA, Drd. Daniel GHENCEA, Drd. Sebastian PĂRĂOANU, Drd. Tiberiu GIURGIU, Ing. Iulian GRĂDINARIU, Tehn. Pr. Dan CUCIUREANU, Tehn. Pr. Viorel SOSEANU, Representatives from Dacia – Renault company, Mioveni Local Council.