



UNIVERSITY OF CRAIOVA

Faculty of Mechanics
Department of Engineering and Management
of Technological Systems

ON-LINE EDITION of the
6th International Conference
**ADVANCES
IN
ENGINEERING & MANAGEMENT**



**ADEM 2020
Conference Program**



**10 – 11 of December, 2020
Drobeta-Turnu Severin
ROMANIA**



ON-LINE EDITION OF THE

ADVANCES
IN
ENGINEERING & MANAGEMENT

ADEM 2020

Organised by:

UNIVERSITY of CRAIOVA
Faculty of Mechanics
Department of Engineering and Management of Technological Systems
and PRONANOMAT ASSOCIATION

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Prof. PhD.

Executive Chairman: Mihai DEMIAN,
Assoc. Prof., PhD.

Secretary: Claudiu NICOLICESCU
Assoc. Prof., PhD.

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Program of ADEM 2020



December 10, 2020

10 ³⁰ – 11 ⁰⁰	<u>Opening Ceremony</u>
	Vice-Rector, Prof. Dr. Eng. Nicolae DUMITRU Dean of the Faculty of Mechanics, Prof. Dr. Eng. Ilie DUMITRU INCESA Research Hub, Assoc. Prof. Dr. Eng. Denisa RUȘINARU
11 ⁰⁰ – 13 ⁰⁰	<u>Plenary Lectures</u>
11 ⁰⁰ – 11 ³⁰	Plenary Lecture 1, Prof. Dr. Eng. Herbert DANNINGER, Technical University of Vienna, Austria <i>THE MASTERALLOY CONCEPT FOR SINTERED STEELS – NEW IMPETUS FOR A CLASSICAL APPROACH</i>
11 ³⁰ – 12 ⁰⁰	Plenary Lecture 2, Prof. Dr. Eng. Dejan TANIKIĆ University of Belgrade, Serbia <i>INTELLIGENT SYSTEMS FOR MODELLING METAL CUTTING PARAMETERS</i>
12 ⁰⁰ – 12 ³⁰	Plenary Lecture 3, Prof. Dr. Eng. Virgil-Florin DUMA, 3OM Optomechatronics Group, Faculty of Engineering, “Aurel Vlaicu” University of Arad, Romania <i>NON-DESTRUCTIVE TESTING (NDT) OF METALLIC FRACTURES USING OPTICAL COHERENCE TOMOGRAPHY (OCT) VERSUS SCANNING ELECTRON MICROSCOPY (SEM)</i>
12 ³⁰ – 13 ⁰⁰	Plenary Lecture 4, C.S. Dr. Iuliana MORJAN National Institute for Laser, Plasma & Radiation Physics, Romania <i>RECENT PROGRESS IN TRANSPARENT OXIDE SEMICONDUCTOR NANOPARTICLES OBTAINED BY LASER PYROLYSIS</i>

ON-LINE PRESENTATIONS
10 December, Starting at 15.00 PM

ADVANCED MATERIALS AND TECHNOLOGIES

Chairman: Mihai DEMIAN, Claudiu NICOLICESCU, Ionela-Gabriela BUCȘE
University of Craiova

15 ⁰⁰ – 15 ¹⁵	Applying the masteralloy concept for manufacturing of sinter hardening PM steel grades	S. GEROLDINGER, R. DE ORO CALDERON, C. GIERL-MAYER, H. DANNINGER
15 ¹⁵ – 15 ³⁰	Thermophysical and functional properties of lead-free ecomaterials with the tetragonal tungsten bronze structure	A. ROTARU, E. PALAIMIENE, J. BANYS, M. CARPENTER, F. D. MORRISON
15 ³⁰ – 15 ⁴⁵	Influence of the shape of composites materials on the stability of microwave heating processes	R. C. MARIN, I. STEFAN, M. C. PREDESCU, S. V. SAVU
15 ⁴⁵ – 16 ⁰⁰	Investigating the effect of α -Fe ₂ O ₃ oxides on the BaFe ₂ O ₄ pyrosynthesis temperature; The digital processing of TG and DTA curves	I. STEFAN, G. C. BENGHA, I. D. SAVU, S. V. SAVU, A. B. OLEI
16 ⁰⁰ – 16 ¹⁵	CHR-X nuclear moderator	V. Ș. VIRZOB, D. SAVU, F. CRIȘAN, C. DRĂGHESCU
16 ¹⁵ – 16 ³⁰	Ni ₂ MnSn heusler alloy phase evolution driven by milling and annealing	F. POPĂ, V. CEBOTARI, T. F. MARINCA, I. CHICINAȘ
16 ³⁰ – 16 ⁴⁵	Ni _{70.5} Fe _{18.8} Mo _{4.7} Al ₆ nanocrystalline powder obtained by mechanical alloying	T. F. MARINCA, B. V. NEAMȚU, F. POPA, I. CHICINAȘ, C. V. PRICĂ, A. MESAROȘ, C. NICOLICESCU
16⁴⁵–17⁰⁰	BREAK	
17 ⁰⁰ – 17 ¹⁵	Effect of aqueous milling on the total carbon content of hard metal powders	H.F. CHICINAȘ, D. O. JUCAN, G. CONȚIU, C. POPA
17 ¹⁵ – 17 ³⁰	Influence of the polymer addition in quenching water on the deformation and residual stresses of aluminum alloy sheets	M. STOICANESCU, GHE. POPA, M. PETRE, A. V. ACHIM
17 ³⁰ – 17 ⁴⁵	Study on the effects of heat treatments on the physical and mechanical characteristics of 1.4301 stainless steel	M. STOICANESCU
17 ⁴⁵ – 18 ⁰⁰	Researches about the dynamic behavior of green composites reinforced with rush and bulrush	A. I. RĂDOI, C. M. MIRIȚOIU, M. BOGDAN, M. M. STĂNESCU, D. BOLCU, I. D. GEONEA
18 ⁰⁰ – 18 ¹⁵	About the mechanical properties for composites reinforced with felt	A. I. RĂDOI, C. M. MIRIȚOIU, A. BOLCU, V. IONICĂ, A. E. ROMANESCU, A. PĂDEANU
18 ¹⁵ – 18 ³⁰	Research on the effects of 12 mm HE mortar bombs on advanced materials	D. PINTILIE, I. F. PANĂ, A. MALCIU, C. PUICĂ, C. PUPĂZĂ
18 ³⁰ – 18 ⁴⁵	Impact of European norms EURO 6 on usage of polymeric and composite products in automotive industry with the purpose of reducing pollution	I. M. COMAN
18 ⁴⁵ – 19 ⁰⁰	Research related to retained austenite on rail and windmill bearings	L. IONESCU, C. TĂNASE, B. GHIBAN

RESEARCH AND DESIGNING OF MACHINES AND MECHANISMS TRANSPORTATION AND LOGISTICS

Chairmans: Bebe-Adrian OLEI and Iulian ȘTEFAN
University of Craiova, ROMANIA

15 ⁰⁰ – 15 ¹⁵	Advanced design concepts and modeling parameterized in the marine, port and naval areas	A. PINTILIE, M. COTRUMBĂ
15 ¹⁵ – 15 ³⁰	Human upper limb experimental analysis for assistive devices in feeding process	C. COPILUȘI, I. GEONEA, A. MARGINE, A. ROȘCA
15 ³⁰ – 15 ⁴⁵	Assessment of industrial settlements along European inland waterways	G. BENGĂ, D. SAVU, S. SAVU, A. OLEI, I. ȘTEFAN
15 ⁴⁵ – 16 ⁰⁰	Re-designing the car seat through the implementation of a wider range of adjustable options, to accommodate a larger diversity of body types	A.G. BARBU, M. GHEORGHE
16 ⁰⁰ – 16 ¹⁵	Experimental stand to investigate the injection process in diesel engines	D. TUTUNEA, I. DUMITRU, L. RACILĂ
16 ¹⁵ – 16 ³⁰	Analysis on the dynamic performance of vehicles	O.V. OȚĂT, I. DUMITRU, L. RACILĂ, D. TUTUNEA, L. MATEI
16 ³⁰ – 16 ⁴⁵	Transport oriented framework for context-aware services management	C. DRĂGĂNESCU
16 ⁴⁵ – 17 ⁰⁰	BREAK	
17 ⁰⁰ – 17 ¹⁵	Methods, instruments in evaluating the satisfaction index of passengers in urban public transport	A. ȘERBAN
17 ¹⁵ – 17 ³⁰	Logistic of goods transited through the Romanian inland harbors	A. OLEI, I. BALOȘIN, A. MIDAN, D. SIMION
17 ³⁰ – 17 ⁴⁵	Finite element modeling of needle insertion into abdominal wall tissue	D. COMAN, L. GRUIONU

ENVIRONMENTAL ENGINEERING AND SUSTAINABLE DEVELOPMENT

**Chairman: Gabriela DEMIAN, Marius CRIVEANU, Olimpia GHERMEC
University of Craiova, ROMANIA**

15 ⁰⁰ – 15 ¹⁵	Aspects regarding polluting emissions to the stack of clincher ovens in Romanian cement factories	C. CIOBANU, Ghe. VOICU, I. A. ISTRATE, P. TUDOR
15 ¹⁵ – 15 ³⁰	Characteristics of wastewater from different pretreatments of flax/cotton fabrics	M. DOCHIA, S. GAVRILAȘ
15 ³⁰ – 15 ⁴⁵	Positive effects on the environment due to restrictions during the coronavirus period	M. CIOBANU, I. G. BUCȘE
15 ⁴⁵ – 16 ⁰⁰	Comparison of the effect of soil amendment of biogenic and chemical obtained CuO NPs on bioactive compounds and elemental accumulation in wheat	I. LUNG, O. OPRIS, M. L. SORAN, O. A. CULICOV, A. CIORITA, A. STEGARESCU, I. ZINICOVSCAIA, N. YUSHIN, K. VERGEL, I. KACSO, Ghe. BORODI, M. PARVU
16 ⁰⁰ – 16 ¹⁵	A new educational requirement: forming specialists in the field of green procurement	O. GHERMEC, C. GHERMEC, I. G. BUCȘE
16 ¹⁵ – 16 ³⁰	Sustainable remediation of soils contaminated with petroleum products	M. ALBU
16 ³⁰ – 16 ⁴⁵	Pollution considerations caused by ships in the Romanian Danube sector	I. BALOȘIN, C. FLORESCU, I. MIREL
16 ⁴⁵ – 17 ⁰⁰	BREAK	
17 ⁰⁰ – 17 ¹⁵	Methodological framework associated to factors that influence sustainability environmental dimension	I. V. HERGHILIGIU, I. B. ROBU, A. L. ASANDULUI
17 ¹⁵ – 17 ³⁰	Study regarding water management in Mehedinti county	I. G. BUCȘE, M. CIOBANU, O. C. GHERMEC
17 ³⁰ – 17 ⁴⁵	Assessment of traffic noise pollution due to road transport	G. DEMIAN, L. GRECU, M. DEMIAN
17 ⁴⁵ – 18 ⁰⁰	Mineral water quality, influencing factor in their selection for use	M. DEMIAN, G. DEMIAN
18 ⁰⁰ – 18 ¹⁵	Aspects about the environmental quality assessment in urban areas by applying multi-criteria analysis methods	L. GRECU
18 ¹⁵ – 18 ³⁰	Sustainable development and livability concepts	C. O. BURADA, A. G. TRIF

MANAGEMENT AND INDUSTRIAL ENGINEERING

Chairman: Luminița GRECU, Mariana CIOBANU
University of Craiova, ROMANIA

15 ⁰⁰ – 15 ¹⁵	Use of intelligent systems in management activity	T. VASILE, C. I. DĂNIASĂ, L. POPESCU, A. IANCU, V. D. POPESCU
15 ¹⁵ – 15 ³⁰	Human resource management in modern society	P. C. SIMION, M. A. M. POPESCU, I. C. COSTEA- MARCU, I. GRECU
15 ³⁰ – 15 ⁴⁵	The management of architectural heritage resources	C.O. BURADA, A. G. TRIF
15 ⁴⁵ – 16 ⁰⁰	Systemic approach of digital competences building at teachers' level – highest necessity in SARS-CoV2 pandemic conditions	I. D. SAVU, C. DRĂGHESCU, S.V. SAVU, D. SIMION
16 ⁰⁰ – 16 ¹⁵	Need analysis for the integration of digital tools for teaching, learning and assessment of the welders	S. V. SAVU, I.D. SAVU, G. C. BENGA, A. B. OLEI, I. STEFAN
16 ¹⁵ – 16 ³⁰	The role of innovative projects for sustainable development of enterprises	A.M.G. MILITARU, B. FLEACĂ, C. SIMION, M. POPESCU
16 ³⁰ – 16 ⁴⁵	Dynamic systems. Applications in economy and in technology	D. BĂLĂ
16 ⁴⁵ –17 ⁰⁰	BREAK	
17 ⁰⁰ – 17 ¹⁵	Quality concept –applicable aspects for management of research projects	D.A. LUTA (MANOLESCU), A. IOANA, D. TUFEANU, C. NICOLICESCU, B. FLOREA, D.I. JUGANARU, B. ENE
17 ¹⁵ – 17 ³⁰	Managerial aspects regarding ecological education	B. ENE, A. IOANA, D. TUFEANU, C. NICOLICESCU, B. FLOREA, D.I. JUGANARU, D.A. LUTA (MANOLESCU)
17 ³⁰ – 17 ⁴⁵	Research on the use of integrated management systems	P. C. SIMION, T.V. POPESCU, M. A. M. POPESCU, A. MILITARU
17 ⁴⁵ – 18 ⁰⁰	Calculation of the collapsing critical load of a translating cam mechanism and roller translating follower actuating an elevator	C.E. RADU, E. RĂȘCHITOR, I.TEMPEA
18 ⁰⁰ – 18 ¹⁵	Comparative analysis for the anti-vibration isolation of a foundation in the case of an elevating mechanism	C.E. RADU, E. RĂȘCHITOR, I.TEMPEA
18 ¹⁵ – 18 ³⁰	Risk management in reducing the occurrence of aviation events	I. M. DUMITRU, M. BOSCOIANU
18 ³⁰ – 18 ⁴⁵	Microwave technology for hybrid fabrication processes	C. GHELINGHER, I. D. SAVU, S. V. SAVU
18 ⁴⁵ – 19 ⁰⁰	Research on the development of the welding reconditioning procedure for friction liner on the passenger coaches	C. (POPIȘTEANU) PETRESCU, D. T. CICIC, GHE. SOLOMON
19 ⁰⁰ – 19 ¹⁵	Digital technologies for analysis of restoration of serial numbers	M. URSU, G. C. BENGA

CLOSING CEREMONY
11 December, Starting at 1.00 PM



University of Craiova
Mechanics Faculty
I.M.S.T. Department
December 2020