



UNIVERSITY OF ZENICA

FACULTY OF MECHANICAL  
ENGINEERING IN ZENICA  
(Bosnia and Herzegovina)



UNIVERSITAT POLITÈCNICA  
DE CATALUNYA



E.T.S.E.I. de BARCELONA  
DEPARTAMENT  
D'ENGINYERIA MECÀNICA  
(Spain)



BAHÇEŞEHİR UNIVERSITY  
ISTANBUL

MÜHENDİSLİK FAKÜLTESİ  
(Turkey)

**14<sup>TH</sup> INTERNATIONAL  
RESEARCH/EXPERT CONFERENCE  
"TRENDS IN THE DEVELOPMENT OF  
MACHINERY AND ASSOCIATED  
TECHNOLOGY"**

**TMT 2010**

**Final program**

**11 - 18 September 2010.  
Mediterranean Cruise**

# INTERNATIONAL SCIENTIFIC/REVIEW COMMITTEE

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Asst.Prof. Jose Antonio Travieso Rodriguez  
Senior Asst. Msc. Edin Begović

## MAIN TOPICS

### 1. MANUFACTURING TECHNOLOGIES AND MATERIALS

Assembly and Disassembly; Machining, Nonconventional Machining, Tools, High Speed Machining; Dry Cutting, MQL Machining, High Performance Machining, Rapid Prototyping, Micromachining, Manufacturing Processes, Welding Processes; Plastic Forming Processes; Materials; Engineering of Polymers; Powder Metallurgy; Measuring; Thin & Thick Coatings; Surface Engineering; Molding Processes; CAM technologies; ...other subtopics

### 2. INDUSTRIAL ENGINEERING

Diagnostic; Expert Systems; Autonomous Systems; Environmental Design; Reengineering; Knowledge Based Systems; Robot

Applications; Mobile Robots; Optimizations, Reliability, Safety, Production Systems, Agile Manufacturing, Concurrent Manufacturing; Control, Flexible Manufacturing Systems; Hybrid Manufacturing Systems; CAP technologies; CIM technologies; Knowledge Management, Project Management, Production Management Systems, Quality Management, TQM, Maintenance, Nondestructive Testing, Operational Research Applications in Production, Scheduling, Supply Chain Management, Logistics, Electrical Engineering, Power Systems, Energetic; Ecology, Environmental Engineering ...other subtopics

### 3. APPLIED TECHNOLOGIES AND SOFTWARE ENGINEERING

Software Engineering Applications, Sensors; Industrial

Robots; Microrobotics; Programming; Simulations, Virtual Manufacturing; Industrial Automation; Hardware & Software; Signal Processing, Networking; Neural Network; Artificial Intelligence, Engineering Education Systems ...other subtopics

### 4. MECHANICAL CONSTRUCTIONS & DESIGN

Design and Construction; Design Automation; Robots-Kinematics, Dynamics; Mechanism; Numerical Methods; Optimal Design, Tolerance Analysis; CAD technologies; Environmental Design, Fluid Mechanics, Mechatronics ...other subtopics

## PAPER PRESENTATION

**Presentation** is limited to **10 minutes + 5 minutes** for discussion. Presenters can use overhead transparencies or PowerPoint slide shows. **The Organizers take responsibility for printing all posters.**

## CONFERENCE DATE AND VENUE

This year Organising Committee decided to bring something new and refreshing to our participants - Mediterranean Sea Cruising. The tour . starting from city Livorno (Italy) with stops in Montecarlo, Valencia, Ibiza, Tunis, Catania, Naples.

Conference will take place on the Cruise Ship during sailing tour, 11-18 September .

Meeting point - Livorno, Italy - Porto Livorno 2000 Stazione Marittima, Terminal Crociere.

Additional options - Valencia, Spain. Nearest airports are in Firenze (airport Perotola), Pisa (airport Galileo Galilei) and in Valencia (airport Valencia).

**MSC Sinfonia** is a cruise ship owned and operated by the Italy-based MSC Cruises. She was built in 2002 by Chantiers de l'Atlantique in Saint-Nazaire, France for the now-defunct Festival Cruises as MS *European Stars*. The public spaces include two main dining rooms, a self-serve buffet, cafeteria, two-deck high showlounge, a discothèque, several bars, a casino and a library. The lido deck includes two outdoors swimming pool and two thalassotherapy jacuzzis.

## CONFERENCE FEE

The conference fee for authors and participants is 200,00 EUR (including members of the Scientific Committee, and session chairmen), 220,00 EUR (poster presentation). The conference fee includes the following: a copy of conference proceedings and accompanying materials, admission to all sessions and presentations, refreshments, and welcome drink.

## CORRESPONDENCE

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## ACCOMMODATION

Dear colleague (s)

TMT 2010 Organizing Committee wish to inform all possible participants and travelers on the Mediterranean Cruise, the BISS Tours travel agency responsible for the overall organization of the tourist part of the trip

All reservation as well as additional information can be found on:

### CONTACT

<http://www.biss-tours.ba>

e-mail: [ekskurzije@biss-tours.ba](mailto:ekskurzije@biss-tours.ba)

tel: +387 32 245-451

+387 32 442-160

Best regards,

TMT 2010 Organizing Committee



**TRAVEL ROUTES**



**SINFONIA**



**SINFONIA**

# SCHEDULE OF EVENTS

## **SUNDAY September 12<sup>th</sup>**

14.30 – 15.30 Poster Presentation

## **MONDAY September 13<sup>th</sup>**

18.00 – 20.00 Registration and Welcome Drink

## **TUESDAY September 14<sup>th</sup>**

12.00 – 12.30 Conference Opening  
12.30 – 13.30 Keynote Papers Presentations  
13.30 – 15.00 Lunch Break  
15.00 – 16.30 Two Parallel Sessions of Presentations  
16.30 – 17.00 Coffee Break  
17.00 – 18.30 Two Parallel Sessions of Presentations  
18.30 – 19.00 Coffee Break  
19.00 – 20.00 Two Parallel Sessions of Presentations

## **WEDNESDAY September 15<sup>th</sup>**

09.00 – 10.30 Two Parallel Sessions of Presentations  
10.30 – 11.00 Coffee Break  
11.00 – 12.30 Two Parallel Sessions of Presentations  
12.30 – 13.00 Coffee Break  
13.00 – 14.00 Two Parallel Sessions of Presentations

## **THURSDAY September 16<sup>th</sup>**

09.00 – 10.30 Two Parallel Sessions of Presentations  
10.30 – 11.00 Coffee Break  
11.00 – 12.30 Two Parallel Sessions of Presentations

# SCHEDULE OF PAPER PRESENTATIONS

**SUNDAY, September 12<sup>th</sup>**

**14.30 – 15.30 POSTER PRESENTATIONS**

**Chairmen: S.Ekinović, Y. Uetug**

1. Characteristics and Evaluation of Surface Texture  
*Mañas Karel, Svoboda Emil, Vojtěch Hrubý, Joska Zdeněk, Tran Quang Dung (Czech Republic)*
2. Contribution to Studies in Grinding Machining Ti Alloys  
*Jusuf Kevelj, Lutvo Haznadarević (B&H)*
3. Research on the Influence of Surface Parameters on Technological Properties of Powder Details  
*Irina Boyko, Victor Mironov, Oskars Linins, Andris Kamols (Latvia)*
4. Thermodynamic Analysis and Characterization of Bi-Cu-Sn Alloys as Advanced Lead-Free Solder Materials for High Temperature Application  
*Dragana Živković, Duško Minić, Dragan Manasijević, Iwao Katayama\*, Nadežda Talijan, Ana Kostov (Serbia, \*Japan)*
5. Natural Fibrous Thermal Insulation Materials in Building  
*Zijad Pašić, Albert Kobaš, Mirsad Topalović (B&H)*
6. Genetic Based Approach to Predict Mechanical Properties of the Material  
*Leo Gusel, Borut Buchmeister, Miran Brezocnik (Slovenia)*
7. Experimental Determination of Forming Limit Diagram  
*Amra Talić – Čikmiš, Tomaž Pepelnjak\*, Suad Hasanbegović (B&H, \*Slovenia)*
8. Surface Engineering of the Nanostructured Functional-Gradient Materials: Features of Synthesis and Development of New Functionalities  
*Elena Zemtsova, Alexey Monin, Vladimir Smirnov (Russian Federation)*
9. Additional Strengthening of Superalloy Nimonic 80A by Worm Rolling  
*Omer Beganović, Mirsada Oruč, Milan Rimac, Faik Uzunović (B&H)*
10. Research on the Surface Coatings Influence on Formation Mechanism of the Resistance Welds  
*Vera Kulakova, Irina Boyko (Latvia)*
11. Designing of Robot Workspace by Application Programming Interface  
*Miran Brezocnik, Simon Brezovnik, Simon Klančnik, Joze Balic, Borut Buchmeister, Leo Gusel (Slovenia)*
12. The use of LENS Technology for Producing Implants  
*Miran Brezocnik, Zoran Lestan, Stanko Stepisnik, Matjaz Milfelner (Slovenia)*
13. Investigation on Quality of Rapid Prototyping FDM Method  
*Grzegorz Dyrbuś (Poland)*
14. Regulation and Tyre Pressure Monitoring System  
*Ibrahim Mustafić, Fuad Klisura, Mirza Berković, (B&H)*
15. Experimental Measurement of Pressing Force of the Working Process of the Workpieces from Layered Wood  
*Ekrem Nezirović, Atif Hodžić (B&H)*

16. Relatedness Requirements and Characteristics of Materials for a some Areas of Applications in Timber Structures  
*Minka Ćehić, Ekrem Nežirević, Atif Hodžić (B&H)*
17. Rolling Element Bearing Vibration – Generation and Significance  
*Radoslav Tomovic (Montenegro)*
18. Mathematical Model for Determination of Elastic Springback of Internal Wall After Rifling using Method of Cold Forming Based on Factor Plan 2<sup>3</sup>  
*Muhamed Lemeš (B&H)*
19. Chip Deformation and its Morphology in Orthogonal Cutting of Hardened Steel 42CrMo4  
*Hakif Zeqiri, Avdi Salihu, Avdil Bunjaku, Hysni Osmani, Nexhat Qehaja, Fitim Zeqiri (Republic of Kosova)*
20. Comparison of Analytical and Experimental Results of Fluid Pressure in Hydroforming of Tubes  
*Edina Karabegović, Milan Jurković, Mehmed Mahmić, Mirko Ficko\* (B&H, \*Slovenia)*
21. Stability Diagrams Prediction in Turning Process  
*Valentina Kallewaard E., Hernán González R\*. (Colombia, \*Spain)*
22. Impact of the Crack in the Angular Welded Joint on the Exploiting Behaviour of the Carrying Structures made of Improved Strength Steel  
*Milenko Perović (Montenegro)*
23. Development of New Non-Cyanide Technology in Gold Plating  
*Silvana Dimitrijevic, Vlastimir Trujic, Mirjana Rajcic-Vujasinovic (Serbia)*
24. Influence of Processing Technology on Mechanical Properties and Structure of Selected Non-Ferrous Metals  
*Lubomír Čížek S. Rusz, D. Ostroushko, R. Puchký, O. Blahož, M. Pražmowski\*, T. Taňski\* (Czech Republic, \*:Poland)*
25. Comparativ Analysis of Metal Cutting Tools Reliability During Processing by Turning in Laboratory Conditions and Exploitation  
*Nexhat Qehaja, Hakif Zeqiri, Hysni Osmani, Jorgaq Kacani\*, Fitim Zeqiri (Republic of Kosova, \*Albania)*
26. Influence of Heat Treatment Conditions in Fatigue Crack Propagation Behaviour of 8090 Alloy  
*Meri Burzic, Emina Dzindo, Katarina Bojic, Igor Hut, Denijel Burzic\*, Miodrag Arsic (Serbia, \*Austria)*
27. The Influence of Precipitation Temperature on Silica Morfology  
*Adnan Mujkanović, Petar Petrovski, Ljubica Vasiljević, Gordana Ostojić (B&H)*
28. Contribution to the Analysis of the Operational Availability of Water Supply Systems in the Fractal Arrangement  
*Sanel Buljubašić, Džemo Tufekčić, Hasan Avdić (B&H)*
29. Energy Intensity Lowering in Polyethylene Production  
*Igor Sutlović, Nastia Degiuli, Veljko Filipan (Croatia)*
30. A Holistic View of Technology and Management Development Towards Sustainable Businesses  
*B.Buchmeister, I.Palčič, L.Gusel, J.Pavlinjek, D. Lalic\* (Slovenia, \*Serbia)*



31. Graphical Depicting of Production Cycle in Multiproduct Manufacturing System  
*Sandro Doboviček, Milan Ikonić, Tonči Mikac, Mladen Perinić, Ivan Rubeša (Croatia)*
32. Strength and Safety Verification of Piping System Exposed to Vibrations  
*Nenad Lorkovic (Croatia)*
33. Managers' Competence as a Factor of SMEs Growth  
*Suvad Isaković, Bahrija Umihanić (B&H)*
34. The Influence of some Geometrical Parameters of Cylinder Sieves over the Volumetric Ranking Efficiency  
*Apostu Elena Diana, Constantinescu Alexandru (Romania)*
35. The Influences of the Cylinder Sieves and the Load Flow of Grain Material over the Volumetric Ranking Efficiency  
*Apostu Elena Diana (Romania)*
36. Optimization of the Drying Factors  
*Atif Hodžić, Minka Čehić, Ekrem Nezirević (B&H)*
37. Flexicurity in Croatia: Transitional Socio-Economic Puzzle  
*Anna Vrca, Nikša Dubreta (Croatia)*
38. TQM Implementation in Wood Industry  
*Esad Bajramović, Fadil Islamović (B&H)*
39. Laboratory for Automation and Measurement at the University of Montenegro  
*Marina B. Mijanović Markuš (Montenegro)*
40. The Culture of an Organisation– A Condition for Successfulness of Business  
*Dušan Djurovic, Miodrag Bulatović (Montenegro)*
41. Improvement of the Quality of Organizational Functioning with Efficient Teams for Solving the Complex Problems  
*Adil Kurtić (B&H)*
42. Understanding of Quality in the Projects  
*Ferizović Mersud, Ferizović Naida (B&H)*
43. Functions of Lubricating Oils in Tribological Systems  
*Alija Karić, Sabahudin Ekinović, Hasan Avdić (B&H)*
44. It Supported Statistical Inference: A Combined Meta-Analysis of Territorially Stratified Data  
*Nina Bijedić, Dževad Zečić (B&H)*
45. Optimization of the Features used in Face Recognition  
*Serkan Tüzün, Aydın Akan, Yalçın Çekiç (Turkey)*
46. Optimization of Operational Characteristics of Shotblasting Turbine  
*Aleš Hribernik, Bojan Ačko, Gorazd Bombek (Slovenia)*
47. Piggings System  
*Halima Hadžiahmetović, Ejub Džaferović (B&H)*
48. The Influence of Technological Parameters on Mine Hoisting Cage in Dynamic Conditions  
*Dušan Vukojević, Elma Ekinović, Mustafa Hadžalić (B&H)*
49. The Influence of the Stiffness and the Third Bearing on Modal Parameters of a Beam  
*Elma Ekinović, Edin Begović, Mustafa Hadžalić (B&H)*
50. Comparison of Some Vibration Based Damage Identification Methods in Beams  
*Elma Ekinović, Sabahudin Ekinović, Edin Begović (B&H)*

51. An Analysis of Damping Type Influence to Vibration of Elastic Systems  
*E. Nezirić, S. Isić, V. Doleček, A. Voloder (B&H)*
52. Advanced Landfill Gas Energy Projects in the Region of Sarajevo  
*N.Delalic, T.Sadovic, E.Džafarović (B&H)*
53. Dynamics Model and Monitoring in Rotation Machines  
*Ranko Antunovic (B&H)*
54. Difference Scheme for Semilinear Reaction-Diffusion Problem  
*Enes Duvnjaković, Nermin Okičić, Samir Karasuljić (B&H)*
55. Configuration of Smart Devices in Wireless Networks  
*M. Kostadinović, D. Bundalo, Z. Bundalo, P. Gojković (B&H)*

## **MONDAY, September 13<sup>th</sup>**

**18.00 – 20.00 Registration and Welcome drink**

## **TUESDAY, September 14<sup>th</sup>**

**12.00 – 12.30 Conference opening**

**12.30 – 13.30 Keynote Paper Presentation**

**Chairmen: S.Ekinović, E.Tacer, S.Brdarević, J.Vivancos,**

1. Machinability of Difficult Machining Materials  
*Elso Kuljanic, Marco Sortino, Giovanni Totis (Italy)*
2. The Future and the Evolution of CAD  
*Stefano Tornincasa, Francesco Di Monaco (Italy)*

## **TUESDAY, September 14<sup>th</sup>**

**(Manufacturing Technologies)**

**15.00 – 16.30 SESSION I**

**Chairmen: I. Buj Corral, Y.Uctug, G.Csaba**

1. Influence of the Tool Ratio Eccentricity/Tool Edge Radius Grinding Error on the Surface Roughness Obtained in Side Milling Processes Using Tools of 6 and 4 Teeth  
*I.Buj-Corral, J. Vivancos-Calvet, H. González-Rojas (Spain)*
2. Constructive and Technological Development of Hypoid Gears  
*Gyenge Csaba, Kismihaly Janos (Romania)*
3. Function on Gaussian and 2RC Filters to Determine the Roughness Profile in Real Non-Periodic and Periodic Surfaces  
*Mite Tomov, Mikolaj Kuzinovski, Neven Trajčevski (Macedonia)*
4. Study of the Influence of the Relationship Between Feed Per Tooth and Radial Depth on the Surface Topography and Surface Roughness Obtained in Ball-End Milling Processes  
*I.Buj-Corral, J. Vivancos-Calvet, H. González-Rojas, A. Domínguez-Fernández (Spain)*

5. Analyzing and Modeling of the Influence of Cutting Parameters on the Cutting Force in Face Milling  
*Dražen Bajić, Luka Celent, Sonja Jozić (Croatia)*
6. Correlation Research of Cutting Forces During Turning  
*Avdi Salihu, Hakif Zeqiri, Avdyl Bunjaku, Nexhat Qehaja, Azem Kyqyku (Republic of Kosova)*
7. Temperature Identification of Drilling Process Using Thermovision Methods  
*Krzysztof Lis, Jan Kosmol (Poland)*
8. Comparative Analysis of /DDSS/ Dynamic and Conventional Method of Static Stiffness Determination  
*Janusz Śliwka, Maciej Kaźmierczak (Poland)*
9. FEM Temperature Modelling in Drilling Process  
*W. Mieszczak, K. Lis (Poland)*
10. Methodology and Adjustment of the Test for Determining the Polishing Difficulty Degree of Hardened Steel Surfaces, Previously Obtained by High-Speed Milling Processes  
*I.Buj-Corral, J. Vivancos-Calvet, R. Casado-López (Spain)*

**TUESDAY, September 14<sup>th</sup>**

**(Applied Technology & Software Engg.)**

**15.00 – 16.30 SESSION II**

**Chairmen: T.Bozbura, D.Petković, J.N.Marcinčin**

1. Classification with Artificial Immune Systems  
*Małgorzata Kuchta, Andrzej Sokółowski (Poland)*
2. Combination of Simulation Software and Virtual Reality for Technological Workplaces Design  
*Jozef Novak-Marcinčin (Slovak Republic)*
3. The Options of Motion Tracking in the Virtual Reality Systems  
*Jozef Novak-Marcinčin, Veronika Fečová (Slovak Republic)*
4. Visualization Technologies in the Process of Making Composite Structures  
*Jozef Novak-Marcinčin, Jozef Barna (Slovak Republic)*
5. A General View on Hardware of Full Flight Simulator  
*Fevzi Bedir, Hakan Gök, Erhan Aslan (Turkey)*
6. The Algorithm of Designing Fuzzy Logic Inference Systems for Diagnostics of Machine Tool and Cutting Process  
*Tomasz Czyszpak, Andrzej Sokółowski (Poland)*
7. E-Government – Wealth Management System Risk Identification  
*Sabedin Meha, Loreta Gashi, Behar Fejzullahu (Republic of Kosova)*
8. E-Learning as a Tool for Knowledge Management  
*Dijana Bilinovac (B&H)*
9. Model for Adaptive E-Learning in BiH Environment  
*Dragica Radosav\*, Indira Hamulic, Nina Bijedic, Emina Junuz (\*Serbia, B&H)*
10. A Fast Method for Quality Control of Wolfram Wires Coatings  
*Eliška Chrpvová, Hana Ledererová (Czech Republic)*

**TUESDAY, September 14<sup>th</sup>**

**(Manufacturing Technologies)**

**17.00 – 18.30 SESSION I**

**Chairmen: S.Brdarević, J.Vivancos, J.Kosmol**

1. Evaluation of Machine Tool Frames in the Process of Optimization  
**Jan Kosmol, Piotr Wilk, Marian Niedbala (Poland)**
2. Simulation Research of Heavy Planer Mills  
**Krzysztof Lehrich, Jan Kosmol (Poland)**
3. Programming and Simulation of Workpiece in CNC Milling Machine  
**Afrim Gjelaj, Avdyl Bunjaku, Mexhait Rustemi, Mehmet Zeqiraj (Republic of Kosova)**
4. Modeling of Welding Process by Robotic Vision  
**Isak Karabegović, Fuad Čatović (B&H)**
5. Experiences in Welding of Membrane Panels made of 7CrMoVTiB 10-10 (T24) Steel  
**Janusz Adamiec, Adam Hernas (Poland)**
6. The Effect of Heat Input on the Weld Metal Toughness of Surface Welded Joint  
**Olivera Popović, Radica Prokić-Cvetković, Meri Burzić, Zlatan Milutinović (Serbia)**
7. Tensile Properties of Ferrite-Austenitic Welded Joint  
**Radomir Jovičić, Aleksandar Sedmak, Aleksandar Bukvić, Radica Prokić-Cvetković, Olivera Popović (Serbia)**
8. Analysis of Residual Stress in Wire Drawing Processes  
**D. Salcedo, C. J. Luis, J. Leon, R. Luri, I. Puertas, I. Pérez (Spain)**
9. Effect of the Die Geometry on the Imparted Damage on Wire Drawing  
**J. León, C.J. Luis, D. Salcedo, R. Luri, I. Puertas, I. Pérez (Spain)**
10. Shear Bond Strength of Dental Self-Adhesive Resin Cements  
**M. Zrilic, K. Obradovic-Djuricic, D. Gavrilov, I. Balac, B. Jokic, D.Popović, P. Uskokovic (Serbia)**

**TUESDAY, September 14<sup>th</sup>**

**(Software Engg./Design)**

**17.00 – 18.30 SESSION II**

**Chairmen: Y.Uctug, V.Kalewaard-Echeverri, V.Doleček**

1. Informatics in Agricultural Production  
**Zorka Jugović, Zoran Jevremović, Branka Jordović, Aleksandar Peulić (Serbia)**
2. The Electropneumatic System Synthesis of Control Through Matrix Method and Simulation  
**Bukurie Shabani, Agron Pajaziti, Shkelzen Shabani (Republic of Kosova)**
3. Universal Programmable Logic  
**Dragan Cvetković, Željko Stanković (Serbia)**
4. Simple Method for Lowpass Narrowband FIR Filter Design  
**Gordana Jovanovic Dolecek, Vlatko Dolecek\*, I. Karabegovic\* (Mexico, \*B&H)**
5. Novel Sharpened Compensated Comb Decimator  
**Gordana Jovanovic Dolecek, Vlatko Dolecek\* (Mexico, \*B&H)**

6. Optimized Virtual Components Systems Design In Mechatronic Networked Enterprises  
**Beqir Hamidi, Vehbi Ramaj (Republic of Kosova)**
7. Optimal Design of Quarter Car Vehicle Suspension System  
**Rame Likaj, Ahmet Shala, Mirlind Bruqi, Mehmet Qelaj (Republic of Kosova)**
8. Geometry Optimization of Tools for Deep Drawing  
**Vukojević Nedeljko, Terzić Muamer, Imamović Mustafa, F. Hadžikadunić (B&H)**
9. Criterion for Selection of the Way for Calculation of Gears  
**Sadullah Avdiu, Nijazi Ibrahim (Republic of Kosova)**
10. The Force-Deformation Dependency Determined Experimentally on Trapezoidal Enveloped Belts  
**Kuçyku, A., Ibrahim, N.; Cakolli, H.; Salihu, A. (Republic of Kosova)**

**TUESDAY, September 14<sup>th</sup>**

**(Manufacturing Technologies and Materials)**

**19.00 – 20.00 SESSION I**

**Chairmen: D.Petković, I. Buj Corral**

1. Finite Element Analysis of Deep Drawing  
**Amra Talić – Čikmiš, Muamer Trako, Mladen Karivan (B&H)**
2. Passive Wooden House  
**Salah – Eldien Omer, Minka Čehić\*, Alma Štrkonjić\* (Croatia, \*B&H)**
3. Simple Solutions for Controlling the Quality of Infiltrated Air Through the Exterior Joinery Elements in Case of Calamities  
**Virgil Grecu (Romania)**
4. Distribution Coefficient of Cr (VI) and Ni (II) Ions Removal from Aqueous Solution by the Anode Dust  
**A.Štrkalj, A. Rađenović, J. Malina (Croatia)**
5. The Mechanical Properties of Plasma Nitrided Layers  
**Zdeněk Pokorný, Vojtěch Hrubý, Karel Stránský (Czech Republic)**
6. WEEE – Potential Resource Base, "Above the Ground Mine", for the Future  
**Ljubisa D. Misić, Jonovic R. Radojka, Gardić R. Vojka (Serbia)**
7. Influence of Change of the Ecap Tool Channel Geometry with Inserted Helix for Strain Hardening of the Semis made of Al and Al Alloys  
**Stanislav Rusz, Lubomir Cizek, Stanislav Tylsar, Jan Kedron, Tibor Donic\*, Marcin Knapinski\*\* (Czech Republic, \*Slovakia, \*\*Poland)**
8. The Effect of Anode Dust Concentration on Removal Efficiency of Cr (VI) and Ni (II) Ions from Aqueous Solution by Adsorption  
**A.Štrkalj, A. Rađenović, J. Malina (Croatia)**
9. Preparing of NC Probing Program by CAM Software  
**Arkadiusz Kolka (Poland)**

**TUESDAY, September 14<sup>th</sup>**

**(Design)**

**19.00 – 20.00 SESSION II**

**Chairmen: E.Tacer, V.Kalewaard-Echeverri, I.Curtu**

1. The Expert Knowledge in the Optimization of the Bulk-Carriers Corrosion Wastage Controlling  
**Sanja I. Bauk, Špiro N. Ivošević (Montenegro)**
2. Pavement Structures Integrity Evaluation Based on Risk  
**Edis Softić, Branko Božić\*, Nedim Suljić (B&H, \*Croatia)**
3. Dynamic Analysis of Wind Farm using Induction Generator Wind Turbines  
**Nedzmiya Demirovic, Sejid Tesnjak\* (B&H, \*Croatia)**
4. Static and Dynamic Design of the Behavior Constructive Part of the Rotary Excavator  
**Beqir Hamidi (Republic of Kosova)**
5. Design of Lathe-Blade Mechanism with Basic Kinematics Blocks using Methodology of Dual-Vector Algebra  
**Kastriot A. Buza, Shaban A. Buza, Ismajl Gojani, Arbnor Pajaziti, Fevzi Radoniqi (Republic of Kosova)**
6. On Estimation of Basquin-Coffin-Manson Fatigue Parameters of Low-Alloy Steel AISI4140  
**Robert Basan, Marina Franulović, Božidar Križan (Croatia)**
7. Shaft Torsional Oscillation of Induction Motor Including the Rotor Eddy Current with an Inertia Load  
**Nysret Avdiu, Nysret Zekolli (Republic of Kosova)**
8. Studying Dynamic Effects for the Case of Forward Motion on Crawler Cranes During the Different Terrain Configurations  
**Illir Doçi, Musli Bajraktari (Republic of Kosova)**
9. Measurement of Resonance Frequency and Other Properties of Lightweight Structures using Advanced Methods  
**Curtu Ioan, Stanciu Mariana Domnica, Timar Janos (Romania)**
10. Analysis of Operation of Exhausters 2,5 MW by Continuous Measuring of Vibrations  
**Safet Brdarević, Sabahudin Jašarević, Senad Alić (B&H)**

**WEDNESDAY, September 15<sup>th</sup>**

**(Materials)**

**09.00 – 10.30 SESSION I**

**Chairmen: J. Vivancos, S.Brdarević, S.Z. Qamar**

1. Influence of Thermodiffusion Treatments on Improvement of Surface Layers Properties Created on Low-Carbon and Low-Alloyed Steels  
**D. Krumes, I. Kladarić, V. Marušić, M. Stubičar, A. Milinović, I. N. Mihailescu\* (Croatia, \*Romania)**
2. Objective Function in Genetic Algorithm for Material Behaviour Modeling  
**Marina Franulović, Robert Basan (Croatia)**
3. Heat Treated Wood  
**Nikola Vukas, Izet Horman, Seid Hajdarević (B&H)**

4. The Relationship Between Quasi-Static and Impact Toughness  
*Ismar Hajro, Damir Hodžić (B&H)*
5. Impact Toughness of Steamline Material 14MoV6-3 after Long-Term Exploitation  
*Damir Hodžić, Ismar Hajro (B&H)*
6. Igneous and Lime Units the Pavement  
*Amir Baraković, Edis Softić (B&H)*
7. Pre and Post-Swelling Mechanical Behavior of a Water-Swelling Elastomer  
*S.Z. Qamar, T. Pervez, S.A. Al-Hiddabi (Sultanate of Oman)*
8. Corrosion Resistance of Dental Alloys  
*Belma Muhamedagić, Lejla Muhamedagić (B&H)*
9. Tensile Properties of Two Al-Mg Welded Plates after Applying Different Welding Conditions  
*Vencislav Grabulov, Zijah Burzić, Miljana Popović, Endre Romhanji (Serbia)*
10. Study Mechanical Behavior of Heat Resistant Steels in Thermal Power Lines  
*Amalia Ana Dascăl (Romania)*

**WEDNESDAY, September 15<sup>th</sup>**

**(Energetics)**

**09.00 – 10.30 SESSION II**

**Chairmen: T.Bozbura, D.Petković, S.Buza**

1. Control of Voltage Source Inverters using SPWM Strategy for Adjustable Speed Motors  
*Sabrije Osmanaj, Rexhep Selimaj (Republic of Kosova)*
2. Modeling Shaft Damping of Electrical Drives With Three-Phase Induction Motors with Saturated Magnetic Circuit  
*Nysret Avdiu, Shaban A. Buza (Republic of Kosova)*
3. Power Quality Indices for Unbalance Characterization in Non-Sinusoidal Condition  
*Andrei Czikar, Anca Miron, Mircea Chindriș (Romania)*
4. Characteristics of Non-Stationary Thermal Stresses in Disc of the Last Turbine Stage  
*Zvonimir Guzović, Stanislav Sviderek, Tihomir Mihalić (Croatia)*
5. Three Step Multipliers Gear Ratios for Wind Turbines from Minimum Volume Condition  
*Cristina A. Bozan, Catalin C. Danaïla (Romania)*
6. Decision Making for the 'Best' Solution During the Optimal Design of the Electromotor  
*Shaban A. Buza, Kastriot A. Buza, Fevzi Radoniqi, Drita Lokaj, Nysret Avdiu (Republic of Kosova)*
7. On Screw Dislocation near a Crack in PZT Material Under Electromechanical Load  
*Zlatan Kulenović, Darko Kulenović (Croatia)*
8. Investigation of Steam Turbine Low Pressure Rotor Axial Channel by Metal Magnetic Memory Method  
*Mica Djordjević, Darko Bajić, Vladimir Djordjević (Montenegro)*
9. Analysis of Annual Energy Requirements of Nonresidential Buildings  
*Nurdil Eskin (Turkey)*
10. Wind Energy Policies in Turkey  
*Sıtkı Güner, İrem Fırtına, Mehmet Melikoğlu, Ayhan Albostan (Turkey)*

**WEDNESDAY, September 15<sup>th</sup>**

**(Materials/Measurements)**

**11.00 – 12.30 SESSION I**

**Chairmen: Y.Uctug, V.Kalewaard-Echeverri, D.Živković**

1. Optimize the Chemical Composition of Steel to Improve the Mechanical Characteristics of Strength and Rigidity  
*Amalia Ana Dascăl (Romania)*
2. Influence of Temperature on the Mechanical Characteristics of Strength and Rigidity For Heat Resistant Steel  
*Amalia Ana Dascăl (Romania)*
3. Structure and Properties of Copper after DRECE Processing  
*Lubomír Čížek, S. Rusz, J. Kedroň, S. Tylšar, V. Michenka (Czech Republic)*
4. Thermodynamic Analysis and Characterization of Ga-Ge-Sb Alloys as Materials for Semiconductor Application  
*Ana Kostov, Dragana Živković (Serbia)*
5. Platinum Solvent Extraction from Rhodium-Acid Solution  
*S. S. Dragulović, V. K. Trujić, Z. S. Stanojević Šimšić, V. B. Cvetkovski, Z. S. Ljubomirović, S. B. Dimitrijević, D. B. Simonović (Serbia)*
6. Anneal Hardening Effect in Sintered Copper Alloys Dependence on Alloying Elements and Deformation  
*Svetlana Nestorović, Desimir D. Marković (Serbia)*
7. Evaluation of Measurement Systems and Methods  
*Imre Nemedi, Miodrag Hadžistević, Janko Hodolič (Serbia)*
8. Assessment of Stability of Manufacturing Process Aided by Average Difference Chart  
*Magdalena Diering, Edward Pajak, Sabahudin Jašarević\* (Poland, \*B&H)*
9. The Importance of Interlaboratory Comparison in Length Measurement as a Prerequisite for Raising the Accuracy of Measurement and Development of Measurement Traceability  
*Hazim Bašić, Almira Softić (B&H)*
10. Role of Gage R&R in Estimation of Process Capability  
*Biserka Runje, Gorana Baršić, Vesna Alar (Croatia)*

**WEDNESDAY, September 15<sup>th</sup>**

**(Hydraulics/Tribology)**

**11.00 – 12.30 SESSION II**

**Chairmen: E.Tacer, I Buj Corral**

1. Machinery Data Input Optimization in Bearings Rating Life  
*Catalin C. Danaïla, Cristina A. Bozan (Romania)*
2. Influence of the Hydraulic Relief Valve Poppet Geometry on Valve Performance  
*Zdeslav Juric, Zlatan Kulenovic, Darko Kulenovic (Croatia)*
3. Oil Quality Influence Analysis on Condition of Hydraulic Excavator RH 120e Tribology Assemblies  
*Hasan Avdić (B&H)*
4. Forms and Modeling of Non-Stationary Water Vapor Diffusion by a Flat Wall  
*Rexhep Selimaj, Sabrije Osmanaj (Republic of Kosova)*



5. Numerical Simulation of Fluid Flow in Thermo Plates  
*Mirna Nožić, Azer Nazdrajić\*, Seadin Hadžomerović\*\**  
(*B&H, \*Germany, \*\*Sweden*)
6. Numerical Simulation of Hydraulic Oil Flow Through a Valve with Seat Area Type A 10 FS1.0364  
*Nedim Hodžić, Denis Spahić, Mirzad Skopljaković (B&H)*
7. Influence of the Lubricant's Temperature at Displacement Journal Bearings in Transient Response of Rotor Bearing Systems  
*Fevzi Radonijqi, Xhevat Perjuci, Kastriot A.Buza (Republic of Kosova)*

**WEDNESDAY, September 15<sup>th</sup>**

**(Industrial Engineering)**

**13.00 – 14.00 SESSION I**

**Chairmen: D.Petković, T.Bozbura, S.Dolinšek**

1. Alpina's new Footwear Development Through Optical Foot Measurements  
*Slavko Dolinšek, Boštjan Novak, Peter Štrukelj (Slovenia)*
2. Measurement and Force Adjustment in Boiler Suspensions and Other Statically Indeterminate Mechanical Systems  
*Donat Renowicz, Marek Plaza, Bogusław Plaza, Ewa Renowicz (Poland)*
3. Integrated Installation Systems used for a Joinery and Furniture Testing Laboratory with a View to the Quality Certification  
*Virgil Grecu (Romania)*
4. Trends in the Firm's Organization and Management  
*Lucia Bednárová, Igor Liberko (Slovak Republic)*
5. Managerial Tools & Internet the Sources of Competitive Advantage of Firms  
*Mirjana Cicak, Marina Dabic, Timothy S. Kiessling\* (Croatia, \*Australia)*
6. Using RFID for Real-Time Production Management in the Digital Enterprise  
*Gordana Maticevic, Marina Dabic, Tugrul U. Daim\* (Croatia, \*USA)*
7. Government Competitiveness and Entrepreneurial Activity – Empirical Analysis  
*Darko Petković, Nino Serdarević, Nevzet Sefo (B&H)*
8. Strengthening the Technological Capacities of SMEs in Bosnia and Herzegovina Through Programs of Cooperation with Universities and Research Centres  
*Bahrija Umihanić (B&H)*
9. Market Survey and Identification of High Impact ICTS in B&H Wood Processing Industry  
*Ismar Alagić (B&H)*
10. The Impact of Buyer Supplier Relationships on Company Performance: An Empirical Research on Turkish Automotive Supplier Industry  
*Sütüki Gözülü, Hasan Kürşat Güleş, Vural Çağliyan (Turkey)*

**WEDNESDAY, September 15<sup>th</sup>**

**(Numerical Analysis)**

**13.00 – 14.00 SESSION II**

**Chairmen: J.Vivancos, S.Ekinović**

1. Finite Element Analysis of Bolted Joint with Coarse and Fine Threads  
**Janko D. Jovanović (Montenegro)**
2. Calculations, Modeling and Analysis with Finite Element Method of Rubber Tyred Container Stacking Crane  
**İsmail Gerdemeli, Serpil Kurt, Metin Yıldırım (Turkey)**
3. Numerical Analysis and Simulation of Deep Drawing Process  
**Vukojević Nedeljko, Terzić Muamer, Šarić Emir, Vukojević Dušan (B&H)**
4. The Strain Intensities  
**Suad Hasanbegović (B&H)**
5. Parameter Modelling of Gears  
**Isad Šarić; Nedžad Repčić; Adil Muminović (B&H)**
6. Finite Element Analysis of the Tower Crane  
**Ismail Gerdemeli, Serpil Kurt, Okan Deliktaş (Turkey)**
7. Main Girder Beam Design and Finite Element Analysis of 2X160 Ton Gantry Crane  
**Ismail Gerdemeli, Serpil Kurt, Hasan Onur Alkan (Turkey)**
8. Comparison of Numerically and Experimentally Determined SCF for Nozzle in Cylindrical Pressure Vessel  
**Josip Kacmarcik, Nedeljko Vukojevic, Fuad Hadzikedunic (B&H)**
9. The Kinematic, Dynamic and FEA Analysis of the Human Main Joints  
**Dragos-Laurentiu Popa , George Gherghina, Dragos Tutunea, Mihaela-Liana Bogdan (Romania)**
10. The Effect of Operating Conditions on Crack Growth Rate Properties of X20 High Alloyed Steel  
**Dž. Gačo, Z. Burzić\*, M. Burzić\*, F. Islamović, R. Halilagić (B&H, \*Serbia)**

**THURSDAY, September 16<sup>th</sup>**

**(Industrial Engineering)**

**09.00 – 10.30 SESSION I**

**Chairmen: I. Buj Corral, T.Bozbura**

1. Assembly System Selection Case Study  
**Sukran Seker, Mesut Ozgurler (Turkey)**
2. Service Quality Management System in Urban Public Transport  
**F. Tunç Bozbura, Erkan Bayraktar, Ismail Durman (Turkey)**
3. Financial Factors, Stumbling Block at Introduction and Maintenance of the Quality System  
**Sabahudin Jašarević, Safet Brdarević, Magdalena Diering\* (B&H, \*Poland)**
4. Strategic Management of University Based on Quality Assurance System  
**Snježana Rezić, Dražena Tomić, Vlado Majstorović (B&H)**

5. Using the Model of Measurement Intangible Assets (Intellectual Property) to Evaluate Companies in Bosnia-Herzegovina  
*Meliha Bašić, Amir Arnautović, Suvada Durmić (B&H)*
6. Designing a Simple U-Shaped Production Line and Analysis of Effectiveness  
*Şenim Özgürler, Ali F. Güneri, Bahadır Gülsün, Onur Yılmaz (Turkey)*
7. A Solution to Customer Selection Problem in Logistics using the Analytic Network Process (ANP)  
*Onur Yılmaz Bahadır Gülsün, Ali F. Güneri, Şenim Özgürler (Turkey)*
8. New Guidelines in Creating PLM and PDM Software  
*Nedžad Repčić, Vahid Avdić, Nedim Pervan (B&H)*
9. Product Data Management Systems (PDMS) as a Support in Student Engineering Design Activities  
*Senad Balić, Elma Mrdanović, Nedžad Šaranović (B&H)*
10. Management Information Systems and the Process of Development a Corporate Communications Project  
*Nurgül Demirtaş, Özge Nalan Alp, Hayri Baraçlı (Turkey)*
11. Initial Implementation and Future Development of Integrated Hospital Information System in Cantonal Hospital Zenica  
*Senad Balić, Jedin Čaušević, Nedžad Šaranović (B&H)*
12. The Economic Justification of the Automatic Lubrication Using  
*Aleksandar Ašonja, Živoslav Adamović (Serbia)*

**THURSDAY, September 16<sup>th</sup>**

**(Industrial Engineering)**

**09.00 – 10.30 SESSION II**

**Chairmen: Y.Uctug, J. Vivancos. I.Curtu**

1. Application of Modal Analysis on the Behaviour Diagnosis of Lignocelluloses Plates  
*Stanciu Mariana Domnica, Curtu Ioan, Rosca Ioan Calin (Romania)*
2. Application of Fuzzy Logic in Control System Using Simulator GUNT RT124  
*Ante Cibilić, Radovan Antonic, Ivana Golub (Croatia)*
3. A Literature Review for the Simulated Annealing Method on the Parallel Machines Since 2003  
*Pelin Alcan, Hüseyin Başlıgil (Turkey)*
4. New Technology Makes Wet Mineral and ORE Milling more Efficient and Ecological  
*Stanislaw Serkowski (Poland)*
5. Health Effects of Air Pollution  
*Lejla Muhamedagić, Belma Muhamedagić (B&H)*
6. Influence of Motor Vehicles in Pollutant Emission in Urban Environments  
*Bashkim Baxhaku, Naser Lajqi, Heset Cakolli, Shpetim Lajqi (Republic of Kosova)*
7. Air Pollution Prevention from Volatile Organic Compound on Shuttle Tankers  
*Ivan Komar, Radovan Antonić, Branko Lalić, Đorđe Dobrota (Croatia)*

8. The Application of Hilbert-Huang Transform to Non-Stationary Environmental Data Sets  
*Milan Hofreiter (Czech Republic)*
9. Ecology and Road Transport in Republic of Kosovo  
*Bashkim Baxhaku, Naser Lajqi, Shpetim Lajqi (Republic of Kosova)*
10. Contents of Pb, Zn, Ni, Mn, Cd and Tl in Sedimentary Dust in the City of Tuzla  
*S.Mičević, J.Marković, A.Bašić, A.Adilović, E.Halilčević (B&H)*
11. Waste Packaging Management in Republic of Croatia  
*Maja Rujnić-Sokele, Mladen Šercer, Ana Pilipović (Croatia)*

**THURSDAY, September 16<sup>th</sup>**

**(Industrial Engineering&Others)**

**11.00 – 12.30 SESSION I**

**Chairmen: E.Tacer, S.Brdarević, Š.Goletić**

1. Definition of Statistics, Corrected and Classical Degree of Efficiency Wastewater Treatment  
*Nusret Imamović, Šefket Goletić, Sabahudin Ekinović (B&H)*
2. The Negative Effect of UV Radiation on the Health of the Population  
*Zorka Jugović, Danijela Pecarski, Vera Ilanković, Nikola Ilanković (Serbia)*
3. Ecological Aspects of Traditional Drinking Water Supply by Shallow Wells in Northwest Bosnia  
*Dinka Pašić-Škripić, Izet Žigić, Dado Srkalović (B&H)*
4. Redesigning a Book Production Process using DFE Tools  
*Diana Milčić, Adisa Vucina\*, Davor Donevski (Croatia, \*B&H)*
5. Pipeline of Drinking Water Breza as a Possible Source of Environmental Power  
*Nurudin Avdić (B&H)*
6. Removal of As from the Sulphur Acidic Waste Solution Obtained in the Electrolytic Copper Refining Process  
*Radmila Marković, Bernd Friedrich\*, Jasmina Stevanović, Branimir Jugović, Milica Gvozdrenović, Jasna Stajić-Trošić, (Serbia, \*Germany)*
7. Testing Quality of Technological Waste Water in Zenica Industrial Zone  
*Šefket Goletić, Nusret Imamović (B&H)*
8. Assessing the Link Between Strategy Choice and Operational Performance of Turkish Companies  
*Erkan Bayraktar, Ekrem Tatoglu (Turkey)*
9. A Model Proposal for Supplier Selection in Automotive Industry  
*Ahmet Beşkese, Adil Şakra (Turkey)*
10. Optimization of Parameters of Cylindrical Gear Pair  
*Nijazi Ibrahim, Sadullah Avdij, Riad Ramadani, Halil Demolli (Republic of Kosova)*







