

FACULTY OF ENGINEERING IN HUNEDOARA



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RESEARCH CENTER OPTIMIZATIONS IN THE INDUSTRY OF MATERIALS

GENERAL PRESENTATION

The Research Center "Optimizations in the Industry of Materials" is recognized by the National Board of Higher Education Scientific Research through certificate No. 100/CC-C of 11.05.2001. It is established at the Faculty of Engineering in Hunedoara and it includes staff involved in the research activity in the fields of electrotechnics, mechanics and metallurgy.

The Department of Electric Engineering and Industrial Computer Science has specialized laboratories for researches on the functioning of the rotative electric equipment and transformers, electrical equipment, electric and electronic circuits, for carrying out the achievement and processing of data, the analysis of the quality of the electric power of different consumers, studying the electromagnetic compatibility, the analysis and synthesis of the automatic adjustment of the parameters of the industrial processes, using the classic adjustment methods, as well as new methods, based on the fuzzy logic, neuronal networks, expert systems.

In the laboratories of the Department of Engineering and Management, the teaching staff can carry out researches in the fields of chemistry, plastic deformation, studies related to the elaboration of iron and non-ferrous materials, thermal treatments and economic researches (prognosis, diagnosis etc.).

The material resources and infrastructure of the Department of Engineering and Management ensures the possibility of carrying out mechanic tests at the surrounding temperature and low temperatures, the research of the behavior of some machinery parts (belts, bearings, springs etc.) during functioning and the tribologic analysis of lubricants and various pairs of materials.

MISSION

The Research Center "Optimizations in the Industry of Materials" offers the framework for scientific research and human resources formation activities in the field of electrotechnics, mechanics, the science of materials, automotive engineering and industrial computer science.

The research activity carried out within the research center is strictly related with the teaching process and aims at:

- solving research topics in the field of materials

- forming specialists who may contribute, through their qualification and performances, to the enlargement of the state of knowledge
- raising the competitiveness of the Faculty of Engineering in Hunedoara on the qualifications market requested by the market economy
- forming of elites within the young generation
- obtaining outside the budget incomes for the modernization of the laboratory infrastructure.

FIELDS OF RESEARCH

Improvement of performances for classical and special electrical machines. Generation of electrical energy with variable speed in microhydro and eolian power plant. Improvement of performances for electrical variable speed drives. Modern electrical traction systems. Static performance converters. Researches on the control of the metal continuous casting process. Electromagnetic compatibility. Numerical modeling and control of the induction heating electro-technology. Modeling and simulation of electro thermal installations. Adaptive processing of signals. Distributed Software. Multi-agent Systems. Distributed Constraints' Software. Improvement of power factor in electric installations with automatic controllers. Improvement of performances for some industrial plate-type electrostatic precipitators. Analysis of electric parameters, from the point of view of electro-magnetic compatibility, for different consumers: plate-type electrostatic precipitators, lighting systems, and electric motors. Implementation of programmable logic controller in industrial applications. Modeling, simulation and automation of processes in the sintering plants by Fuzzy logic. Researches concerning modeling and control of the processes from sintering plants. Magnetism, disperse systems of magnetic nanoparticles, magneto – insulator materials, stochastic methods and models of simulation. Software architectures on integrated systems. Mathematical modeling. Numerical problems in fluid dynamics. Semigroups of linear bounded operators. Existence and uniqueness of finite and infinite dimensional diffusion operators. Linear systems with control. Stability theory. Industrial automation control process. Neuro-fuzzy expert systems. Modeling, simulation and control of process from electric railway. Resistance of materials. Elasticity. Plasticity. Processing technologies. Tests on materials at high temperatures. Thermal fatigue of hot rolling cylinders. Optimization of resistance structures. Analysis of tensions and deformations.

Processing in semi-solid status of metallic alloys. Reliability and maintainability of industrial entities. Theory of linear operators' semi-groups. Study of spectral properties, convergence properties and some representation formulae both for semi-groups of series C_0 and integrated ones. Research on fluid motions with sliding phenomena on plane surfaces in the first-order approximation. Processing of experimental data by mathematic modeling with truncate probability laws. Theory of operators, study of stability and dichotomy of a solution of differential equations. Machines and hydro-pneumatic actuators. Rolling of materials. Research development for continuous casting products. Waste recycling. Environmental protection. Materials science and technology. The optimisation of the processes of elaboration and solidification of the steel. Research development for continuous casting products. The recovery and the development of the metallic scraps. Waste recycling. Thermal fatigue and durability of the hot rolling mill cylinders. Resistance of materials. Elasticity. Plasticity. Analysis of tensions and deformations between the wires of the steel ropes. Thermodynamics. Heat transfer and thermal machines. Numerical simulating of thermal stratification phenomena in steel ladles.

KEYWORDS

electrical machines; designing and optimization; static frequency converters; variable speed; regenerable energy; electric drives; secondary cooling; mould level; electromagnetic compatibility; power quality; harmonic pollution; induction heating; numerical modeling; numerical control; power factor; automatic controllers; plate-type electrostatic precipitators; lighting systems; programmable logic controller; expert system; fuzzy logic; sintering plant; microcontroller; magneto-dielectric materials; nanomagnetism; stochastic modelling and simulating; ABAP programming; MVC design pattern; Web Dynpro ABAP programming; adaptive control; adaptive filtering; modeling and simulating; power quality; electromagnetic pollution; distributed software; multi-agent systems; statistical modeling; computational fluid dynamics; sliding phenomena; vortex stability analysis; C_0 -semi-groups; integrated semi-groups; adjunct semi-groups; diffusion operators; Schrödinger operators; L^∞ -uniqueness; theory of semi-groups; operators in Banach spaces; linear systems; stability theory modeling, automation, neuro-fuzzy systems; steel; waste; environment; casting; ingot; continuous casting; semifinished products; pulverous waste; lime; dolomite; non-ferrous slags; quality; advanced materials; fatigue; tensions; durability; optimization; cylinders; numerical modeling; heat transfer; durability.

ACTIVITIES

- Studies regarding the die-forging of the metallic alloys in semisolid state;
- Assimilating in the fabrication process of new technologies of carbon and alloyed steel making;
- Improving the technologies of carbon and alloyed steel making and casting in the direction of improving the physical – mechanical and technological characteristics;
- Reducing the electric power and thermal energy consumption, auxiliary and raw materials, refractories and metal specific consumption;
- Introducing in the iron and steel industry economic circuit of some metal waste with iron content resulted from different industrial branches (iron and steel industry, energetic industry, mining industry, mechanical engineering industry, chemical industry, etc.);
- Studies on the hydrodynamics and thermal work conditions of the alloy in the casting ladles;
- Studies in computational fluid dynamics, swirling flow motions and stability analysis of some type of vortices;
- Studies upon truncated distributions in multidimensional data modeling;
- Studies and investigations on automation and optimization of continuous casting process;
- Modelling and control of continuous casting process using Fuzzy logic;
- Analysis of electromagnetic interferences produced by operating the crucible induction furnaces which are supplied at industrial frequency;
- Studies and investigations on automation and optimization of sintering processes;
- Modelling and control of sintering processes using fuzzy logic;
- Identification, modelling and control of the continuous casting;
- Analysis of the thermal fatigue and the durability of the hot mill rolling cylinders;
- Researches and experiments regarding the thermal and the equivalent tensions from the hot rolling mills cylinders, in avoiding the growing thermal fatigue resistance and the increase of service life;
- Analysis of the thermal thermal shock upon the hot mill rolling cylinders;
- Studies regarding the prediction of workpiece machining error;
- Studies regarding the die-forging of the metallic alloys in semisolid state;
- The study of the durability for wires of steel ropes;
- Analysis of heat transfer in thermal machines and automotive with FEA methods;
- Analysis of the moulding – casting technology of the casting pieces;

- Experimental analysis of the strain state in the mill rolls, using the numerical simulation;
- Analysis of adaptive control of nonlinear power loads
- Analysis of electromagnetic pollution caused by wireless electronic equipments
- Analysis of adaptive algorithms and filtering
- Computer graphics
- E-learning
- Object-oriented programming
- Advanced programming methods
- Analysis of reactive homopolar synchronous generator with stator excitation used in electrical energy generation
- Analysis of asynchronous single phase generator
- Analysis of modern static frequency converter for industrial application
- Analysis of asynchronous machine for electric traction
- Studies and investigations on automation and optimization of continuous casting process
- Modelling and control of continuous casting process using Fuzzy logic
- The implementation of the asynchronous techniques in Netlogo. The management of the messages in the case of the asynchronous search techniques. The introduction of the synchronization of the agents execution for the asynchronous search techniques.
- Implementation and evaluation model for the asynchronous search techniques: MAS NetLogo Models-c. Available: <http://discsp-netlogo.fih.upt.ro/>
- The introduction of a model of implementation and evaluation for the asynchronous search techniques in NetLogo, with support for the message synchronization and management.
- The use of the model in the study of agents behavior in several situations, like the priority order of the agents, the synchronous and asynchronous case, leading, therefore, to identifying possible enhancements of the performances of asynchronous search techniques
- Power quality measurement for crucible induction furnaces supplied at industrial frequency
- Analysis of Some Programmable Logic Controller Used in Industrial Applications
- Analysis of Plte-Type Electrostatic Precipitators
- Analysis of Modern Inverter Welding Power Sources
- Analysis of Fluorescent Lamps with Electronic Balast
- Studies and investigations on automation and optimization of sintering processes
- Software-oriented controller for hierarchycal management of materials transportation process in sintering plants
- Modelling and simulation of the disperse systems of magnetic nanoparticles behavior in dynamics fields
- Programming on integrated systems
- Studies upon truncated continuous distributions
- Studies in computational fluid dynamics, swirling flow motions, stability analyses and sliding phenomena
- Finite element and spectral simulations for nonlinear time-dependent problems
- Adjoint semigroups
- Existence and uniqueness of pre-generators
- L^∞ -uniqueness of Schrödinger operators and L^1 -uniqueness of weak solution for the Fokker-Planck equation
- Stability and dichotomy of evolution processes
- Fisure detection in continuous casting process

RESEARCH PROJECTS

1. Project no. 232/20.07.2006: *New refractories of complex functions used in steel industry, made by modern technologies*, Program CEEX Consortium – Partner P2. Responsible: Prof. dr. eng. Teodor Heput. Total value of the contract RON 1,800,000 (Partner P2- RON 26,050).
2. Project no. 233/20.07.2006: *Integrated technology to obtain some non-conventional energy – technological sources, used as raw materials for steel making*, Program CEEX Consortium – Partner P3. Responsible: Prof. dr. eng. Teodor Heput. Total value of the contract RON 1,900,000 RON (Partner P3- RON 10,280).
3. Project no. 71-044/2007: *Advanced technology direction of pieces case-hardening industrial process in induced current*, Program PN2 – Consortium – Partner P2. Responsible: Prof. dr. eng. Teodor Heput. Total value of the contract RON 1,449,550 (Partner P2- RON 43,161).
4. Project no 31-098/2007: *Prevention and fighting pollution in the steel making, energetic and mining industrial areas through the recycling of small-size and powdering wastes*, Program PN2 – Consortium – CO. Responsible: Prof. dr. eng. Teodor Heput. Total value of the contract RON 1,980,000 RON (CO- RON 415,000).
5. Project no. 46/15.05.2008: *Decreasing of environment pollution degree through the siderite waste capitalization for production cement*, Balkan Environmental Association (B.EN.A.) – TUBORG, Manager project: Conf. dr. eng. Teodor Heput. Value: RON 2,000.
6. Project no. 56/2008: *Measure of the electromagnetic pollution level caused by mobiles and wireless electronic equipments -* Program Project B.EN.A Cosmote, Manager project: Conf. dr. eng. M. Panoiu. Value: RON 2,500.

7. Project no. 55/2008: *Research concerning electromagnetic pollution produced by the industrial frequency crucible induction furnaces in the power supply network* - Program Project B.EN.A Cosmote, Manager project: S. I. dr. eng. A. Iagar, Value: RON 2,100.

PUBLICATIONS

BOOKS

1. Ardelean, M., Zamfir, V., *Cooling bed equipment of section mill. Constructive and functional analysis*, 2008, Mirton Publishing House, Timisoara, ISBN 978-973-52-0298-9, 193 pages (published in Romanian language).
2. Sorin Ratiu, Liviu Mihon, *Processes and characteristics of the internal combustion engines*, 2008, Mirton Publishing House, Timisoara, ISBN 978-973-52-0314-6, 278 pages (published in Romanian language).
3. Pinca B. Camelia – *Fabrications technologies of the automotive elements*, Ed. Cerמי, ISBN 978-973-667-347-4, pages 156.
4. Pinca B. Camelia – *Fabrications and asambulation of the automotive*, Ed. Cerמי, ISBN 978-973-667-346-7, pages 156.
5. Vilceanu L. – *Heat transfer and thermal installations*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-344-3, 156 pages (published in Romanian language).
6. Putan V. – *Thermal equipments*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-343-6, 200 pages (published in Romanian language).
7. Stoica, D. – *Contribution regarding semisolid die-forging of structural steels*, PhD. Thesis, Politehnica Publishing house, Timisoara, Series 11: Materials Science and Engineering, No. 5, 2008, ISBN: 978-973-625-702-5, ISSN: 1842-7855.
8. Floarea, M.C. *Studies and researches on the behavior of the improvement steels treated thermochemical trough nitriding*, PhD Theses, "Politehnica" Publishing House, Timisoara, Series 11: Materials Science and Engineering, No. 6, ISBN 978-973-625-703-2, 2008.
9. Alic C., Miklos C., *Basic of mechanical*, Mirton Publishing House, Timisoara, ISBN 978-973-52-0478-5, 228 pages (published in Romanian language).
10. JOSAN, A., *Quality Management*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-348-1, 150 pages (published in Romanian language).
11. Popa E., Prejban. I, Mihut G., *Thermal treatments in experiments*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-345-0, 180 pages (published in Romanian language).
12. Dascal A., *The test by stee of the high temperature*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-330-6, 268 pages (published in Romanian language).
13. Dascal A., *The body car and the structure of automotive*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-350-4, 270 pages (published in Romanian language).
14. Dascal A., *Strength of Materials in solved problems*, Mirton Publishing House, Timisoara, ISBN 978-973-52-0525-6, 205 pages (published in Romanian language).
15. Budiul Berghian A., VasIU T., *Fiability and mentenability of the industrial entities. Teory and aplicacions*, Infomin Publishing House, Deva, ISBN 978-973-7646-07-1, 140 pages (published in Romanian language).
16. Weber, F., *Strenght of materials - Laboratory guide*, Mirton Publishing House, Timisoara, ISBN 978-973-52-0377-1, 97 pages (published in Romanian language).
17. Weber, F., *Tolerance and Dimensional Control –laboratory workbook*, Mirton Publishing House, Timisoara, ISBN 978-973-52-0427-3, 102 pages (published in Romanian language).
18. Weber, F., Dascāl, A., *Laboratory tehncics for strength materials - Laboratory guide*, Mirton Publishing House, Timisoara, ISBN 973-585-517-8, 38 pages (published in Romanian language).
19. Kiss I., *Rolling rolls - Approaches of the quality in the multidisciplinary research*, Mirton Publishing House, Timisoara, ISBN 978-973-52-0380-1, 326 pages (published in Romanian language).
20. VasIU T., Budiul Berghian A., *Machines tools and mechanical processings*, CERMI Publishing House, Iași, 2008, ISBN 978-973-667-336-8, 315 pages (published in Romanian language).
21. M. Panoiu, C. Panoiu, *Modeling and simulating the electro-thermal nonlinear processes*, Mirton Publishing House, Timisoara, 237 pages, ISBN 978-973-52-0378-8. (published in Romanian language).
22. Deaconu, S., *General elements of Electric machines. Transformers and D.C. machines* Politehnica publishing house, 2008, ISBN 978-973-625-739-1, 141 pages, (published in Romanian language)
23. Deaconu, S., *A.C. machines. Fundamental elements*. Politehnica publishing house, 2008, ISBN 978-973-625-739-1, 154 pages, (published in Romanian language).
24. Maksay, Ș., D.A. Bistriian, *Differential equations – Problems collection*, Cerמי Publishing House of Iași, 2008, ISBN 978-973-667-311-5, 165 pages (published in Romanian language).
25. Maksay, Ș., Bistriian, D.A., *Introduction into the finite element method*, Cerמי Publishing

- House of Iași, 2008, ISBN 978-973-667-324-5, 183 pages (published in Romanian language).
26. Lemle, L.D., *Semigroups of linear operators and applications*, Politehnica Publishing House of Timișoara, 2008, ISBN 978-973-625-769-8, 104 pages (published in Romanian language).
 27. Tirian, G.O. Rusu-Anghel, S., *Automation of continuous process*, Mirton Publishing House, 2008, pages 115, ISBN 978-973-52-0467-9 (published in Romanian language).
 28. Rusu-Anghel, S., *Nonconventional processing management in cement factories*, Mirton Publishing House, 2008, 249 pages, ISBN 978-973-52-0479-2 (published in Romanian language).
 29. Muscalagiu, I., *Contributions at the implementation, evaluation and improving of the asynchronous search techniques performances in the distributed constraint programming*, Politehnica Publishing House of Timișoara, 228 pages, ISBN 978-973-625-592-2, (published in Romanian language).

PUBLICATIONS

1. Socalici A., Ardelean E., Heput T., Ardelean M., *The influence of micro-coolants of the mechanical properties of the carbon steels*, Metalurgia International, Vol. XIII, No.4, ISSN 1582 – 2214, pp.50-55;
2. Ardelean M., Heput T., Ardelean E., Socalici A., Vilceanu L., *New methods and analysis functioning techniques for cooling bed tool of the profile laminators*, Metalurgia International, Vol. XIII, No.5, ISSN 1582 – 2214, pp.48-53;
3. Socalici A., Ardelean E., Heput T., Ardelean M., *Experimental researches meant to improve the quality of continuous cast semi-finished section*, Metalurgia International, Vol. XIII, No.11, ISSN 1582 – 2214, pp.48-55;
4. Socalici A., Heput T., Ardelean E., Ardelean M., Milostean D., *Experimental researches in pilot phases regarding at processing of ferrous pulverous and scrap waste in briquettes*, Metalurgia International, Vol. XIII, No.13, ISSN 1582 – 2214, pp.57-63;
5. Ardelean M., *New method and technology for measure of acceleration*, Annals of the Oradea University, Fas of Management and Technological Engineering, CD-ROM edition, Vol. VII(XVII), ISSN 1583-0691, pp.1196-1201;
6. Ardelean M., Ardelean E., Socalici A., Heput T., *Experiment equipment for microcoolers adding in tundish and crystallizer of continuous casting installation*, Annals of the Oradea University, Fas of Management and Technological Engineering, CD-ROM edition, Vol. VII(XVII), ISSN 1583-0691, pp.1196-1201;
7. Socalici A., Heput T., Ardelean E., Ardelean M., Milostean D., *Experimental researches regarding added of microcoolers at continuous casting steel*, Annals of the Oradea University, Fas of Management and Technological Engineering, CD-ROM edition, Vol. VII(XVII), ISSN 1583-0691, pp.1785-1790;
8. Ardelean M., Ardelean E., Heput T., Socalici A., *Kinetostatic analysis method for braking mechanism*, International Symposium about Forming and Design in Mechanical Engineering, KOD 2008, Novi Sad, Serbia, ISBN 978-86-7892-104-9, pp.187-190;
9. Ardelean E., Ardelean M., Heput T., Socalici A., *Aspects regarding to dimensioning of shape cooling bed*, International Symposium about Forming and Design in Mechanical Engineering, KOD 2008, Novi Sad, Serbia, ISBN 978-86-7892-104-9, pp. 233-236;
10. Socalici A., Harau C., Ardelean E., Heput T., Ardelean M., *Increasing efficiency of the gathering activity of pet waste in Hunedoara town*, 3 rd International Conference „Management of Manufacturing System”, Environmental Technologies and Management, Presov, Slovakia, ISBN 978-80-553-0068-9, pp. 27-31;
11. Ardelean E., Ardelean M., Heput T., Socalici A., Josan A., *Possibility of capitalization in metallurgy of pulverulent waste with basic characters*, 3 rd International Conference „Management of Manufacturing System”, Environmental Technologies and Management, Presov, Slovakia, ISBN 978-80-553-0068-9, pp.2-5;
12. Ardelean M., Ardelean E., Heput T., Socalici A., Josan A., *Reducing of environment pollution through the power capitalization of sawdust*, 3 rd International Conference „Management of Manufacturing System”, Environmental Technologies and Management, Presov, Slovakia, ISBN 978-80-553-0068-9, pp.6-9;
13. Heput T., Socalici A., Ardelean E., Ardelean M., Josan A., *The capitalization in metallurgy of small and pulverulent waste with ferric and carbon content*, 3 rd International Conference „Management of Manufacturing System”, Environmental Technologies and Management, Presov, Slovakia, ISBN 978-80-553-0068-9, pp.10-13;
14. Ardelean E., Ardelean M., Socalici A., Heput T., *Recycling of slag from the aluminium industry to steel refining*, International Conference: "Management and Sustainable Marine Development", Constanta, Romania;
15. Ardelean M., Socalici A., Heput T., Ardelean E., *Research to obtaining lubricating powder from various tipe of wastes*, International Conference: "Management and Sustainable Marine Development", Constanta, Romania;

16. Socalici A., Heput T., Ardelean E., Ardelean M., *Research regarding using the wastes with carbon content in siderurgical industry*, International Conference: "Management and Sustainable Marine Development", Constanta, Romania;
17. Heput T., Ardelean E., Ardelean M., Socalici A., Puțan V., *Reducing of pollution in alumina factory area based of red slime waste recovery*, National Conference of Metallurgy and Materials Science, Bucuresti, Romania, ISBN 978-606-521-077-6, pp. 309-316;
18. Ardelean E., Ardelean M., Socalici A., Heput T., Josan A., *Researches in laboratory phases regarding to capitalization of ferrous pulverous waste in pellets*, National Conference of Metallurgy and Materials Science, Bucuresti, Romania, ISBN 978-606-521-077-6, pp. 125-132;
19. Ardelean E., Ardelean M., Socalici A., Heput T., Josan A., *Researches in laboratory phases regarding to capitalization of ferrous pulverous waste in pellets*, National Conference of Metallurgy and Materials Science, Bucuresti, Romania, ISBN 978-606-521-077-6, pp. 125-132;
20. Pinca C., Tirian G.O., Vilceanu L. *The effects of the thermal fatigue upon the hot rolling mill cylinders*, Metalurgia Internațional, Ed. Științifică F.R.M, Vol. XIII, Nr.5, pg. 25-33, ISSN 1582 – 2214, 9 pg.
21. Pinca C., Tirian G.O., *Installation for determining the rolling forces*, Annals of the Faculty of Engineering Hunedoara, 2008, Tom VI, Fasc.1., ISSN 1584 – 2665, 5 pages.
22. Pinca C., Tirian G.O., *Experimental installation for studying the lastigness of the rolling cylinders*, Annals of the Faculty of Engineering Hunedoara, 2008, Tom VI, Fasc.3., ISSN 1584 – 2673, 5 pages.
23. Pinca C., Tirian G.O., *Determining the composite tension inside the warm rolling cylinders*, 12th International Research/Expert Conference „ Trends in the development of machinery and associated technology”, 26-29 Aug. 2008, Istanbul – Turcia, TMT 2008, 4 pages.
24. Pinca C., Tirian G.O., *The influence of the symmetrical thermal tensions when producing thermal fatigue inside the warm rolling cylinders*, 12th International Research/Expert Conference „ Trends in the development of machinery and associated technology”, 26-29 Aug. 2008, Istanbul – Turcia, TMT 2008, 4 pages.
25. Pinca C., Tirian G.O., *Theoretical contribution and original experiments for determining all mathematical relations for calculating symmetrical thermal tension*, Annals of the Oradea University, 2008, Fascicule of Management and Technological Engineering, Volume VII (XVII), ISSN 1583 – 0691, 8 pages.
26. Pinca C., Tirian G.O., *The current stage of the research about the thermal shock inside the rolling cylinders*, Annals of the Oradea University, 2008, Fascicule of Management and Technological Engineering, Volume VII (XVII), ISSN 1583 – 0691, 8 pages.
27. Flori, M., Gruzza, B., Bideux, L., Monier, G., Robert-Goumet, C., *A study of the 42CrMo4 steel surface by quantitative XPS electron spectroscopy*, Applied Surface Science, 2008, Vol. 254, pp. 4738, 6 pages., ISSN 0169-4332.
28. M. Flori, B. Gruzza, L. Bideux, G. Monier, C. Robert-Goumet, J.P. Cherre, H. de Baynast, *XPS, EPMA and microstructural analysis of a defective industrial plasma-nitrided steel*, Surface and Coatings Technology, 2008, Vol. 202, pp.5887, 8 pages., ISSN 0257-8972.
29. Chitaru, C., Ilca, I., Stoica, D., *Quality performances establishment for hot-rolled products*, Metalurgia Internațional, 2008, Vol. XIII, No. 8, pp. 53, 6 pg., ISSN 1582-2214.
30. Miloștean, D., Ilca I., *Laboratory stage experiments on the semisolid state steel die forging*, Metalurgia Internațional, 2008, Vol. XIII, No. 6, pp. 49, 6 pages., ISSN 1582-2214.
31. Miloștean, D., Ilca I., *Studies on the semisolid state die-casting in the presence of mechanical vibration*, Metalurgia Internațional, 2008, Vol. XIII, No. 11, pp. 57, 6 pg., ISSN 1582-2214.
32. Vilceanu L., Putan V., Josan A., Ghita E., *Strength of steel wires ropes*, Metalurgia Internațional, 2008, Vol. XIII, No. 8, pp.34, 4 pages, ISSN 1582-2214.
33. Cioata Vasile George, Kiss Imre, *Experimental research regarding the technological parameters of a new method of processing in the semisolid state*, Metalurgia Internațional, 2008, Vol. XIII, No. 6, pp. 21, 6 pages, ISSN 1582-2214.
34. Cioată V. G., *Determination of the moulding time of alloys processed in a semi-solid state*, Metalurgia Internațional, No. 12/2008, Bucuresti, ISSN 1582 – 2214, pp 42-52.
35. Putan V., Vilceanu L., Josan A., *Numerical simulating of thermal stratification phenomena in steel ladles*, Metalurgia Internațional, 2008, Vol. XIII, No. 10, pp. 67, 8 pages, ISSN 1582-2214.
36. Josan A., Vilceanu L., Puțan V., Socalici A., *Researches concerning the particularities of the hypereutectoid steel, using for casting the mill rolls*, Metalurgia Internațional, 2008, Vol. XIII, Nr.7, pp.33, 6 pages, ISSN 1582-2214.
37. Vasiu T., Budiul Berghian A., *Reliability and maintainability of a shear for cutting metallurgical products*, Metalurgia

- Internațional, 2008, Vol. XIII, No. 8, pp.21, 7 pages, ISSN 1582-2214.
38. Kiss I., *Research upon the quality assurance of the rolling-mill rolls and the variation boundaries of the chemical composition*, Revista de metalurgia, 2008, No. 44(4), pp. 335, 8 pages, ISSN 0034 – 8570.
39. Kiss I., Maksay S., *Mathematical approaches in the area afferent to the cast iron rolls manufacturing process*, Metalurgia Internațional, 2008, Vol. XIII, No.2, pp. 22, 6 pages ISSN 1582-2214.
40. Cioata V. G., *Determining the Machining Error Due To Workpiece-Fixture System Deformation using the Finite Element Method*, Annals of DAAAM for 2008 & Proceedings of the 19th International DAAAM Symposium, ISBN 978-3-901509-68-1, ISSN 1726-9679, Published by DAAAM International, Vienna, 2008, pp 127-128, Inspec, Cambridge Scientific Abstracts, ISI Proceedings.
41. Vilceanu L. – *Analytical study of the stress state between the steel wires ropes*, the 8th National Conference “Professor Dorin Pavel – romanian hydrotechnique founding”, Science and Engineering, vol.XIII, Sebeș, AGIR House, 2008, ISBN 973-8130-82- 4, pp 653-656.
42. Weber F., Weber E., *Study upon the influence exerted by the diameter size of general usage steel wires into the constitutive material’s mechanical and technological characteristics*, Journal of Engineering Annals of Faculty of Engineering Hunedoara, 2008, Tome VI, Fascicule I, ISSN 1584-2665, pp.213-217.
43. Weber F., *Pressuring methods of Dewar recipients aiming the cooling agent’s transfer into the mechanical test enclosure*, Journal of Engineering Annals of Faculty of Engineering Hunedoara, Tome VI (year 2008), Fascicule I, ISSN 1584-2665, pp.218-221.
44. Weber, F., Maksay, Șt., *The linear schematization in which the diagram of resistance at weariness is depicted, for asymmetrical cycles having variable loading, a generalised point of view*, Journal of Engineering Annals of Faculty of Engineering Hunedoara, Tome VI (year 2008), Fascicule I, ISSN 1584-2665, pp.197-200.
45. Weber, F., *Characteristica of the manner in which samples are obtained, namely through testing materials at low temperatures*, the 8th National Conference “professor Dorin Pavel-romanian hydrotechnique founding”, Science and Engineering, vol.XIII, Sebeș, AGIR House, ISBN 978-973-720-197-3, pp.547- 554.
46. Weber, F., Weber, E., *Mobile equipment for the assemblage of big pieces through hooping, in conditions of mobile equipment for the assemblage of big pieces through hooping, in conditions of low temperatures*, Science and Engineering, vol.XIII, Sebeș, AGIR House, ISBN 978-973-720-197-3, pp.623-628.
47. Cioata V., Kiss I., *Researches regarding the obtaining process of metallic materials in semi-solid state*, Manufacturing Engineering, Presov, SLOVAKIA, 2008, Issue 1, Year VII, pp. 37, 4 pages, ISSN 1335-7972.
48. Kiss I., Cioata V., *The nodular cast iron half-hard rolls hardness assurance through the chemical composition*, Manufacturing Engineering, Presov, SLOVAKIA 2008, No. 2, pp.79, 4 pages, ISSN 1335-7972.
49. Kiss I., Maksay S., *Tehnological correlations between the hardness and main alloyed elements in the area of cast iron half-hard rolls*, Technical Gazette, 2008, No. 3, pp.33, 5 pages, ISSN 1330-3651.
50. Miklos I., Miklos Cristina, Alic C., *Beam structure static and dynamic analysis with finite element method in algor program*, Annals of Faculty of Engineering Hunedoara, 2008, TOME VI, FASCICULE 3, p.237, 3 pages., ISSN 1584 – 2673.
51. Miklos I., Miklos Cristina, *Up and down car mechanism dynamic simulation*, Annals of Faculty of Engineering Hunedoara, 2008, TOME VI, FASCICULE 3, pp.240, 5 pages., ISSN 1584 – 2673.
52. Josan, A., Putan, V., *Comparison between hardness of the lamination cylinders, Adamit type OT – A3 and prelevated probes to their casting*, Annals of the Oradea University Fascicle of Management and Technological Engineering, 2008, CD-ROM edition, Vol. VII (XVII), pp. 357, 4 pages., ISSN 1583-0691.
53. Putan, V., Josan, A., *Numerical studies on the parameters influencing steel ladle heat loss rate*, Annals of the Oradea University Fascicle of Management and Technological Engineering, 2008, CD-ROM edition, Vol. VII (XVII), pp.549, 6 pages, ISSN 1583-0691.
54. Dascal A., *Research regarding the hardness tests under high temperatures*, Annals of the Oradea University Fascicle of Management and Technological Engineering, 2008, CD-ROM edition, Vol. VII (XVII), pp.196, 4 pages., ISSN 1583-0691.
55. Dascal A., *Mechanical testing by shock bending under high temperature*, Annals of the Oradea University Fascicle of Management and Technological Engineering, 2008, CD-ROM edition, Vol. VII (XVII), pp.200, 4 pages, ISSN 1583-0691.
56. Vasiu T., Budiul Berghian A., *Mathematic model to determine the preventive maintenance of ball mills*, Annals of the Oradea University Fascicle of Management and Technological Engineering, 2008, CD-ROM edition, Vol. VII (XVII), pp.675, 6 pages., ISSN 1583-0691.

57. Vasiu T., Budiul Berghian A., *Ways to approach the availability of ball mills*, Revista minelor, 2008, Nr.1(199), pp.36, 3 pages, ISSN 1220-2053.
58. Vasiu T., Budiul Berghian A., *Paper clips accelerated life testing analysis*, Journal of Engineering Annals of Faculty of Engineering Hunedoara, Tome VI (year 2008), Fascicole 3, ISSN 1584-2665, pp.23-27.
59. Kiss I., Maksay S., *Graphical addenda in the technological area of the nodular iron cast rolls production*, ACTA POLYTEHNICA HUNGARICA - Journal of Applied Science, 2008, No.14, p.27, 9 pg., ISSN 1785-8860.
60. Kiss I., *Experimental research regarding the durability of rolling mill cylinders*, Machine Design - Monograph Of FtS, 2008, Nr.1, pp.102, 9 pages, ISBN 86 – 85211 – 92 – 1.
61. Mihut G., Popa, E., *Optimization of manufacture of bimetals milling rolls trough the computer simulation*, The 5th International Symposium about design in mechanical engineering, University of Novi Sad, KOD2008, Konstruisanje.Oblikovanje.Dizajn, Proceedings, pp. 443, 6 pages, ISBN 978-86-7892-104-9.
62. Mihut G., Popa, E., Kiss I., *Ensuring the Quality of the Bimetallic Cast Rolls*, 3rd Conference with international participation MANAGEMENT OF MANUFACTURING SYSTEMS, Tehnical University of Kosice, MANAGEMENT OF MANUFACTURING SYSTEMS – Proceedings, 2008, pp. 181, 6 pages, ISBN 978-80-553-0069-6.
63. Cioata V., Kiss I., *Experimental research regarding the metallic materials die forging process in semisolid state*, KOD 2008 - The Fifth International Symposium about forming and design in mechanical engineering, Novi Sad, Serbia, pp. 407, 4 pages., ISBN 978-86-7892-104-9.
64. Cioata V., Kiss I., *Considerations regarding the quality of pieces obtained through the alloys in semisolid state processing methods*, 3rd Conference With International Participation, Management of Manufacturing Systemes focused on Enviromental Technologies and Management Proceedings, pp.159, 4 pages, ISBN 978 – 80 – 553 – 0069 – 6.
65. Alic C., Miklos, I.Z., Miklos C., *Computer aided design methods for an optimal quality of conception and exploitation of the pre-stressed bolted joints*, Management of Manufacturing Systems, The 3 rd Conference With International Participation, September, 2008 Prešov, SLOVAKIA, CD - 6 pages, ISBN 978-80-553-0069-6.
66. Miklos C., Miklos, I.Z., Alic C., *Kinematic and dynamic analysis for EP3 asymmetric pantograph mechanism used in railway electric traction with SAM 5.0 programs*, Vol. "The 5th International Symposium About Shaping, Industrial and Product Design, KOD 2008", Novi Sad/ Palić, Serbia, pp.181-186, 6 pages, ISBN 86-85211-92-1.
67. Miklos I. Z., Miklos I., Alic C., Miklos C., *CAM Mechanism - Modeling and Dynamic Aanalysis with Autodesk Iinventor*, Vol. "The 5th International Symposium About Shaping, Industrial and Product Design, KOD 2008", Novi Sad/ Palić, Serbia, pp. 385, 4 pages, ISBN 86-85211-92-1.
68. Josan, A., Putan, V., *The variations of the carbide and graphite formation elements of the mill rolls casted of hypereutectoid steel*, 12th International research/Expert Conference Trends in the Development of machinery and associated technology, TMT 2008, pp. 309, 4 pages, ISBN 9958-617-34-5.
69. Josan, A., *The experimentation pre-calibration mill rolls for the increase the durability in exploitation*, 12th International research/Expert Conference Trends in the Development of machinery and associated technology, TMT 2008, pp. 321, 4 pages, ISBN 9958-617-34-5.
70. Popa, E., Mihut, G., *Simulation of the continuously cast semi-products in the case of introduction of consumable micro-coolers*, The 5th International Symposium about design in mechanical engineering, University of Novi Sad, Konstruisanje. Oblikovanje. Dizajn, Proceedings, pp.65, 6 pages, ISBN 978-86-7892-104-9.
71. Popa, E., Mihut, G., Kiss, I., *The Quality of the Continuously Cast Semi-Products*, 3rd Conference with international participation management of manufacturing systems, Tehnical University of Kosice, management of manufacturing systems – Proceedings, pp.189, 4 pages, ISBN 978-80-553-0069-6.
72. Ratiu, S., Popa, G., Alexa, V., *Monitoring of some functional parameters for an internal combustion engine*, 1st WSEAS International Conference on SENSORS and SIGNALS (SENSIG '08), pp.60, 6 pages, ISBN 978-960-474-021-5.
73. Dascâl, A., Vilceanu, L., *Studies and Research Regarding the Influence of the High Temperature by Mechanical Characteristics for the OLT 35k Steel*, 12th International Research/Expert Conference Trends in the Development of machinery and Associated Technology TMT 08, 26 -30 August 2008 Istanbul, Bahçeşehir Üniversitesi, Turkey – Turcia, pp.1213, 8 pages, ISBN 9958-617-34-5.
74. Dascâl, A., *The Analysis on How the Material From A Steam Boiler's Economizer Deals at High Temperature*, 12th International Research/Expert Conference Trends in the Development of machinery and Associated

- Technology TMT 08, 26 -30 August 2008 Istanbul, Bahçeşehir Üniversitesi, Turkey – Turcia, pp.1233, 8 pages, ISBN 9958-617-34-5.
75. Dascăl, A., *Numerical Research on the Optimization of the Chemical Composition for OLT 35k Steel With a View to Obtaining Superior Mechanical Features at High Temperature*, 12th International Research/Expert Conference Trends in the Development of Machinery and Associated Technology TMT 08, 26 -30 August 2008 Istanbul, Bahçeşehir Üniversitesi, Turkey – Turcia, pp.1217, 4 pages, ISBN 9958-617-34-5.
76. Benea, C., Benea, L., *The “green” prices – a reflection of the responsibility for protecting the environment*, 3rd Conference with International Participation management of systems, Presov, Faculty of Manufacturing Technologies, Technical University of KOSICE, pp.58, 6 pages, ISBN 978-80-553-0069-6.
77. Budiul Berghian, A., Vasiu, T., *Methods to determine the preventive maintenance cycles of shears type mechanisms assigned to cut metallurgical products*, International Symposium about Forming and Design in Mechanical Engineering, KOD 2008, Novi Sad, Serbia, pp.433, 6 pages, ISBN 978-86-7892-104-9.
78. Vasiu, T., Budiul Berghian, A., *Statistical processing of results for the predictive maintenance of an industrial fan*, International Symposium about Forming and Design in Mechanical Engineering, KOD 2008, Novi Sad, Serbia, pp.287, 4 pages, ISBN 978-86-7892-104-9.
79. Alexa V, Kiss I, *The Company Theory - Programme in the Matlab area for simulation a market structure*, Management of Manufacturing Systems MMS-2008 – 3rd Conference With International Participation, Presov, Slovakia, pp.200, 4 pages, ISBN 978 – 80 – 553 – 0069 – 6.
80. Kiss, I., Maksay S., *The semihard cast nodular iron rolls mechanical properties in some graphical addenda*, The 5th Symposium About Shaping, Industrial And Product Design - Kod 2008, Vol.1, 6 pages, ISBN 86 – 85211 – 92–1.
81. Kiss, I., Alexa, V., Cioata, V., *Quality assurance in the rolling-mill rolls manufacturing – approaches and tendencies*, Management Of Manufacturing Systems Mms-2008 – 3rd Conference With International Participation, Vol.1., 6 pages, ISBN 978 – 80 – 553 – 0069 – 6.
82. Kiss, I., Mihut, G., Popa, E., *Industrial review in the rolling-mill cast-iron rolls manufacturing*, Management Of Manufacturing Systems Mms-2008 – 3rd Conference With International Participation, Vol.1., 6 pages, ISBN 978 – 80 – 553 – 0069 – 6.
83. Kiss I., Alexa V., Cioata V., *Experimental research of the thermal stress in the rolling mill rolls*, Annual Conference of the Anghel Kanchev University of Russe, Vol.1., 4 pages.
84. Kiss, I., Cioata, V., Alexa, V., *Approaches of the experimental durability researches upon the exploitation of rolling mill rolls*, Annual Conference of the Anghel Kanchev University of Russe, Vol.1., 4 pages
85. Josan, A., Putan, V., *The use of informatical systems for data processing acquired in metallurgical company*, the 8th National Conference “Professor Dorin Pavel – romanian hydrotechnique founding”, Science and Engineering, vol.XIII, Sebeş, AGIR House, 2008, ISBN 973-8130-82- 4, pp 429-432.
86. Ioan, I., *University scientific research – organization, content and method, Part I*, the 8th National Conference “Professor Dorin Pavel – Romanian hydrotechnique founding”, Science and Engineering, vol.XIII, Sebeş, AGIR House, 2008, ISBN 973-8130-82- 4, pp 65-72.
87. Ioan, I., *University scientific research – organization, content and method, Part II*, the 8th National Conference “Professor Dorin Pavel – Romanian hydrotechnique founding”, Science and Engineering, vol.XIII, Sebeş, AGIR House, 2008, ISBN 973-8130-82- 4, pp 73-76.
88. Ilca, I., Cioată, V. G., *Research on the quality characteristics of the parts obtained through semisolid die-forging*, The 3th National Conference of Technichal Science Roumanian Achademy, Cluj Napoca, nov. 2008, pp.439-446.
89. Panoiu, C., Panoiu, M., Toma, L., Rob, R., *Properties of IIR-OSLMS Adaptive Filters*, Proceedings of the 27th IASTED International Conference on Modelling, Identification and Control, Innsbruck, Austria, febr. 2008, pp. 460-465.
90. Panoiu, C., Panoiu, M., Toma, L., Rob, R., *Temperature adaptive control based on modeling the heating process of an electric resistance furnace*, Proceedings of the 16th IASTED International Conference on Applied Simulation and Modelling (ASM 2008), Corfu, Greece, june, 2008 pp. 460-465.
91. Panoiu, M., Panoiu, C., Sora, I., *Simulation results regarding harmonics filtering, reactive power compensation and load balancing on power loads*, Proceedings of the 16th IASTED International Conference on Applied Simulation and Modelling (ASM 2008), Corfu, Greece, june 2008 pp. 71-76.
92. Panoiu, M., Panoiu, C., Iordan, A., Rob, R., *Simulation Results Regarding High Power Loads Balancing*, Proceedings of 12th WSEAS International Conference on Systems, Heraklion, Greece, july 2008, Source: New Aspects of Systems, PTS I and II, Book

- Series: Mathematics and Computers in Science and Engineering, pp. 614-619.
93. Panoiu, M., Panoiu, C., Sora, I., Rob, R., *Study about the possibility of flicker effect simulation caused by nonlinear power loads*, Proceedings of the 8th WSEAS International Conference on Systems Theory and Scientific Computation, Book Series: Mathematics and Computers in Science Engineering, pp. 142-147, Rodos, Greece, august 2008.
 94. Panoiu, C., Panoiu, M., Toma, L., Rob, R., *A real-time Identification Method of a slow Process Parameters Using an Adaptive Algorithm*, Proceedings of the 8th WSEAS International Conference on Systems Theory and Scientific Computation, Book Series: Mathematics and Computers in Science Engineering, pp.148-153, Rodos, Greece, august 2008.
 95. Panoiu, M., Panoiu, C., Sora, I., Iordan, A., *Adaptive Control of the Active Power of an Electric Arc Furnace*, Proceedings of the 4th WSEAS/IASME International Conference on Dynamical Systems and Control, Corfu, Greece, october 2008, Book Series: Mathematics and Computers in Science and Engineering, pp. 85-90.
 96. Pănoiu, M., Pănoiu, C., Osaci, M., Muscalagiu, I., *Simulation Result about Harmonics Filtering using Measurement of Some Electrical Items in Electrical Installation on UHP EAF*, WSEAS Transactions on Circuits and Systems, Issue 1, Volume 7, pp. 22-31.
 97. Panoiu, M., Panoiu, C., Sora, I., Iordan, A., Rob, R., *Using simulation for study the possibility of canceling load unbalance of non-sinusoidal high power three-phase loads*, WSEAS Transactions on Systems, Issue 7, vol 7, pp. 699-710.
 98. Panoiu, M., Panoiu, C., Sora, I., Rob, R., *Simulation of the Flicker Phenomenon based on Modeling the Electric Arc*, WSEAS Transactions on Systems, Issue 10, Volume 7, pp. 1132-1142.
 99. Panoiu, M., Panoiu, C., Sora, I., Iordan, A., *Study about the Process Control of an Electric Arc Furnace using Simulations based on an Adaptive Algorithm*, WSEAS Transactions on Information Science and Applications, Issue 11, Volume 5, pp. 1628-1637.
 100. Panoiu, C., Panoiu, M., Toma, L., Rob, R., *A Real-Time Identification Method of Slow Process Parameters Using Adaptive IIR-OSLMS Filters*, WSEAS Transactions on Systems, Issue 10, Volume 7, october 2008, pp.1143-1154.
 101. Panoiu, M., Panoiu, C., Deaconu, S.I., *Study about the possibility of electrodes motion control in the EAF based on adaptive impedance control*, 13th International Power Electronics and Motion Control Conference, Poznan, Poland, september 2008, pp 1409-1415.
 102. A. Iordan, G. Savii, M. Pănoiu, C. Pănoiu, *Development of a Dynamical Software for Teaching Plane Analytical Geometry*, Proceedings of the 5th WSEAS International Conference on Engineering Education, Book Series: New Aspects of Engineering Education, Heraklion, Greece, July 22-24, 2008, pp. 55-60, ISBN 978-960-6766-86-2, ISSN 1790-2769.
 103. A. Iordan, G. Savii, M. Pănoiu, C. Pănoiu, *Development of a dynamical software for doing geometrical constructions*, Proceedings of the 8th WSEAS International Conference on Applied Informatics and Communications, Book Series: New Aspects of Applied Informatics and Communications, Rodos, Greece, august 20-22, 2008, pp. 104-109, ISBN 978-960-6766-94-7, ISSN 1790-5109.
 104. A. Iordan, G. Savii, M. Pănoiu, C. Pănoiu, *Multimedia Interactive Environment for Study the Plane Analytical Geometry*, Wseas Transactions on Computers, Volume 7, october 2008, pp. 1564-1573, ISSN 1109-2750.
 105. C. Abrudean, M. Pănoiu, *Software application implemented in Java for electrical lines dimensioning*, Proceedings of the 8th WSEAS International Conference on Applied Computer Science, Book Series: Recent Advances on Applied Computer Science, Venice, Italy, november 2008, p. 414-418.
 106. C. D. Cuntan, I. Baciu, *Adaption System of the Continuous Voltage Level for Controlling the Water Flow Adjustment at the Secondary Cooling in The Continuous Casting Process*, Proceedings of the 7th WSEAS International Conference on System Science and Simulation in Engineering (ICOSSSE '08), pp. 95-99, ISBN 978-960-474-027-7.
 107. C. D. Cuntan, I. Baciu, *Adaption Circuit of a Fuzzy Controller Input Voltage for Controlling the Adjustment System of the Withdrawal Speed of the Steel From the Mould in Continuous Casting*, The Knowledge Based Organization The 14th International Conference, Conference Proceedings 7, pp. 237-244, ISSN 1843-6722.
 108. I. Muscalagiu, J. Vidal, V. Cretu, H.E. Popa, M. Panoiu, *Experimental analysis of the Effects of Agent Synchronization in Asynchronous Search Algorithms*, International Journal of Software Engineering and Knowledge Engineering, Volume 18, No. 4 (2008) pp. (1-18), Special Issue on Mobile Agent Software, august 2008.
 109. H.E. Popa, V. Negru, D. Pop, I. Muscalagiu, *DL-AgentRecom - A multi-agent based recommendation system for scientific document*, Proceedings of the 10th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC

- 2008), 26-28 september 2008, Timisoara, Romania, 2008.
- 110.H.E. Popa, V. Negru, D. Pop, I. Muscalagiu, *DL-AgentRecom - A multi-agent based recommendation system for scientific document*, Synasc, Tenth International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2008), IEEE Computer Society Press, in editing.
- 111.A. Iagar, C. Abrudean, C. M. Dinis, C. Panoiu – *Research upon optimization of the volume induction heating process*, Metalurgia International, vol. XIII, no. 9, 2008, pp. 27-31, ISSN 1582-2214.
- 112.A. Iagar, G. N. Popa, I. Sora - *Study about Electromagnetic Compatibility of Line Frequency Coreless Induction Furnaces*, Proceedings of the 8th WSEAS International Conference on Power Systems (PS 2008), Santander, Cantabria, Spain, september 23-25, ISSN 1790-5117, ISBN 978-960-474-006-2, pp. 95-100.
- 113.A. Iagar, G. N. Popa, C.M. Dinis – *Power Quality Measurement for Line Frequency Coreless Induction Furnaces in MV Network*, Proceedings of the 8th WSEAS International Conference on Electric Power Systems, High Voltages, Electric Machines (POWER'08), Venice, Italy, november 21-23, 2008, ISSN 1790-5117, ISBN 978-960-474-006-2, pp. 153-158.
- 114.C.M. Diniş, E. Pop, A. Iagăr, G.N. Popa, *Researches upon the hierarchical control of a conveyor belt system from the sintering plants*, Metalurgia International, Vol. XIII (2008), No. 9, august, Romania, pp. 54-62, ISSN 1582-2214.
- 115.C.M. Diniş, G.N. Popa, A. Iagăr, *Modeling and Simulation of Processes from an Iron Ore Sintering Plant*, Proceedings of the 7th WSEAS International Conference on Systems Science and Simulations in Engineering (ICOSSSE'08), november 21-23, 2008, Venice, Italy, pp. 119-124, ISBN 978-960-474-027-7.
- 116.C.M. Dinis, G.N. Popa, S. Deaconu, C.D. Cuntan, *Sizing of power factor improving electrical installation for woodwork workshop*, the 8th National Conference with International Participations "Prof. Dorin Pavel - the romanian hydroenergetic founder", Sebes, Volume 13, Science and Engineering, AGIR House, pp. 255-262.
- 117.S. I. Deaconu, G. N. Popa, I. Popa, *Increasing the energetic efficiency in producing of electric and thermal power in thermal power plants by using of variable speed*, WSEAS Transactions on Systems, Volume 7, Issue 9, september 2008, pp. 834-843, ISSN 1109-2777.
- 118.S.I. Deaconu, G.N. Popa, I. Popa, V. Beldean, *Solar energy usage in rural areas with and without electrical grid connections*, Journal of Automation and Instrumentation no. 5/2008 pp. 30.
- 119.S.I. Deaconu, G.N. Popa, I. Popa, S.C. Pop, C.M. Dinis, *Automation Of The Transport And Dosage System For The Ladle-Furnace Installation*, Bulletin of the Politehnic Institute of Iasi, vol. LIV - Electrotechnics, Energetics, Electronics, issue 4 / 2008 pp. 567-572, ISSN 1223-8139.
- 120.S.I. Deaconu, G.N. Popa, I. Popa, *Electrification on isolated villages in mountain areas by 1 kV grids*, Journal of Automation and Instrumentation, Nr. 2/2008, pp. 26.
- 121.S. I. Deaconu, G. N. Popa, C.M. Diniş, I. Popa, *Comparative study of the methods for starting-up the inductions motors by softstarter*, Proceedings of the 14th National Conference on Electrical Drives, september 25-26, 2008, Timisoara, Romania, Tom 53(67), Scientific Bulletin of the Politehnica University of Timisoara, Romania, Transaction of Power Engineering, pp. 93-96, ISSN 1582-7194.
- 122.S. I. Deaconu, G. N. Popa, I. Popa, *Optimizing the Operation of an Urban District Heating System by Means of Variable Speed Drives*, 12th WSEAS International Conference on Systems, Heraklion, Greece, july 22-24, 2008, pp. 149-154, ISBN 978-960-6766-83-1.
- 123.S. I. Deaconu, L. Tutelea, G. N. Popa, I. Popa, C. Abrudean, *Optimizing the Designing of a Reactive Homopolar Synchronous Machine with Stator Excitation*, Proceedings IECON 2008, 34th Annual Conference of the IEEE Industrial Electronics Society, IEEE Catalog Number CFP08IEC-CDR, pp.1311-1318, ISBN 978-1-4244-1766-7.
- 124.S.I. Deaconu, G. N. Popa, I. Popa, C.M. Dinis, *Study of the influence of initial voltage on the connection time for the bypass contacto*, 8th National Multidisciplinary Conference with international participation "Professor Dorin PAVEL - founder of Romanian hydroenergetics " Sebes, 2008, Vol. 13 Science & Engineering, AGIR publishing House, ISBN 978-973-720-197-3, pp. 263-268.
- 125.G.N.Popa, I. Şora, V.Vaida, I. Popa, S.I.Deaconu, *Analysis of Some Solutions that Improve Performances of Plate-Type Electrostatic Precipitators*, WSEAS Transactions on Circuits and Systems, Issue 8, Volume7, august 2008, ISSN 1109-2734, pp. 843-854.
- 126.G.N. Popa, S.I. Deaconu, I.Popa, *Analysis of the Corona Currents in an Electrostatic Discharge System in Normal Atmospheric Pressure and Temperature*, WSEAS Transactions on Systems, Issue 9, Volume 7, september 2008, ISSN 1109-2777, pp.814-823.

- 127.G.N.Popa, V.Vaida, A.Iagăr, C.M. Diniş, *Improvement of Technological and Electric Performances for Plate-Type Electrostatic Precipitators with Three-Sections*, WSEAS Transactions on Power Systems, Issue 8, Volume 8, august 2008, ISSN 1790-5060, pp.557-566.
- 128.G.N. Popa, I. Şora, V. Vaida, S.I.Deaconu, I. Popa, *Solutions to Improve Dust Collection with Plate-Type Electrostatic Precipitators*, Automation and Information. Theory and Advanced Technology, Proceedings of the 9th WSEAS International Conference on Automation and Information (ICAI '08), Bucharest, Romania, 24-26 june, 2008, pp.282-287, Published by WSEAS Press, ISBN 978-960-6766-77-0, ISSN 1790-5117.
- 129.G.N. Popa, I. Şora, V. Vaida, I. Popa, S.I. Deaconu, *Analysis of Mathematical Models of Current-Voltage Characteristics for Plate-Type Electrostatic Precipitators*, Automation and Information. Theory and Advanced Technology, Proceedings of the 9th WSEAS International Conference on Automation and Information (ICAI '08), Bucharest, Romania, 24-26 june, 2008, pp. 288-292, Published by WSEAS Press, ISBN 978-960-6766-77-0, ISSN 1790-5117.
- 130.G.N. Popa, S.I. Deaconu, I. Popa, *Analysis of the Corona Currents from Pins to Plate Geometry*, New Aspects of Systems, Part I, Proceedings of the 12th WSEAS International Conference on Systems (SYSTEMS '08), Heraklion, Greece, 22-24 july, Published by WSEAS Press, 2008, pp.143-148, ISBN 978-960-6766-83-1, ISSN 1790-2769.
- 131.G.N. Popa, V. Vaida, A. Iagăr, C.M. Diniş, *Simulations and Measurements of Some Parameters from Plate-Type Electrostatic Precipitators with Three Sections*, Proceedings of the 2nd WSEAS/IASME International Conference on Energy Planning, Energy Saving, Environmental Education, Corfu, Greece, 26-28 october, 2008, pp.106-112 ISBN 978-960-474-016-1, ISSN 1790-5095.
- 132.G.N. Popa, I. Popa, C.M. Diniş, A. Iagăr, *Resistive Stepped Transducer Used for Water Level Measurement*, Proceedings of the 1st WSEAS International Conference on Sensors and Signals, Bucharest, 7-9 november, 2008, pp.66-71, ISBN 978-960-474-021-5, ISSN 1790-5117.
- 133.G.N. Popa, I. Popa, S.I. Deaconu, C.M. Diniş, *Time control for a belt conveyers system*, The 8th National Conference with International Participations "Prof. Dorin Pavel - the romanian hydroenergetic founder", Sebes, Vol. 13, Science and Engineering, AGIR House, pp. 255-262.
- 134.I. Popa, G.N.Popa, S.I. Deaconu, *Electronic time relay with 8 functions, made with integrate logical devices*, The 8th National Conference with International Participations "Prof. Dorin Pavel - the romanian hydroenergetic founder", Sebes, Vol. 13, Science and Engineering, AGIR House, pp. 249-254.
- 135.I. Popa, G.N. Popa, S.I. Deaconu, C.M. Diniş, *Analytical Method of the Start Time of Three-Phase Induction Motors with Resistance Torque Dependent by Square Speed*, Proceedings of the 14th National Conference of Electrical Drives, Timisoara, september 197-201, 2008, pp.197-200.
- 136.G.N. Popa, S.I. Deaconu, A. Toma, C.M. Diniş, I. Popa, *Analysis of Some Solutions for Diminishing the Harmonics and Improving the Power Factor in an Electric Steel Shop*, Polytechic Institute Bulletin Iasi, Electrotechnics, Energetics, Electronics, Tom LIV (LVIII), Fasc. 4 pp.1053-1058.
- 137.M. Osaci, Determination of the effective magnetic anisotropy constant of ferrite nanoparticles dispersed in organic matrix, Indian Journal of Physics and Proceedings of the Indian Association for the Cultivation of Science, vol.82(12), pp. 1671-1679, ISSN 0019-5480, impact factor 0,32.
- 138.M. Osaci, A.D. Berdie, Ş. Maksay, *A simulation Method of the magneto-dielectric materials behavior in radiofrequency fields by interactive graphical interface*, The 8th National Conference with International Participations "Prof. Dorin Pavel - the romanian hydroenergetic founder", Sebes, Vol. 13, Science and Engineering, AGIR House Bucharest, 2008.
- 139.M. Osaci, A.D. Berdie, A.D. Cristea, The nanoparticles disposal influence on magnetic relaxion time for a ultrafine magnetic particle dispersed system, National Conference of Metallurgy and Materials Science ROMAT 2008 Proceedings, pp.225-231, Bucharest, Romania, ISBN 978-606-521-077-6.
- 140.A.D. Cristea, A.D. Berdie, M.Osaci, *User's Interfaces with Web Dynpro ABAP and Web Dynpro Java*, The Knowledge Based Organization The 14th International Conference, Sibiu, Conference proceedings 7, pp. 237-244, ISSN 1843-6722.
- 141.Ş. Maksay, F. Weber, *Statistical estimate of safety at variable loading, through asymmetrical cycles*, using a parabolised approach, Journal of Engineering, Annals of Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2665, Tome VI, Fasc. 1, pp. 195-196.
- 142.Ş. Maksay, D.A. Bistriian, *Cauchy model using two-dimensional quadrangular truncated distribution*, Journal of Engineering, Annals of

- Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2673, Tome VI, Fasc. 3, pp. 79-82.
- 143.Ş. Maksay, D.A. Bistriian, *A computational study upon the Burr 2-dimensional distributions*, Journal of Engineering, Annals of Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2665, Tome VI, Fasc. 1, pp. 191-195.
- 144.Ş. Maksay, D.A. Bistriian, *An algorithm for truncated 4-dimensional modelling using MATLAB computer algebra system*, Journal of Engineering, Annals of Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2673, Tome VI, Fasc. 3, pp. 9-14.
- 145.Ş. Maksay, D.A. Bistriian, *The normal three-dimensional distribution parallelepipedically truncated*, International multidisciplinary symposium “Universitaria SIMPRO 2008”, Mathematics-Informatics and Physics, 2008, ISSN 1842-4449, pp.5-10, Petrosani.
- 146.Ş. Maksay, D.A. Bistriian, *Optimization of three-dimensional truncated von Mises modeling*, The 14th International Conference, Knowledge Based Organisation, Technical Sciences Computer science, Modeling & Simulation and E-Learning Technologies. Physics, Mathematics and Chemistry, Conference Proceedings 8, 2008, ISSN 1843-6722, pp. 255-262, Sibiu.
- 147.Ş. Maksay, D.A. Bistriian, M. Osaci, A.D. Berdie, *Computational optimization of a three-dimensional Burr modelling*, International Conference “Profesorul Dorin Pavel”, Science and Engineering, vol.14, 2008, ISBN 973-8130-82-4, ISBN 978-973-720-198-0, p. 367-374, Sebeş.
- 148.L.D. Lemle, *$L^1(\mathbb{R}^d, dx)$ -uniqueness of weak solutions for the Fokker-Planck equation associated with a class of Dirichlet operators*, Electronic Research Announcements in Mathematical Sciences, vol. 15, 2008, ISSN 1935-9179, pp. 65-70.
- 149.L.D. Lemle, *Desch-Schappacher perturbation theorem for C_0 semigroups on the dual of a Banach space*, Acta Universitatis Apulensis Mathematics Informatics, vol. 15, 2008, ISSN 1582-5329, pp.191-194.
- 150.L.D. Lemle, *L^∞ -uniqueness of Schrödinger operators restricted in an open domain*, The 21st International Conference on Operator Theory, Timisoara, 2008, Hot Topics in Operator Theory. Theta Ser. Adv. Math. 9, Theta, Bucharest, 2008, eds (R.G. Douglas, J. Estrele, D. Gaspar, D. Timotin, F-H Vasilescu), ISBN-10: 973-87899-2-3; ISBN-13: 978-973-87899-2-0, pp.137-143.
- 151.L.D. Lemle, *Hille-Yosida theorem for C_0 -semigroups on the dual of a Banach space*, International multidisciplinary symposium “Universitaria SIMPRO 2008”, Mathematics-Informatics and Physics, 2008, ISSN 1842-4449, pp.16-18, Petroşani.
- 152.D.A. Bistriian, Ş. Maksay, *Finite element algorithm for velocity profile of a laminar bounded flow*, Journal of Engineering, Annals of Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2673, Tome VI, Fasc. 3, pp. 73-78.
- 153.D.A. Bistriian, M. Iakob, *One-dimensional truncated von Mises distribution in data modeling*, Journal of Engineering, Annals of Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2673, Tome VI, Fasc. 3, pp. 15-22.
- 154.D.A. Bistriian, Ş. Maksay, *Reduced model for temporal stability of a Q-Vortex*, Journal of Engineering, Annals of Faculty of Engineering Hunedoara, 2008, ISSN 1584 – 2673, Tome VI, Fasc. 3, pp. 307-311.
- 155.D.A. Bistriian, Ş. Maksay, *Approximate method for numerical investigation of temporal stability of swirling flows*, International multidisciplinary symposium “Universitaria SIMPRO 2008”, Mathematics-Informatics and Physics, 2008, ISSN 1842-4449, pp.11-15, Petroşani.
- 156.D.A. Bistriian, Ş. Maksay, St., *Approximate modelling of degree 4 of sliding second order phenomena*, The 14th International Conference, Knowledge Based Organisation, Technical Sciences Computer science, Modeling & Simulation and E-Learning Technologies. Physics, Mathematics and Chemistry, Conference Proceedings 8, 2008, ISSN 1843-6722, pp. 249-254, Sibiu.
- 157.D.A. Bistriian, Ş. Maksay, *Numerical spectral study for viscous temporal stability of a trailing vortex*, The 14th International Conference, Knowledge Based Organisation, 2008, Technical Sciences Computer science, Modeling & Simulation and E-Learning Technologies. Physics, Mathematics and Chemistry, Conference Proceedings 8, ISSN 1843-6722, pp. 241-248, Sibiu.
- 158.D. Stoica, M. Tomescu, A. Minda, *Economic Models with Discrete Time. State of Equilibrium*, Annals of “Eftimie Murgu” University, 2008, nr. 1, pp. 427-436, ISSN 1453 – 7394, Reşiţa.
- 159.A. Minda, D. Stoica, M. Tomescu, *Solving Nonlinear Equations with Mathematica*, Annals of “Eftimie Murgu” University, 2008, nr. 1, pp. 261-268, ISSN 1453 – 7394, Reşiţa.
- 160.D. Stoica, *Stochastic evolution cocycles*, Proceeding of the International Symposium “Research and Education in Innovation Era” 2nd Edition, 2008, 2065-2569, Arad, Romania.
- 161.A. Minda, M. Tomescu, D. Stoica, *Solving Differential Equation with Mathematica*, The 14th International Conference, Knowledge Based Organisation, Technical Sciences Computer science, Modeling & Simulation and

- E-Learning Technologies. Physics, Mathematics and Chemistry, Conference Proceedings 8, 2008, ISSN 1843-6722, pp. 323-329, Sibiu.
162. Tirian G.O, Pinca C, *Software implementation of a neuronal system which enables the prediction of the wire breaking during continuous casting*, WSEAS International Conference on CSECS'08,15-17 Decembrie, Spain.
- 163.Tirian G.O, Pinca C., *The dimensional optimization of a cardanic cross according to the analysis based on finite elements*, Annals of he Faculty of Engineering Hunedoara, 2008, Tome VI, Fasc.3, ISSN 1584 – 2673.
- 164.Tirian G.O, *Numerical system for temperature measuring*, Annals of he Faculty of Engineering Hunedoara, 2008, Tome VI , Fasc.3, ISSN 1584 – 2665.
- 165.Tirian G.O, *System of automatic regulation of the relation between two flows*, Annals of he Faculty of Engineering Hunedoara, 2008, Tome VI, Fasc.I, ISSN 1584–2665.
- 166.Tirian G.O, *Neural system for detecting cracks in the wire at the continuous casting*, 12th Internatinal Research/Expert Conference „Trends in the development of machinery and associated technology”, 26-29Aug.2008, Istanbul – Turkey, TMT 2008.
- 167.Topor Marcel, Chun Yon Do Koo, Dae Hyun, Han, Pil Wan, Woo, Byung Chul, Boldea Ion, *Application of flux reversal principle for axial flux permanent magnet machines*, Journal of Applied Physics, Vol, 103 Issue 7, ISSN: 0021-8979, impact factor 2.171.
- 168.R. Rob, S.I. Deaconu, G.N. Popa, I. Popa, C. Panoiu, *Automatic Separation of the 20kV Electrical Open Lines Faults*, The 8th edition of the "Professor Dorin Pavel - the founder of the romanian hydrotechnics, National Conference, SEBES, 2008, Science and Engineering, vol. 13, pp.269-274, ISBN 973-8130-82-4.
- Reducing the degree of pollution in the siderurgic, energetic and mining industry
 - Improving the parameters of the continuous casting technology of the steels and the extension of the continuous casting to a various range of tipodimensions of semi-finished products
 - The management of the process of secondary cooling for steel continuous casting
 - Identification ,control and optimization of metallurgical pocesses
 - Strength of materials, elasticity and plasticity
 - Applications of the thermal fatigue in the automotive engines
 - Thermodynamics and heat transfer analysis.
 - The numerical simulation of the hot rolling process for analyze the durability in exploitation of the mill rolls
 - Development of some mathematical models for electric arc for simulating the electric installation of the EAF in order to control de process and to reduce the electromagnetic pollution and power consumption.
 - Analyze and measure the electromagnetic pollution level caused by mobiles and wireless electronic equipments
 - Development of applications on produced electrical energy with variable speed.
 - Estabilish the electrical performances of static frequency converter for use in microhydro and eolian power plant
 - Modelling and control of industrial processes using Fuzzy logic;
 - The management of the process of secondary cooling for steel continuous casting
 - Simulation and data acquisition using the LABView software.
 - The expansion of the NetLogo models, used at the implementation of the asynchronous techniques to allow the agents to operate with multiple variables.
 - The introduction of the new problems for the analysis of the asynchronous techniques, problems which are called “binary random problems”, which allow the more exact study of the asynchronous techniques behavior.
 - Research concerning electromagnetic compatibility of industrial frequency crucible induction furnaces (designing an harmonics filters installation for industrial frequency crucible induction furnaces, in such way to be satisfied the EMC European norms).
 - Development of some mathematical models 2D and 3D based on FMD, and of some simulating programs, able to allow numerical control of induction heating for pieces with complex shape
 - Development of applications on programmable logic controller used in industry;

PERSPECTIVES, INTERESTS, STRATEGIC PRIORITIES

- The assimilation into manufacturing of some new technologies of elaboration and casting of carbon and allied steels
- Perfecting the technologies of elaboration and casting of carbon and allied steels in the way of improving the physical, mechanical and technological characteristics
- The reduction of the electric and thermic energy consumption, raw and auxiliary materials, refractory materials, specific metal consumption
- Reintroducing into the economic circuit of some metallic scraps with iron content, came from different industrial branches (siderurgical industry, energetical industry, mining industry, mechanical engineering, chemical industry, etc.)

- Establish the electrical performances of inverter power sources and fluorescent lamps with electronic ballast
- Modelling and control of industrial processes using Fuzzy logic
- Simulation and data acquisition using the LABView software
- Researches upon the hierarchical control of a conveyor belt system from the sintering plants
- Identification ,control and optimization of metallurgical processes
- Modelling and control of industrial processes using Fuzzy logic
- Simulation and data acquisition using the LABView software
- Researches upon the hierarchical control of a conveyor belt system from the sintering plants
- Identification ,control and optimization of metallurgical processes
- Contributions on modelling and simulation of the disperse systems of magnetic nanoparticles behavior in dynamics fields by implementation of some simulation stochastic models
- Development of numerical algorithms for hydrodynamic stability studies using computer simulations of steady flows and swirling flows;
- Development of methodologies for analyzing the vortex structures by using the linear stability analysis
- Automation of industrial instalation using neuro-fuzzy systems with aplication in continuous casting and electric railway

RESEARCH TEAMS

1. Increasing the life span of industrial equipment

- Assoc.prof.dr.eng. Teodor Vasiu
- Assist.dr. eng. Adina Budiul Berghian
- Assist. Diana Stoica

2. State of stress, deformations and vibrations analysis on deformation mechanics systems constrained on static and dynamic strain

- Assoc. prof. dr. eng. Carmen Alic
- Assoc. prof. dr. eng. Imre Miklos
- Lecturer dr. eng. Vasile George Cioată
- Lecturer dr. eng. Zsolt Miklos
- Assist. eng. Cristina Miklos

3. Theoretical and experimental researches regarding the prediction of workpiece machining error

- Lect. dr. eng. Cioată Vasile George
- Lect. dr. eng. Kiss Imre
- Lect. dr. eng. Miklos Imre Zsolt

4. Theoretical and experimental researches regarding the die-forging of the metallic alloys in semisolid state

- Lect. dr. eng. Cioată Vasile George
- Prof. dr. eng. Hepuț Teodor

- Lect. dr. eng. Kiss Imre
- Lect. dr. eng. Alexa Vasile

5. Analysis of the moulding–casting technology of the rolling mill cylinders

- Lect. dr. eng. Josan Ana
- Lect. dr. eng. Putan Vasile
- Lect. dr. eng. Petre Doina

6. Processing in semi-solid status of metallic alloys

- Prof. dr. eng. Ioan Ilca
- Lect. dr. eng. George Vasile Cioată
- Lect. dr. eng. Vasile Alexa
- Assist. dr. eng. Imre Kiss
- Assist. Daniela Stoica (cas. Milostean)

7. Optimization of the thermal regime of steel on the direction of furnace–secondary treatment unit – continuous casting installation

- Lect. dr. eng. Erika Ardelean
- Lect. dr. eng. Ana Socalici
- Lect. dr. eng. Marius Ardelean
- Lect. Dr.eng. Corina Cunțan
- Assist. eng. Erika Popa
- Assist. eng. Cristian Abrudean

8. Refractories with complex functions used in the steel industry, made by modern technologies

- Prof.dr.eng. Teodor Hepuț
- Lect. dr. eng. Erika Ardelean
- Lect. dr. eng. Ana Socalici
- Lect. dr. eng. Marius Ardelean
- Lect. dr. eng. Laura Benea
- Lect. Dr.eng. Ana Josan
- Prof.dr. Ștefan Maksay
- Assist. Adrian Bleoca

9. Integrated technology used to obtain some non-conventional energy technological sources, used as raw materials for steel making

- Prof.dr.eng. Teodor Hepuț
- Lect. dr. eng. Erika Ardelean
- Lect. dr. eng. Ana Socalici
- Lect. dr. eng. Marius Ardelean
- Lect. dr. eng. Caius Pănoiu
- Asist.dr.eng. Adrian Găvănescu
- Lect. dr. eng. Mihaela Osaci
- Lect. dr. eng. Vasile Puțan

10. Advanced technology direction of pieces case-hardening industrial process in induced current

- Prof.dr.eng. Teodor Hepuț
- Lect. dr. eng. Erika Ardelean
- Lect. dr. eng. Ana Socalici
- Lect. dr. eng. Marius Ardelean
- Assoc.prof.dr.eng. Caius Pănoiu
- Assoc.prof.dr.eng. Manuela Pănoiu
- Lect. dr. eng. Vasile Puțan

- Lect. dr. eng. Gabriela Mihuş
 - Lect. dr. eng. Doina Petre
- 11. Assimilating, making, casting of iron, steel and non-ferrous alloys**
- Lect. dr. eng. Virginia Socalici
 - Lect. dr. eng. Erika Ardelean
 - Lect. dr. eng. Marius Ardelean
 - Lect.dr.eng. Camelia Pinca-Bretotean
 - Assist. eng. Erika Popa
- 12. Prevention and fighting pollution in the steel making, energetic and mining industrial areas through the recycling of small-size and powdering wastes**
- Prof.dr.eng. Teodor Heput
 - Lect. dr. eng. Erika Ardelean
 - Lect. dr. eng. Ana Socalici
 - Lect. dr. eng. Marius Ardelean
 - Assoc.prof.dr.eng. Caius Pănoiu
 - Assoc.prof.dr.eng. Manuela Pănoiu
 - Lect. dr. eng. Vasile Puţan
 - Lect. dr. eng. Ana Josan
- 13. Numerical modeling and control of the induction heating electro-technology**
- Lect. dr. eng. Imre KISS
 - Lect. dr. eng. Vasile ALEXA
 - Lect. dr. eng. Vasile George CIOATA
 - Assist. drd. eng. Erika Monika POPA
 - Assist. drd. eng. Ovidiu Gelu TIRIAN
- 14. Optimization the process of bimetal lamination and the tables plating, using the asymmetrical rolling**
- Lect. dr. eng. Vasile ALEXA
 - Lect. dr. eng. Imre KISS
 - Lect. dr. eng. Vasile George CIOATA
 - Lect. dr. eng. Sorin RAŢIU
 - Assist. drd. eng. Adina BUDIUL
- 15. The analyses of the effects of the thermal shocks upon the hot rolling mill cylinders**
- Assoc.prof.dr.eng.Pinca-Bretotean Camelia
 - Assoc. prof. dr. eng. Vîlceanu Lucia
 - Assist.eng. Tirian Gelu Ovidiu
 - Lector. dr.eng. Dascăl Amalia
 - Lector.dr.eng. Ana Josan
- 16. Theoretical and experimental researches regarding the prediction of workpiece machining error**
- Lect. dr. eng. Cioată Vasile George
 - Lect. dr. eng. Kiss Imre
 - Lect. dr. eng. Miklos Imre Zsolt
- 17. Theoretical and experimental researches regarding the die-forging of the metallic alloys in semisolid state**
- Lect. dr. eng. Cioată Vasile George
 - Prof. dr. eng. Ilca Ioan
 - Assist. dr. eng. Miloştean Daniela-Cătălina
 - Lect. dr. eng. Kiss Imre
- 18. Analysis of heat transfer in thermal machines and automotive.**
- Assoc.prof.dr.eng. Vîlceanu Lucia
 - Lect. dr. eng. Vasile Puţan
 - Lect.dr.eng. Raţiu Sorin
- 19. Numerical analysis of the stress and strain state between the steel wires ropes.**
- Prof.dr.eng. Weber Francisc
 - Assoc.prof.dr.eng. Vîlceanu Lucia
 - Assoc.prof.dr.eng.Pinca-Bretotean C.
 - Lect. dr. eng. Dascăl Amalia
- 20. Analysis of the moulding–casting technology of the casting pieces**
- Lect. dr. eng. Josan Ana
 - Lect. dr. eng. Putan Vasile
 - Lect. dr. eng. Petre Doina
- 21. Numerical modeling and control of the induction heating electro-technology**
- Assoc. prof. dr. eng. Manuela Pănoiu
 - Assoc. prof. dr. eng. Caius Pănoiu
 - Lect. dr. Mihaela Osaci
 - Lect. dr. Ionel Muscalagiu
 - Teaching assistant Raluca Rob
 - Teaching assistant Anca Iordan
 - Teaching Assistant Cristian Abrudean
- 22. Development of some interactive environment for study mathematics, physics and computers science**
- Assist. Iordan Anca
 - Assoc. prof. dr. eng. Pănoiu Manuela
 - Assoc. prof. dr. eng. Pănoiu Caius
 - Assist. eng. Abrudean Cristian
- 23. Analysis of a reactive homopolar synchronous machine**
- Assoc. prof. dr. eng. Sorin Deaconu
 - Assoc. prof. dr. eng. Iosif Popa
 - Lecturer dr.eng. Gabriel Nicolae Popa
 - Assistant eng. Marcel Topor
 - Lecturer dr.eng. Maria Corina Diniş
- 24. Analysis of asynchronous single phase generator**
- Assoc. prof. dr. eng. Sorin Deaconu
 - Assistant eng. Marcel Topor
 - Lecturer dr.eng. Gabriel Nicolae Popa
 - Lecturer dr.eng. Maria Corina Diniş
- 25. Analysis of modern static frequency converters**
- Assoc. prof. dr. eng. Sorin Deaconu
 - Lecturer dr.eng. Gabriel Nicolae Popa
 - Assistant eng. Marcel Topor
 - Lecturer dr.eng. Angela Iagăr
- 26. EMI tests**
- Lect. dr. eng. Angela Iagăr
 - Assoc. prof. dr. eng. Caius Pănoiu
 - Assoc. prof. dr. eng. Sorin Deaconu
 - Lect. dr. eng. Popa Gabriel

- Assist. eng. Cristian Abrudean
 - Lect. dr. eng. Diniş Corina
 - Lect. dr. eng. Cunţan Corina
 - Lect. drd. eng. Baciui Ioan
- 27. Implementation and evaluation of the asynchronous search techniques in NetLogo:**
- Lect. dr. Muscalagiu Ionel
 - Lect. dr. Popa Horia Emil
 - Assoc. prof. dr. eng. Manuela Pănoiu
 - Assist. eng. Cristian Abrudean
 - Lect. Dr. Osaci Mihaela.
- 28. Numerical modeling and control of the induction heating electro-technology**
- Lect. dr. eng. Angela Iagăr
 - Assoc. prof. dr. eng. Caius Pănoiu
 - Assoc. prof. dr. eng. Sorin Deaconu
 - Lect. dr. eng. Popa Gabriel
 - Assist. drd. eng. Cristian Abrudean
- 29. Programmable Logic Controller Used in Industrial Applications**
- Lecturer dr.eng. Gabriel Nicolae Popa
 - Assoc. prof. dr. eng. Iosif Popa
 - Assoc. prof. dr. eng. Sorin Deaconu
 - Lecturer dr.eng. Corina Diniş
- 30. Analysis of Plate-Type Electrostatic Precipitators, Modern Inverter Welding Power Sources and Fluorescent Lamps with Electronic Balast**
- Lecturer dr.eng. Gabriel Nicolae Popa
 - Assoc. prof. dr. eng. Iosif Popa
 - Assoc. prof. dr. eng. Sorin Deaconu
 - Lecturer dr.eng. Angela Iagăr
- 31. Automation, neuro-fuzzy systems.**
- Assoc. prof. dr. eng. Nicolae Rusu
 - Lect. dr. eng. Stela Anghel
- Assist. eng. Gelu Ovidiu Tirian
- 32. Algorithms development in non-linear hydrodynamic problems of vortex motion and sliding phenomena**
- Assist. drd. Diana A. Bistran
 - Prof. dr. Ştefan Maksay
- 33. Numerical modeling of multidimensional data in variate problems**
- Prof. dr. Ştefan Maksay
 - Lect. dr. Dan L. Lemle
 - Assist. drd. Diana A. Bistran
 - Assist. drd. Diana M. Stoica
- 34. Modelling and simuling in nanomagnetism**
- Lect. dr. Mihaela Osaci
 - Assoc. prof. dr. eng. Manuela Pănoiu
 - Lect. dr. Muscalagiu Ionel
 - Assist. drd. Eng. Adela Berdie
 - Assist. drd. eng. Cristian Abrudean
- 35. Software architectures on itegrated systems**
- Prof. dr. Reinhold Haipl, BASF IT Services GmbH, Ludwigshafen, Germany (associate professor of University Politehnica Timisoara)
 - Lect. dr. Mihaela Osaci
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