



University of Josip Juraj Strossmayer in Osijek
Mechanical Engineering Faculty
Slavonski Brod, Croatia



The 4th DAAAM International Conference
on Advanced Technologies for Developing Countries
September 21-24, 2005 - Slavonski Brod, Croatia



Danube Adria Association for
Automation & Manufacturing (DAAAM)
DAAAM International Vienna

ATDC 2005 – Preliminary Conference Programme

September 21, 2005 – Wednesday

(Hall of the Mechanical Engineering Faculty, Trg Ivane Brlić-Mažuranić 2, Slavonski Brod)

16:00 – 19:00 Registration
19:30 – 21:00 Welcome cocktail for 'early birds'
21:00 – 22:00 Meeting of the Organising Committee

September 22, 2005 – Thursday

(KKD Ivana Brlić-Mažuranić, Trg Stjepana Miletića 12, Slavonski Brod)

08:00 – 09:00 Registration
09:00 – 09:40 Opening ceremony

Invited lectures	"Ivana Brlić-Mažuranić" Hall	
09:40 – 10:10	Katalinić Branko (Vienna University of Technology, Austria)	Intelligence and technology
10:10 – 10:40	Duhovnik Jože (University of Ljubljana, Slovenia)	Problem definition and design goal
10:40 - 11:00	Coffee break	
11:00 – 11:30	Majdandžić Niko, Šarić Tomislav, Šimunović Goran, Lujčić Roberto (University of Osijek, Croatia)	The concept of the Centre for development of the new production and informatics technologies, entrepreneurship and management
11:30 – 12:00	Kopač Janez, Korošec Marjan (University of Ljubljana, Slovenia)	Review of new approaches in tool wear measuring techniques, focused on vision systems
12:00 – 14:00	Lunch	

14:00 – 15:30

Session A – Product Development, Mechanical Engineering Faculty, Room 101

No	Authors	Title
1A	Balić Senad, Spahić Denis, Duhovnik Jože	Computer Aided Design Method for Hollow-Jet Valve Flowing Tract
3A	Budić Hrvoje, Andrić Berislav	The significance of the marketing strategy in the product development on the global market
7A	Fröschl Jürgen, Lamik A., Godór Istvan and Eichseder W.	Multiaxial fatigue of crank shafts
8A	Fröschl Jürgen, Eichseder W., Kierner T.	Technological effects of forging and heat-treatment on the fatigue behaviour
9A	Gomerčić Mladen, Hercigonja Tomislav	3D Digitization – A step toward a success on the international market
10A	Grizelj Branko, Muhlis Kenter I., Popović Robert, Jović Pavo, Jukić Anto, Jukić Irena, Math Miljenko, Seuček Ivan, Stanišić Dubravka	Bending of tank
12A	Harman Blahoslav, Opalić Milan, Vereš Miroslav	Modelling of the flank profile of gearing by means of stochastic lattice

14:00 – 15:30

Session B – Production Technologies and Materials, Mechanical Engineering Faculty, Room 102

No	Authors	Title
1B	Avdeenko Anatoly, Konovalova Svetlana	The investigation of tribological behavior of acid alkylphosphate salts on basis of fatty alcohols. The creation of new lubricating fluid for drilling of the deep wells
3B	Barbarić-Mikočević Željka, Matković Prosper, Bolanča Ivana	Possibility of increasing deinking flotation efficiency of the digital offset prints
5B	Burđić Mustafa, Andrejaš Franc, Avdić Goran	Selective extraction of salts from the system $\text{NH}_4\text{Cl}-\text{Na}_2\text{SO}_4-(\text{NH}_4)_2\text{SO}_4-\text{H}_2\text{O}$, by appropriate solvent
6B	Cerjaković Edin, Šelo Ramiz, Tufekčić Džemo, Topčić Alan	Production of Rapid prototyping models in medicine
16B	Kodácsy János, Danyi József, Szabó András	Roller burnishing metal parts in magnetic field
17B	Klarić Štefanija, Šimunović Katica, Kolumbić Zvonimir and Samardžić Ivan	Optimal disposal of metal working industrial waste water/oil mixtures
18B	Kovács Tamás, Csizmás Edit, Szabó András	Finite element analysis of the entry phase in interrupted cutting

15:30 – 16:00

Coffee break

16:00 – 17:30

Session A – Product Development, Mechanical Engineering Faculty, Room 101

No	Authors	Title
14A	Hristovska Elizabeta, Markovski Nikola	Methodology for define lode of cantilever beam on the tower of ropeway
15A	Ilijevski Živko	New technologies for ground vehicles drive system
16A	Imamović Mustafa, Mandžuka, Abas	Analysis of influence of rolling speeds coordination on load rolls
18A	Kljajin Milan, Ivandić Željko, Karakašić Mirko, Galić Zoran	The conceptual framework in development of solid fuel oven
19A	Singh Maharaj, Koomsap Pisut	Automatic Pet Feeder
20A	Kozak Dražan, Tóth Laszlo, Tonković Zdenko, Lenkeyné Biró Gyöngyvér, Čanađija Marko, Szabolcs Szávai	New design of repair welded joints based on materials heterogeneity
21A	Likaj Ramë, Geca Ahmet, Pajaziti Agron, Osmanaj Sabrie	Parametric and sensitivity analysis of a four DOFs vehicle model

16:00 – 17:30

Session B – Production Technologies and Materials, Mechanical Engineering Faculty, Room 102

21B	Raos Pero, Stoić Antun and Lucić Mirjana	Rapid prototyping and rapid machining of medical implants
22B	Saeed A. Khaled, A. G. Olabi, M.S.J. Hashmi	Justifying CIM implementation in developed and developing countries
23B	Samardžić Ivan, Stoić Antun, Klarić Štefanija, Pavić Josip	Possibilities of cost effective plasma cutting application
24B	Samoilescu Gheorghe, Barbu Alina, Samoilescu Adelina	Installations specific to oil tankers leading to electric charge accumulation
25B	Samoilescu Gheorghe, Barbu Alina, Buciu Ion	Constructive measures to be taken for ships with a view to diminishing the accumulation of electric charges
27B	Torims Toms, Rudzitis Janis	Analysis of novel grinding technology impact on the three –dimensional roughness parameters of the shipboard diesels crankshaft bearings
32B	Zuperl Uroš, Čuš Franci, Kiker Edvard	Intelligent force control in end-milling
33B	Hloch Sergej, Ragan Emil, Radvanská Agata	Application of factorial design to study the effects of the selected abrasive waterjet factors on sound pressure level
34B	Gečevska Valentina, Dukovski Vladimir, Kužinovski Mikolaj	Modeling of manufacturing activities for information integration by using intelligent programming

20:00

Gala dinner at 'Slavonski restoran', Mile Budaka bb, Slavonski Brod

September 23, 2005 – Friday

08:30 – 10:00

Session A – Product Development, Mechanical Engineering Faculty, Room 101

No	Authors	Title
24A	Olaru Adrian, Olaru Serban	Quaternion algebra and LabVIEW instrumentation applied into robots kinematic research
25A	Repčić Nedžad	In many creative projects research is deployed as the silent designer
26A	Semenski Damir, Jerbić Bojan and Štabi Ivan	Simulations of motion of industrial robots
27A	Stopper Markus, Kittl David, Kohlmaier Martin and Stuja Kemajl	Evolution to a modern form of robotics engineering
28A	Šercer Mladen	The development of the case room for CD media
32A	Grbac Darko, Jakopec Dražen, Hercog Ivica	Demining machine testing, according to CEN workshop No. 15044
33A	Bašić Ivan, Bašić Aleksandar, Marušić Vlatko	Analysis of tribosystem of the demining machine flail RM-KA-02

08:30 – 10:00

Session C – Logistic of production, Room 102

No	Authors	Title
2C	Barišić Branimir, Car Zlatan, Mikac Tonči	Evolutionary computation based design and reconfiguration of shop-floor layout
3C	Ćosić Ilija, Anišić Zoran, Lazarević, Milovan	Contribution to development of technological structures for “end-of-life” products
4C	Ćosić Predrag, Volarević Nikola, Lenac Dubravka	Variants of process planning – Step toward production planning
5C	Galzina Vjekoslav, Šarić Tomislav	Optimization of process control in dry sugar beet pulp production
6C	Hirvelä Jarkko, Takala Josu	Making NPD project decisions
9C	Mocan Marian, Popa Horia, Izvercianu Monica, Draghici Anca	The production logistics in the automotive companies from Timis county

10:00 – 10:30

Coffee break

10:30 – 12:00

Session D – Information Technologies, Education and Quality Assurance, Mech. Eng. Faculty, Room 101

No	Authors	Title
1D	Ivić Anto, Slišković Josip	Influence of convergent billing over quality of services in the fixed telecommunication network
3D	Jović Franjo, Job Josip, Pešut Marina, Protrka M.	Holographic coding of process actions and interactions
4D	Komma R. Venkateswara, Jain K. Pramod and Mehta K. Narendra	Agent based approach for automated guided vehicle system - A review
5D	Leskinen Juha	Sports products in professional ice hockey events
7D	Mujić Nihad, Verner Jelena	Service quality measurement – Application of servqual instrument
8D	Raguž Nikola, Jeleč Mirjana	The role and significance of vocational studies on regional development of Croatia
9D	Sivusuo Henry and Takala Josu	Results of strategy and operations integrated quality-thinking at Finnish air force
10D	Slavek Ninoslav, Blažević Damir, Jović Franjo	Quality factors for measuring architectures
11D	Šaldić Nihad, Firsching Peter	Modular approach to the mobile robot platform development

10:30 – 12:00

Session E – Measurements, Diagnostics and Maintenance, Mechanical Engineering Faculty, Room 102

No	Authors	Title
5E	Ergić Todor, Stoić Antun, Konjatić Pejo	Dynamic analysis of machine and workpiece instability in turning
6E	Filić Mirko, Ćorluka Venco, Valter Zdravko	Chopping frequency optimizing in the nir moisture meter
7E	Formánek Josef	Experimental analyses of dynamic materials properties
8E	Gavrilă Lucian, Gavrilă Daniela, Istrati Lăcrămioara, Fînaru Adriana, Ciocan Marius-Eduard, Simion Andrei-Ionuț	Improving of Heat Transfer Efficiency in Shell and Tube Heat Exchangers by Cooling Water Conditioning
9E	Hirvelä Jarkko	Oil condition on-line monitoring
16E	Kronerova Eva, Formánek Josef	Experimental determination of elastic coupling stiffness and damping
17E	Novak Igor, Hocenski Željko	Visual inspection of ceramic tiles using pixels pair difference
18E	Šindelářová Jana and Formánek Josef	Thermal conductivity of composite materials
19E	Tóth László, Lenkey Biró Gyöngyvér	Practical large-scale application of risk-based approaches in Hungarian petrochemical industry

12:00 – 13:00

Poster session, Hall of the Mechanical Engineering Faculty

No	Authors	Title
2A	Bartak Jiri, Hosnedl Stanislav,	System for knowledge support of the engineering design specification
4A	Čirek Milan, Kubec Vaclav	Analysis of the energy consumption of spindle presses and influences which effect presses efficiency
11A	Gubeljak Nenad, Predan Jožef, Kozak Dražan, Vojvodič-Tuma Jelena	The estimation of optimal impact toughness for the material of turbine shaft
13A	Hlaváč Jan, Čechura Milan	Influence of used elements (FEA) in press machine design
17A	Klepáček Jan, Lašova Vaclava, Hynek Martin	Experimental identification of composite materials properties for utilization in numerical simulations
22A	Mikulić Dinko, Stojković Vjekoslav, Gašparić Tomislav	Modelling of all-protected vehicles
29A	Vujčić Mate, Pandurović Tomislav, Baličević Pavo	The changeability of tractional resistance and longitudinal stability of a tractor aggregate
30A	Židek Jan, Hynek Martin, Hudec Zdenek, Kadlec David	Experimental investigation of clamping mechanism with variable loads simulations
31A	Mikulić Dinko, Šilić Đorđe	Mechanics of flail for soil digging
2B	Arzenšek Boris, Tehovnik Franc, Arh Bostjan, Kmetič Dimitrij, Pirnar Boštjan, Kosmač Alenka	Deformability of duplex stainless steels at high temperatures
4B	Budić Ivan, Novoselović Daniel	Reclaiming of moulding compound
7B	Dubkova I. Valentina and Krutko P. Nikolay	Magnetic fields under formation of Epoxy composites discretely reinforced by metal-carbon fibers
8B	Dubkova I. Valentina	New materials and employment of polymer composites on base of element containing carbon fibers
9B	Dumitru Ion, Marsavina Liviu, Faur Nicolae	A proposal regarding the loading conditions at the stress – strain test of steel – aluminium conductors core
10B	Džimbeg-Malčić Vesna, Mikac Dadić V., Bolanča Ivana and Bolanča Z.	Kubelka-Munk parameters of some printed surfaces
12B	Faur Nicolae, Marsavina Liviu, Culea L.	The determination of stiffness characteristics for the coiled torsion springs
13B	Indof Janez, Marušić Vlatko	Interdependence of properties of polyester laminates on kind and content of reinforcement
14B	Jakopčić Mirko	Influence of weapon barrel superheat on structure and hardness of material

19B	Milković Marin, Bolanča Stanislav, Mrvac Nikola, Zjakić Igor	Influence of chromatic induction on perception of print quality produced by standard rendering methods
26B	Srećković Mileša, Ristić S., Družijanić D., Tomić Ž., Gospavić R., Ilić J., Milošević N., Popov V., Burzić Z., Đokić B.	Some aspects of the theory and praxis on laser interaction with the material for special construction
30B	Veerle Goossens, Balič Jože, Cardon Ludwig and Veža Ivica	Advanced CAD/CAM model for industry tools manufacturing
31B	Zjakić Igor, Drevenšek Majda and Bolanča Stanislav	The influence of colour density on dot gain in printing
11C	Troblová Petra, Šimon Michal	Logistics of the products in the net business
2D	Jelić Predrag, Lazić Ladislav	Application of simulation software in metallurgy
2E	Blažević Marko, Samardžić Ivan, Kolumbić Zvonimir	Leak detection in underground pipelines of municipal water distribution
3E	Čermák Roman	Sensor fault detection and correction by means of redundancy
4E	Ćorluka Venco, Filić Mirko, Valter Zdravko	Power supply choosing in the nir moisture meter
10E	Janžekovič Marjan, Muršec Bogomir and Janžekovič Ignac	Development of noninvasive method of measuring heart rate in cattle
11E	Hnatko Emil, Jozić Marko, Veljić Nataša	Piezo fuel injection in modern engines
12E	Kárník Ladislav	Obtaining the 3D metrical information with the mobile robot
13E	Kmetič Dimitrij, Arzenšek Boris, Celin Roman, Vojvodič Tuma Jelena, Šuštaršič Borivoj	Evaluating the microstructure changes on the screen of steam turbine
15E	Křížek Michal	Machine tool dynamic characteristics measurement at milling
20E	Hnatko Emil, Veljić Nataša, Jozić Marko	Diesel unit injector system & Unit pump system
12F	Stančik Petr, Troblová Petra	Research the behavior of the assistance toward fixed costs and profit making in relation to changing input conditions
18F	Repač Zvonimir, Penić Sanja	Improve SME sector results with a BSC

13:00 – 14:30

Lunch

14:30 – 16:00

Session F – Management and Controlling, Mechanical Engineering Faculty, Room 101

No	Authors	Title
1F	Dabić Marina	Knowledge transfer and human factor: The case of Croatia
3F	Kersan-Škabić Ines, Andrijević Matovac Vesna	Technology as a factor of competitiveness of Croatian economy
4F	Leahu Iustina Mihaela, Valkokari Katri and Poikkimäki Jyrki	International Outsourcing Roadmap for Small and Medium Technology Industry Companies
5F	Mocan Marian, Popa Horia, Izvercianu Monica, Draghici Anca	Changes in the type of management used in small and medium size companies in Timis county
6F	Mujić Nihada, Barković Ivana	Purposeful system programming – Forgotten origin of the strategic management
8F	Pejić Bach Mirjana, Vlahović Nikola, Knežević Blaženka	Application of information agents for business intelligence
9F	Popa L. Horia, Mocan L. Marian	Centers, clusters and competitiveness programmes in the enlarged Europe
10F	Popa L. Horia, Mocan L. Marian	The valuation of the enterprises competitiveness
13F	Takala Josu, Hirvelä Jarkko, Hiippala Pekka and Nissinen Vesa	Management and Deep Leadership Sand Cone Model for Human Resource Allocation
14F	Takala Josu, Sivusuo Henry, Leskinen Juha and Hirvelä Jarkko	How to Communicate and Implement Strategies in a strong Organization Culture?
16F	Delač Darko, Capanec Drago	Possibilities of developing countries to create differentiated products
17F	Ivanković Jadranka	Managing customer relationship – Value chain creation

16:00

Closing ceremony of the official part of ATDC 2005 Conference

September 24, 2005 – Saturday

10:00 – 15:00

Social Programme – Coach Tour through the countryside of Slavonski Brod with lunch