



UNIVERSITY OF CRAIOVA

Faculty of Mechanics
Department of Engineering and Management
of Technological Systems – IMST

3rd International Conference

ADVANCES
IN
ENGINEERING & MANAGEMENT



ADEM 2014
Conference Program



September 11th – 12th, 2014
Drobeta Turnu-Severin



Scientific Advisory Committee ADEM 2014

Aurel Viorel SERBAN	University "Politehnica" of Timisoara, RO
Romulus PASCU	University "Politehnica" of Timisoara, RO
John KECHAGIAS	Technological Educational Institute of Thessaly, GR
Cristian DOICIN	University „Politehnica” Bucuresti, RO
Anca PURCAREA	University „Politehnica” Bucuresti, RO
Florin NICOLAE	„Mircea cel Bătrân” Naval Academy, RO
Maria GAVRILESCU	„Gheorghe Asachi” Technological University of Iasi, RO
Gheorghe VOICU	University „Politehnica” Bucuresti, RO
Nicolae DUMITRU	University of Craiova, RO
Nicolae CRACIUNOIU	University of Craiova, RO
Leonard DOMNIȘORU	„Dunarea de Jos” University of Galați, RO
Andrej DAVID	University from Zilina, SK

Programme of ADEM 2014

September, 10th		
16⁰⁰ – 18⁰⁰	Registration	“Continental” Hotel, Lobby
20⁰⁰ – 23⁰⁰	Welcome Cocktail	“Continental” Hotel, Restaurant
September, 11th		
09⁰⁰ – 10⁰⁰	Registration	Registration Desk, CUDTS
10⁰⁰ – 11²⁰	Plenary Session	“Gheorghe Anghel” Auditorium, CUDTS
11³⁰ – 12⁰⁰	Coffee Break	CUDTS, Lobby
12⁰⁰ – 13³⁰	Plenary Session	“Gheorghe Anghel” Auditorium, CUDTS
13³⁰ – 15³⁰	Lunch	“Continental” Hotel, Restaurant
15³⁰ – 17³⁰	Oral Session	IMST Department
17³⁰ – 17⁴⁵	Coffee Break	IMST Department
17⁴⁵ – 20⁰⁰	Oral Session	IMST Department
20³⁰ – 23³⁰	Banquet	“Continental” Hotel, Restaurant
September, 12th		
09³⁰ – 11⁰⁰	Oral Session	IMST Department
11⁰⁰ – 11¹⁵	Coffee Break	IMST Department
11¹⁵ – 12⁰⁰	Oral Session	IMST Department – B11, B13, B14
12⁰⁰ – 14⁰⁰	Lunch	“Continental” Hotel, Restaurant
14⁰⁰ – 18⁰⁰	Technical Visit	Cruise on the Danube River

Plenary Session – “Gheorghe Anghel” Auditorium

10 ⁰⁰ – 10 ⁰⁵	Welcome Speech	G. BENGA, Head of Department IMST
10 ⁰⁵ – 10 ¹⁵	Welcome Speech	D. C. DĂNIȘOR, Rector UCV
10 ¹⁵ – 10 ²⁰	Welcome Speech	C. GHERGHE, Mayor of DTS
10 ²⁰ – 10 ²⁵	Welcome Speech	N. DRĂGHIEA, Prefect of Mehedinți County
10 ²⁵ – 10 ³⁰	Welcome Speech	A. GEORGESCU, vice-President of Mehedinți Council County
10 ³⁰ – 10 ⁴⁰	Welcome Speech	N. DUMITRU, Dean Faculty of Mechanics
10 ⁴⁰ – 11 ⁰⁰	CCNR activities on professional qualification in inland navigation	K. MOOSBRUGGER, Deputy Secretary General of CCNR
11 ⁰⁰ – 11 ²⁰	Education and Training in IWT Sector	A. MINTJES, President of EDINNA

11³⁰ - 12⁰⁰ Coffee Break – CUDTS

12 ⁰⁰ – 12 ²⁰	On the optimization of the polyjet direct 3d printing process quality indicators utilizing taguchi design of experiments	J. KECHAGIAS, P. STAVROPOULOS, E. IORGO
12 ²⁰ – 12 ⁴⁰	The metallurgy in the biblical period, an important chapter of the human and metals technology history	S. MOISA
12 ⁴⁰ – 13 ⁰⁰	A review regarding the biogas production through anaerobic digestion of organic waste	M. DINĂ
13 ⁰⁰ – 13 ²⁰	Sustainable use of water resources in the process of adaptation and mitigation of climate changes	E. STOJIC KARANOVIC
13 ²⁰ – 13 ⁴⁰	Soft technologies in transferring organic biomaterials for application in drug delivery, biomimetism or biosensing	I.M. MIHĂILESCU, C. RISTOCU
13 ⁴⁰ – 14 ⁰⁰	Research and Development in the Powder Metallurgy field at the University of Craiova, Romania	M. MANGRA, O. GÎNGU

Lunch – “Continental” Hotel, Restaurant

14 ⁰⁰ – 15 ³⁰	Lunch	“Continental” Hotel, Restaurant
-------------------------------------	-------	---------------------------------

ADVANCED MATERIALS AND TECHNOLOGIES

IMST Department A14

Chairman: Oana GÎNGU

15 ³⁰ – 15 ⁴⁵	Studies on the particle size distribution of tungsten nanopowders prepared by ball milling	C. NICOLICESCU, O. GÎNGU, V.H. NICOARĂ
15 ⁴⁵ – 16 ⁰⁰	Shape memory NiTi and NiTiCu alloys obtained by powder metalurgy and spark plasma sintering	C.D. CIRTEA, M. LUNGU, A.M. BALAGUROV, F. DAMAY, V. MARINESCU, C. HAJDU, V. CIRTEA
16 ⁰⁰ – 16 ¹⁵	Research about bulk biocomposites based on hydroxyapatite nanopowders obtained by two steps sintering (tss) technology	O. GINGU, C.I. PASCU
16 ¹⁵ – 16 ³⁰	Research regarding the influence of copper powders on tensile strength of sintered steels	C. NICOLICESCU, D. ZORILĂ, V.H. NICOARĂ, M. A. GRANDE, M. CRIVEANU
16 ³⁰ – 16 ⁴⁵	Study on the green properties Of the fe-based parts processed by micro metal injection moulding technology	C. TEISANU, G. SIMA, O. GÎNGU
16 ⁴⁵ – 17 ⁰⁰	Effect of Fe ₂ O ₃ mechanical milling on the barium hexaferrite synthesis	I. STEFAN, M. CIOBANU, C. NICOLICESCU
17 ⁰⁰ – 17 ¹⁵	Microstructure and failure process characterization of porous iron based materials	C. TEISANU, O. GÎNGU, G. SIMA
17 ¹⁵ – 17 ³⁰	Role of failure analysis in building and assessing the reliability of advanced technologies	M. BĂZU, T. BĂJENESCU
17 ³⁰ – 17 ⁴⁵	COFFEE BREAK	IMST Department
17 ⁴⁵ – 18 ⁰⁰	Green composites based on kenaf fibers	R. F. COTERLICI, V. GEAMĂN, I. RADOMIR, M.A. POP
18 ⁰⁰ – 18 ¹⁵	An estimate of thermo-physical changes in hybrid basalt/glass fibres reinforced polymer based composites	D. L. MOTOC, T. BEDO
18 ¹⁵ – 18 ³⁰	Synthesis of Fe ₇₅ Si _{20-x} B ₅ M _x (m=ti or zr) powders by wet mechanical milling	H.F. CHICINAȘ, B. V. NEAMȚU, T. F. MARINCA, I. CHICINAȘ
18 ³⁰ – 18 ⁴⁵	Composite compacts of Fe/Fe ₃ O ₄ type obtained by mechanical milling-sintering-annealing route	T. F. MARINCA, B. V. NEAMȚU, I. CHICINAȘ, F. POPA
18 ⁴⁵ – 19 ⁰⁰	Nanocrystalline/nanosized Fe ₃ O ₄ powder obtained by mechanosynthesis	T. F. MARINCA, B. V. NEAMȚU, I. CHICINAȘ, O. ISNARD
19 ⁰⁰ – 19 ¹⁵	The influence of barium carbonate on the tribological characteristics of some iron-based friction composites	V. MERIE, V. CÂNDEA
19 ¹⁵ – 19 ³⁰	Substrate influence on the mechanical and	V. MERIE, M. PUSTAN, C.

	tribological characteristics of gold thin films for mems applications	BİRLEANU, G. NEGREA
19 ³⁰ – 19 ⁴⁵	Void's evolution in aluminium sheets during high deformation	F. POPA, I. CHICINAȘ, D. BANABIC
19 ⁴⁵ – 20 ⁰⁰	The influence of milling conditions on the Ni ₃ Fe alloyed powder	C.V. PRICA, C.D. STANCIU F. POPA, I. CHICINAS



ENVIRONMENT ENGINEERING

IMST Department, A13

Chairman: Mirela DINCĂ

15 ³⁰ – 15 ⁴⁵	Considerations regarding the spreading of flames in forest fires	M. BICĂ, S. SOFRONIE, C. CERNĂIANU, D. TUTUNEA
15 ⁴⁵ – 16 ⁰⁰	Researches regarding the combustion of gaseous fuels in installation of small power	M. BICĂ, C. CERNĂIANU, A. POPA, A. CERNĂIANU
16 ⁰⁰ – 16 ¹⁵	Noise maps – important tools in analyzing workers' dangerous exposure at noise that arises at workplace	L. GRECU
16 ¹⁵ – 16 ³⁰	Assessment of water quality in the lakes along Colentina river	P. IONESCU, V.M. RADU, D. GYÖRGY, E. DIACU
16 ³⁰ – 16 ⁴⁵	The exigencies of environmental protection against the vulnerabilities of natural disasters	M. MAZILU, Ș. ISPAS
16 ⁴⁵ – 17 ⁰⁰	Studies regarding photovoltaic solar energy potential on Pristol area, Mehedinti county	G. DEMIAN, M. DEMIAN, L. BOGDAN
17 ⁰⁰ – 17 ¹⁵	Studies regarding the influence of cutting regime on vibration and noise pollution in a parts processing	M. DEMIAN, R. STEFAN, G. DEMIAN
17 ¹⁵ – 17 ³⁰	Studies regarding identification and assessment of noise generating sources in different areas of work	M. CIOBANU
17 ³⁰ – 17 ⁴⁵	COFFEE BREAK	IMST Department
17 ⁴⁵ – 18 ⁰⁰	Study of the emissions through the fuel distribution stations in Drobeta Turnu Severin	I. G. BUÇȘE, O. GHERMEC E. GAVRILESCU, M. CIOBANU
18 ⁰⁰ – 18 ¹⁵	Aspects of waters management in river basins in Romania	E. GAVRILESCU, G.D. BUZATU
18 ¹⁵ – 18 ³⁰	Structural and hydro technical schemes for flood defenses	E. GAVRILESCU, G.D. BUZATU
18 ³⁰ – 18 ⁴⁵	Environmental strategies in areas affected by ash from large combustion plants	C. COTIGĂ, I.G. BUÇȘE
18 ⁴⁵ – 19 ⁰⁰	Particle size distribution of the coal ash from the large combustion plant	O. GHERMEC, I.G. BUÇȘE, M. CIOBANU
19 ⁰⁰ – 19 ¹⁵	Assessment of heavy metals content in water and sediments from the lower danube river using ecoindex	V. M. RADU, A. A. IVANOV, G. DEÁK, E. DIACU
19 ¹⁵ – 19 ³⁰	Technical and economic contributions in	M. ALBU

	the field of monitoring and reducing the impact of the oil and gas industry on the environmental factors	
19 ³⁰ – 19 ⁴⁵	Research on the reduction of greenhouse gases emissions to the enrichment in carbon of the iron powders	C. GHERMEC, M. CIOBANU, I.G. BUCȘE
19 ⁴⁵ – 20 ⁰⁰	The use of heat pumps to the drying of grain seed	L. DICU, I. CONSTANTIN, D. TUTUNEA, M. BĂDESCU



MODELING AND SIMULATION		
		IMST Department, B11
Chairman: Daniela COMAN		
15 ³⁰ – 15 ⁴⁵	Real and simulated mechanical tests	M. MATACHE, P. CARDEI, G. VOICU, V. VLADUT, R. SFARU, M. LUDIG
15 ⁴⁵ – 16 ⁰⁰	A non-standard mathematical model for testing under simulated regime	P. CARDEI, G. VOICU, M. MATACHE, I. VOICEA, V. MURARU, M. LUDIG
16 ⁰⁰ – 16 ¹⁵	316l metal powder compaction simulation with assisted friction	I. M. SAS-BOCA, D. FRUNZA, D.A. ILUȚIU-VARVARA
16 ¹⁵ – 16 ³⁰	Quantitative and qualitative methods in the study of some dynamic systems	D. BĂLĂ
16 ³⁰ – 16 ⁴⁵	Position control of hyper-redundant arm For grasping operation	M. FLORESCU, D. M. MATEI
16 ⁴⁵ – 17 ⁰⁰	Modelling and simulation of the magnetic fluid flowing within inclinometer sensor for laser-arc hybrid welding processes	S.V. SAVU, I.D. SAVU, M. G. GHIBA
17 ⁰⁰ – 17 ¹⁵	Numerical Simulations based on Kinematic Model of a Mobile Robot	D. COMAN, A. IONESCU, J. KECHAGIAS
17 ³⁰ – 17 ⁴⁵	COFFEE BREAK	IMST Department



NAVAL ENGINEERING AND NAVIGATION		
		IMST Department, B14
Chairman: Andrej DAVID		
17 ³⁰ – 17 ⁴⁵	COFFEE BREAK	IMST Department
17 ⁴⁵ – 18 ⁰⁰	Possible applications and potentials for lng (liquefied natural gas) in Central Europe	L. SIMMER, S. PFOSER, G. ASCHAUER, O. SCHAUER
18 ⁰⁰ – 18 ¹⁵	Consideration regarding the optimization of records from the river information system	M. GHIBA
18 ¹⁵ – 18 ³⁰	Consideration regarding the utilization of records from the river information system	M. GHIBA
18 ³⁰ – 18 ⁴⁵	Controllable pitch propeller system using the	T. POPA, O. CUPȘA

	shaft line energy	
18 ⁴⁵ – 19 ⁰⁰	Navigation training requirements for the Danube inland navigation simulator	M. JURKOVIČ, A. DÁVID
19 ⁰⁰ – 19 ¹⁵	AMI learning - an interactive multimedia application for learning in maritime and inland waterway radiocommunication training programmes	V. PIPIRIGEANU



ENGINEERING AND MANAGEMENT		
		IMST Department, A15
Chairman: Dănuț SAVU		
15 ³⁰ – 15 ⁴⁵	Transhipment simulators for training of ports' personnel	A. HALLER, L.M. PUTZ, O. SCHAUER
15 ⁴⁵ – 16 ⁰⁰	Automated software for streamlining optimisation of resource planning for an additive manufacturing system	M. E. LUPEANU, M. M. ROȘU, C. V. DOICIN, A. E.W. RENNIE, C. NEAGU
16 ⁰⁰ – 16 ¹⁵	On predictive control using vibration detection method on condensation damage to the machine with single stage pump	M. ISTRATE, M. BĂLDEA
16 ¹⁵ – 16 ³⁰	Experimental stand controlled by web interface for data acquisition in punching process	S. UȚULEANU, A. VLĂȘE, G. SINDILĂ, N. CĂPĂȚĂNĂ
16 ³⁰ – 16 ⁴⁵	Attitudes and risk management for youth careers in engineering	T. FLESER, R. SZUHANEK, E. BINCHICIU, C. SZUHANEK
16 ⁴⁵ – 17 ⁰⁰	WACC as the minimization criterion of liability management in a company capital structure optimization	J. JAROŠ, V. MELICHAR, L. ŠVADLENKA
17 ⁰⁰ – 17 ¹⁵	The importance of information sources in effective listening process in organizations	M. BĂLDEA, A. BĂLTEANU
17 ¹⁵ – 17 ³⁰	Research regarding the load wig welding of active areas for asphalt uncovering milling cutter teeth	R. F. IOVĂNAȘ, D. M. IOVĂNAȘ
17 ³⁰ – 17 ⁴⁵	COFFEE BREAK	IMST Department
17 ⁴⁵ – 18 ⁰⁰	The FMEA concept integration in project management for medical robotic systems	V. DUMITRU, M. CHERCIU
18 ⁰⁰ – 18 ¹⁵	Quality management in shipbuilding	I.D. SAVU, S.V. SAVU, M. G. GHIBA
18 ¹⁵ – 18 ³⁰	Comparative economical analysis regarding the technologies for the processing of the support plates	I. CIUPITU

Banquet – “Continental” Hotel, Restaurant

20 ³⁰ – 23 ³⁰	Gala Dinner	“Continental” Hotel, Restaurant
-------------------------------------	-------------	---------------------------------

Oral Session – IMST Department

ADVANCED MATERIALS AND TECHNOLOGIES		
Chairman: Oana GÎNGU		IMST Department A14
09 ³⁰ – 09 ⁴⁵	Analysis of corrosion behavior of sintered titanium in sbf environments)	L. A. SORCOI, C. R. ROMAN
09 ⁴⁵ – 10 ⁰⁰	Synthesis of the Fe-6.5% wt. Si alloy by mechanical alloying	C.D. STANCIU, F. POPA, I. CHICINAȘ, O. ISNARD
10 ⁰⁰ – 10 ¹⁵	Structural and morphological evaluation of 25% vol. Ni/Al ₂ O ₃ nanocomposite powders produced by mechanical milling	C. VOICU, F. POPA, P. PĂȘCUȚĂ, I. CHICINAȘ
10 ¹⁵ – 10 ³⁰	Modal parameters identification for some sandwich bars reinforced with fiber-glass	C. M. MIRIȚOIU, M. M. STĂNESCU, D. BOLCU, V. ROȘCA, S.B. RIZESCU, C.O. BURADA
10 ³⁰ – 10 ⁴⁵	Modal parameters identification for some sandwich bars reinforced with fiber-carbon	C. M. MIRIȚOIU, D. BOLCU, M. M. STĂNESCU, A. STANIMIR, I. MANEA
10 ⁴⁵ – 11 ⁰⁰	Research on the treatments at sub-zero temperatures of the sintered steels and hardened in oil	S. DUBOVAN, T. POPESCU, L. DUBOVAN
11 ⁰⁰ – 11 ¹⁵	COFFEE BREAK	IMST Department
11 ¹⁵ – 11 ³⁰	Effect of process control agents on the FeSiB powder amorphisation by wet mechanical alloying	B. V. NEAMȚU, T.F. MARINCA, H. F. CHICINAȘ, I. CHICINAȘ, O. ISNARD
11 ³⁰ – 11 ⁴⁵	Influence of the cutting parameters on the surface roughness when machining hardened steel with ceramic and PCBN cutting tools	G. BENGA
11 ⁴⁵ – 12 ⁰⁰	The tribological behavior of some steel samples prepared by powder metallurgy sintered in microwave field	A. OLEI, S. SAVU, I. ȘTEFAN

LUNCH – “Continental” Hotel, Restaurant

12 ⁰⁰ – 14 ⁰⁰	Lunch	“Continental” Hotel, Restaurant
-------------------------------------	-------	---------------------------------

CRUISE ON THE DANUBE RIVER

14 ⁰⁰ – 18 ⁰⁰	Cruise	“Flamingo” Ship
-------------------------------------	--------	-----------------

Sponsors

- **Drobeta Turnu Severin City Hall**
- **Mehedinti County Council**
- **SC VLĂDUȚU COMPANY PROD SRL Dr. Tr. Severin**
- **SC TOLEDO SRL Drobeta Turnu Severin**
- **SC SERTIM SRL**
- **ROMANIAN NAVAL LEAGUE**

DROBETA TURNU SEVERIN



