

Table of Contents

Preface	v
Committees and Sponsors	vi

Chapter 1: Advanced Machining and Surface Engineering, Assembling Technologies

Structural and Technology Support Quality Improvement of Gear Coupling	
A. Mikhaylov, R. Grubka, A. Lahin, A. Nedashkovskiy and A. Guitouni	3
Increase of Firmness of Milling Cutters with Variable Cutting Velocities along the Length of Teeth Cutting Edges	
T. Al-Sudani, A. Mikhaylov, H. Dolhykh, S. Selivra and Z. Sahbi	8
Optimization of the Tool Life and the Cutting Speed in Terms of Productivity at Drilling of the Stainless Steel 10TiMoNiCr175	
A. Vlase, O. Blăjină and B. Vlase	13
Mathematical Model for Economic Optimization of the Tool Life and the Cutting Speed at Drilling of the Stainless Steel X6CrNiTi18-10	
O. Blăjină, A. Vlase and V. Darie	18
Intensification of Finish Turning of Stainless Steels with the Use of Technological Cutting Fluids	
V. Boguslavskiy, T. Ivchenko, V. Polchenko and I. Navka.....	23
The Influence of the Lubrication Method and the Cutting Regime on the Surface Roughness when Milling 7175 Aluminum Alloy	
V. Diciuc, M. Lobontiu, G. Bran and V. Lazar.....	28
Contribution at the Calculation and Variation in Time of the Surface Roughness Produced by Turning Process	
C. Buzatu and I.A. Orzan	33
Study of the Uncut Chip in 5 Axes Ball Nose End Milling for the Third Quadrant of the Tool Inclination	
M. Cosma	37
Performance Analysis of a Layout of an Assembly Line Supplied Based on Stock or Synchronous	
E. Nițu, A. Rotaru and A.C. Gavriluță	42
Experimental Design Methodology in Ball End Milling of C45 Material by Using Tool Tilt Angle - Analysis and Estimation of Surface Roughness Variation	
I. Pasca, M. Lobontiu, R. Čep and M. Banica.....	48
Contributions on the Influence of the Cutting Parameters and Constructive Geometrical Parameters of the Tool on the Precision of the Worm Gears Manufactured Using Whirling Thread Cutting	
G. Cretu and M. Coteață	54
Influence of the Temperature and Mechanical Stresses Generated by Milling Process in Machined Part Surfaces on their Accuracy	
N.C. Tămpu, M.C. Radu and B.A. Chirita.....	59
Mathematical Modeling of Thermocurrent Parameters for Roughness Assessment in Turning	
C.A. Cirstoiu	64

Design of an Automatic Tool Changer System for Milling Machining Centers	69
C. Obreja, G. Stan, D. Andrioiaia and M. Funaru	
V Prism Special for Centering Devices	74
E. Pămîntăș and F.V. Banciu	
Technological Failures Research at Aluminum Parts Processing on Automatic Lathes	79
E. Pămîntăș and C.G. Turc	
Computer Aided Measurement of Elastic Deformations of a Work Piece in the Turning Process	84
M. Boca, G. Nagit and M. Horodinca	
Cooling Capability of Cutting Fluids in Grinding	89
G.X. Yin and I. Marinescu	
Basic Research for the UV Fixed Abrasive Lapping Plate	95
I. Marinescu, L. Guo and P. Wei.....	
The Study of Elastic Strains of Parts from the Grinding Technological System	101
M. Casian	
A Comparison between the Wear of the Ball Nose End Mill Generated in 4 Axes Milling and in 5 Axes Milling	106
V. Diciuc	
Experimental Researches upon Changes of a Pipe's Roughness after Hydroformation	111
B.C. Vaceanu, G. Nagit and V. Huian	
Functional Modeling of an Assembly Line Supplied in Synchronous	116
A. Rotaru, A.C. Gavriliuță and E. Nițu	
High Precision Rotary Table Used on Milling Machining Centres	121
L. Mihăilă, G. Stan, C. Obreja and M. Pascu.....	
Surface Integrity of Ti6Al4V Alloy under Dry Sliding Conditions	126
Z. Doni, M. Buciumeanu and L. Palaghian.....	

Chapter 2: Forming Technologies

Determination of Technological Forces in the Incremental Forming Process	133
R. Breaz, M. Tera, O. Bologa and G. Racz.....	
Applying the Networks Division Method for Studying the State of Deformation of Semi-Finished Sheet Submitted to Technological Cutting Operations	138
A. Stancioiu and L. Luca.....	
Influence of the Blankholder Force on the Accuracy of the Rectangular Drawn Parts Made from Steel Sheets	143
N. Nanu, G. Brabie and M. Bologan	
The Residual Stress State Generated by Single Point Incremental Forming of Aluminum Metal Sheets	148
C. Radu, E. Herghelegiu, C. Tampu and I. Cristea	
Influence of the Clearances in the Stamping Device upon the Burrs Resulted on the Stamped Bearing Cages Windows	153
M.I. Ripanu, G. Nagit, V. Merticaru, A.M. Mihalache and I.I. Hurja	
Simulation of the Pressing Process with Combined Forces by Using ABAQUS Software	158
A. Mardari and S. Mazuru.....	
Influence of the Thickness Value on the Mechanical and Formability Properties of the CuZn37 Thin Sheet Metal	163
G. Brabie, N. Nanu and A. Jitaru	

Experimental Researches on the Limit Angle of Conical Parts Manufactured by Single Stage Incremental Forming on CNC Lathes	I. Neagoe, A.C. Filip and M.A. Vasiloni	168
Drawing Study of Sheet Bimetallic Brazed Parts	I. Olaru	173
Blank Shape Optimization in Deep Drawing with Combined Restraint	V. Paunoiu and V. Teodor.....	178
Methods to Increase the Rigidity of the C-Frame of a Press	I. Dan and R. Cioară.....	183
Dimensional Accuracy of the Molds Built on Rapid Prototyping under the Influence of the Investment Casting Heat Processes	A. Coman, S. Rodean, D.V. Leordean and C. Patalita.....	188
 Chapter 3: Non-Conventional Technologies in Manufacture and Industry, Welding Technologies		
Dimensional Analysis of Electro-Separation Kinetics of Particles from Dielectric Liquids	T. Sajin and C.N. Ostahie.....	195
Rapid Manufacturing of Microwave Circuits on Low-Cost Substrates Using Laser Machining	M. Ghulam, A.Y. Hu, J.G. Miao and L. Gherman.....	200
Experimental Research on Quality Assessment of Ultrasonic Cleaning Process	L. Butu, M. Marinescu, C. Borda, D. Arsene and I. Slavchev	205
Economic Efficiency of Using Rapid Prototyping Technology	C. Gavrus	210
Aspects of Finite Element Analysis of Microdrilling by Ultrasonically Aided EDM and Related Knowledge Management	D. Ghiculescu, N. Marinescu, D. Ghiculescu and S. Nanu.....	215
Customer Matrix with Different Time Horizons Applied to Electrodischarge Machines	D. Ghiculescu, N. Marinescu, D. Ghiculescu and C. Pîrnău.....	220
Specific Aspects on Modelling and Simulation of the Synchronized Ultrasonic Assistance of the Electro-Discharge Machining Process	S. Nanu, N. Marinescu, D. Ghiculescu and C. Pirnău.....	225
Photogrammetric Scanning Technique and Rapid Prototyping Used for Prostheses and Orthoses Fabrication	O. Ciobanu, G. Ciobanu and M. Rotariu.....	230
Environmental Attributes of EDM Process	D. Soaita.....	235
Influence of the Distance between the Cutting Head and Working Sample on the Geometric Precision in Water Jet Abrasive Cutting Process	E. Herghelegiu, C. Radu, C. Schnakovszky and I. Cristea	240
High Pressure Water Jet Cutting of the Al 6061 T651 Aluminum Alloy	E. Herghelegiu, C. Radu, C. Schnakovszky and I. Cristea	245
Industrial Parts for Investment Casting Built on the Rapid Prototyping Systems	A. Coman, A. Gebhardt, C. Patalita and D.V. Leordean	250
Aspects Regarding the Technologies on Wire EDM CNC Machines	I. Mocian and R. Cazacu	255

Modeling by Finite Element Method of Thermal Field when Coating with Stellite Welding of Valvetype Parts	260
G. Gărleanu, V. Popovici, D. Gărleanu and C. Luchian	260
Researches about Mechanical Characteristics of some Steels Resistance Spot Welded	265
M.I. Chirileanu and D.A. Gheorghiu	265
The Influence of the Diffusion on Adherence of the 60T Deposits Obtained by Thermal Spraying in Electric Arc	270
S.L. Toma, D.A. Gheorghiu, S. Radu and C. Bejinariu	270
Investigation Concerning Maximal Forming Depth of Tailor Welded Blanks Made from same Material but Different Thickness Ratios	275
A. Albut.....	275
Research on Producing Complex Metal Parts with Lattice Structure by Selective Laser Melting	280
V. Mager, N. Bâlc, D. Leordean, C. Dudescu and M. Fockele.....	280
Some Aspects Regarding Micro-Scale EDM Drilling Process	285
O. Dodun, C.E. Panaite and L. Gherman	285
Machinability Evaluation by Single Electrical Discharge	290
L. Gherman, I. Palaghia and L. Slătineanu	290
Workpiece Clamping at Laser Beam Machining	295
G. Nistoroschi and G. Bosoancă	295
Formation of the Optimal Machining Process Based on the Analysis of Design and Technological Dimension Relations	300
A. Toca and I. Stingaci.....	300
Diminishing Shape Errors at Electrical Discharge Machining of External Cylindrical Surfaces	305
L. Slătineanu, M. Coteață, L. Gherman, I. Beșliu, M. Radovanovic, C. Mircescu and S. Stoica	305
Comparative Analysis of the Quality of Parts Made by an Aluminum Alloy Processed by Unconventional Cutting Methods	310
C. Radu, E. Herghelegiu, C. Schnakovszky and I. Cristea	310
Direct Moulding of Rubber Granules and Powders from Tyre Recycling	315
F. Quadrini, D. Bellisario, L. Santo and I. Hren	315

Chapter 4: Advanced Materials and Construction Technologies

Drying Process Modelling for Heavy Clay Products Using a New Thin Layer Drying Model	323
M. Vasić and Z. Radojević.....	323
Experimental and Mathematical Considerations on Roughness Resulting from "ATSi12CuMgNi" Turning Alloys Using Poly-Crystalline Diamond Tools	328
A. Zapciu, I.S. Munteanu and A. Zapciu	328
Spring-Back of Pre-Strained High Strength Steel Stripes	333
B. Chirita	333
Studies Concerning the Corrosion Behaviour of the Cast Stainless Steel Used for Chemical Industry	338
G. Simionescu and M. Gheorghian	338
Studies Concerning Variation of the Friction Coefficient in Case of Polymeric Composite Materials Reinforced with Carbon Fibers	343
R. Căliman	343

Experimental Studies Regarding Mechanical Behaviour of Textile Reinforcements Laminated Composite Materials	M. Oleksik, N. Cofaru and V. Oleksik.....	348
The Corrosion Resistance of NiTi-Active Element before and after Thermo-Mechanical Solicitation	A. Ursanu Dragoş, S. Stanciu, R. Cimpoeşu, I. Ionita, M. Rațoi, T. Constantin, I. Cimpoeşu and M. Agop	353
Object Oriented Finite Element Analysis on Microstructure for W1.8507	C. Nejneru, M. Axinte and M.C. Perju	358
Researches Regarding Ti/W/TiC Triple Layers Deposition on the Ferritic-Pearlitic Cast Iron Support, Obtained by Electro-Spark Deposition Method	C. Nejneru, M.C. Perju and M. Axinte	363
Preliminary Results of Copper Based Shape Memory Alloys Analyze Used for MEMS Applications	N. Cimpoeşu, A.D. Ursanu, S. Stanciu, R. Cimpoeşu, B. Constantin, C. Paraschiv and S.O. Gurlui	368
Correction to the Wills-Harrison Approach: Influence on the First Minimum of the Effective Pair Interaction	N. Dubinin.....	373
Researches on Mechanical Proprieties of Wooden Materials Used in Furnishings Production	L. Butnar and H. Cioban	378
Controlled Properties of the Thin Films of $\text{Ni}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4$- BaTiO_3 Ferrite-Ferroelectric Nanocomposites - Simulational Study	D. Ionescu and M. Kovaci.....	383
Simulation Determination of the Electromagnetic Parameters for the CdCr_2S_4 Multiferroic Relaxor in GHz Range	D. Ionescu and M. Kovaci.....	389
Research Concerning the Optimum Extrusion Temperature for Reinforced Polyamide	A. Popescu, L. Hancu and P. Bere	394

Chapter 5: Flexible Manufacturing, Automation and Robotics in Technological Processes

Automated Stand for Non-Destructive Testing Evaluation of Metal Products	D.T. Cicic, C.G. Amza, D. Popescu and D. Anania.....	401
The Influence of Kinematic Joints Clearances on the Positioning Accuracy of 3DOF Delta Parallel Robots	D. Andrioiaia, G. Stan, M. Funaru and C. Obreja	406
Poly-Articulated System with Spatial Positioning	G. Stan.....	411
Robot-Forming - An Incremental Forming Process Using an Industrial Robot by Means of DELMIA Software Package	I. Chera, O. Bologa, G. Racz and R. Breaz.....	416
Transmission Ratio Optimization of Electric Driven Palletizing Mechanism	L. Mihăilă, G. Stan, M. Funaru and D. Andrioiaia	421
The Automatic Configuration Method of Modular Structures Composing Multi-Axis Heads	A. Babă, M. Iordache, E. Nițu, A. Costea, D. Iacomi and S. Tonoiu	426

Application of Tree Graph Method for Reducing the Total Time of Tool Changing in Milling and Boring Machine Tools

C. Obreja, G. Stan, L. Mihăilă and M. Pascu 431

Neck Design Solution Adopted in the Development of a New Social Robot

F. Adăscăliței, I. Doroftei and B. Vanderborght 436

Chapter 6: CAD/CAM/CAE/CAx Technologies, Manufacturing Optimization**Advanced Integrated Design Method for Fatigue Assessment of Large Elastic Ship Structures**

I. Rubanenco, I. Mirciu and L. Domnisoru 443

FEA Study on the Elastic Deformation Process of a Simple Bimetal Beam

M. Aignătoaie 448

Harmonic Gear Modeled in SolidWorks

M. Urdea 453

CAD and CAE Analysis of Devices Connection Cable, DLC-1, 2 and 3

V. Itu, I. Dumitrescu and B. Cozma 458

Alternative Method for Segmenting Digitized Data in Reverse Engineering

G. Nagit and A.M. Mihalache 463

Converting Point Cloud to Revolved Solids

M.V. Drăgoi and S. Navalušić 468

Customized Software Tools Integrated in Reverse Engineering Process of Rectangular Parts with Holes

G. Oancea, A. Manolescu, I. Bădan and R. Pescaru 473

Estimating the Life-Cycle of the Medical Implants Made by SLM Titanium-Alloyed Materials Using the Finite Element Method

R. Păcurar, A. Păcurar, N. Bâlc, A. Petrilak and L. Morovič 478

Constructing 3D Surfaces from Random Sets of Points by Means of Level Curves

R. Cazacu and L. Grama 483

Intelligent Management of Dies and Molds CAD Projects

I. Mocian and R. Cazacu 488

Graphical Representation of Solids - An Important Issue in Teaching Technical Drawing

R. Clinciu 493

About CAD Activities Effectiveness and Efficiency as Instruments for Sustainable Product Development

V. Merticaru and M.I. Ripanu 499

3D Parametric Modeling for Complex Parts Generation

C. Stan, M. Zapciu, M. Paraschiv and M. Ungureanu 504

Modeling of Stress in Drills with Curved Cutting Edges

N. Baroiu, D. Boazu, C.A. Vasilache and V. Teodor 509

Designing an Innovative Face-Milling Cutter

P.D. Brîndașu, G.V. Oniță and L.D. Beju 514

3D Measuring of Complex Automotive Parts by Multiple Laser Scanning

A.C. Voicu, I.G. Gheorghe, L.L. Badita and A. Cirstoiu 519

Study of Cooling Parameters Using Fluid Jet in Milling Process Simulation

D.I. Nedelcu and I. Olaru 524

Virtual Simulation of Plastic Injection Technology for Medical Devices

M. Catana, D. Tarnita and V. Diorduc 529

Study of Flow Font Advancement during Filling Stage of a Spiral Mold	534
I.L. Sandu, F. Stan and C. Fetecau	
Studies about Movement Biofidelity of a Dummy Neck Used in an Impact Testing Device	539
S. Ciunel, D.L. Popa and N. Dumitru	
Parts in CATIA Based on Reverse Engineering Technique	544
R. Pescaru, G. Oancea and L. Parv	
Modeling, Simulation and Optimization of a Human Knee Orthotic Device	549
M. Catana, D. Tarnita and D. Tarnita.....	
Ankle Foot Orthoses with Wire Insertion	554
M. Badescu, C. Purcar and D. Badescu	

Chapter 7: Mechanical and Manufacturing Equipment, Devices and Instrumentation, Design and Analysis

Theoretical-Applicative Research on Design and Implementation of a Special Dynamometer	561
M. Ință, A. Muntean and C. Drăgoi	
Dimensional Stability Analysis of Unconventional Treated Steel Bearings	566
M. Gheorghian and R. Căliman	
Numerical Analysis of Load Carrying Capacity in the Contact between High-Order Surfaces	571
S. Spinu and D. Gradinaru	
A Numerical Study of the Partial Slip Elliptical Contact under Fretting Conditions	576
S. Spinu and D. Gradinaru	
The Influence of the Operating Conditions on the Lubrication Regimes of Ball Screws	581
G.C. Puiu and V. Puiu.....	
Assessment Procedure of Technological Consumption in the Natural Gas Distribution Systems	586
I. Pana and M. Minescu.....	
A Study of an Ion-Drag Pump Characteristics	591
C.N. Ostahie and T. Sajin.....	
Influence of Microtube Heating Geometry on Behavior of an Alumina Nanofluid at Low Reynolds Numbers	596
A.A. Minea, R.S. Luciu and O. Manca	
Study of Micro Hydropower Plant Operating in Gravitational Vortex Flow Mode	601
M.G. Marian, T. Sajin and A. Azzouz	
The Mathematical Model for Studying Bearing Reliability Unconventional Treated	606
M. Gheorghian and G. Simionescu	
Measuring System Analysis of the Video Equipments for Quality Measurements and Quality Control in the Automotive Industry	612
I.A. Orzan and C. Buzatu	
Mathematical Model and Algorithm to Optimize the Construction of Adjustable Multi-Axis Heads	617
E. Nițu, A. Babă, M. Iordache, A. Costea and D. Iacomi	
Vibration Analysis Methods in Bearing Damage Detection	622
C. Bujoreanu, V. Horga and B. Drăgan	
System for Compensating the Rigidity of the Hydrostatic Guideways of the Column Saddle Subassembly of the Boring and Milling Machines	627
M. Pascu, G. Stan, D. Andrioia and L. Mihăilă	

Device for Supplying the Hydrostatic Pockets with Compensation of the Fluid Temperature	632
M. Pascu, G. Stan, C. Obreja and D. Andrioiaia	
Researches upon the Maintenance of the Railway Wagons Brake System	637
B.S. Orhei Bercea, O. Lupescu and L.D. Bercea	
Aspects of Mathematical Modelling of Heat and Mass Exchange at Burning of Droplet of Water Fuel Oil Emulsion	642
Ş.R. Buzdugă and T. Sajin	
Modeling of Railway Vehicles for Virtual Homologation from Dynamic Behavior Perspective	647
M. Dumitriu	
Structural Analysis of a Flange Coupling without Clearance	652
D. Zahariea	
Electrical Elements in Reduction of Mechanical Vibrations	657
K. Białas	
Designing a Specialized Devices for Correction of the Axis Deviation at the Human Leg	662
I.I. Cofaru, P.D. Brîndașu and N.F. Cofaru.....	
Improving Functional Parameters for Hydro-Mechanical Systems from Treatment Station of Water	667
A. Alexandrescu and S.A. Miron	
Design and Manufacturing of a Low Head Banki Turbine	672
C. Popescu.....	
Optimal Pump Scheduling to Reduce the Operating Costs	677
S.A. Miron, A. Alexandrescu and M. Luca.....	
Heat Transfer Modeling for a Plate Heat Exchanger used in Solar Power Systems	682
I. Ivancu, D. Stanciu Dragomir, V.I. Crîsmaru and G. Dumitrescu	
Industrial Rollers in PUR Made for Slaughterhouses	687
B.K. Storm and L.A. Schjøtt	
Determining the Calibration Life of Measuring Devices by Means of Parameter Deviation Function	695
R. Clinciu	
Research on Accidental Defects to Bearings of Mining Equipment	700
C.F. Ciofu.....	
Influence of Tool Clearance Values on the Quality of the Small Drawn Parts	705
G. Brabie, E. Costache and M. Bologan	
Influence of the Blank Initial State on the Quality of the Small Drawn Parts	710
E. Costache, G. Brabie and A. Jitaru	
Crashing Behaviour Analysis of TWB Thin-Walled Structures with Various Cross-Sections	715
V.A. Ciubotariu	
Procedure and Equipment for Circularity Test of Inner Section of Bent Tubes	721
C. Pisarciuc	

Chapter 8: Innovation, Creativity, Learning and Education in Engineering

Research on Improving the Assessment Process of Students' Knowledge in the Field of Materials Processing	729
G. Strnad	
Management and Assessment of Curricula in Technical Higher Education	734
A.F. Modrea and A. Peterlanean	

Project-Based Learning in Higher Education

A. Peterlicean and F. Morar 739

The Importance of Teaching GIS in Engineering

T. Morar, I. Costescu and B.H. Muller 744

Improving Teaching Staff Lifelong Learning Using Fuzzy Algorithms

C. Butnaru and A. Nedelcu 749

"Mechatronics Galaxy" a New Concept for Developing Education in Engineering

I.G. Gheorghe, L.L. Badita, A. Cirstoiu, S. Istriteanu, V. Despa and S. Ganatsios 754

The Role of Internship in Transversal Competence Development of Industrial Engineering Graduates

N. Ionescu, C. Doicin and M. Roșu 759

Creative Teaching Methods for Educating Engineers

V. Grecu, C. Deneș and N. Ipiña 764

Machine Learning and Creative Methods Used to Classify Customers in a CRM Systems

M. Cioca, A.I. Ghete, L.I. Cioca and D. Gîfu 769

Chapter 9: Industrial and Product Management, Quality and Evaluation**Advanced Quality Planning of Manufacturing Products - APQP**

D.V. Ciobanu, A.E. Dumitrescu, C. Tudosoiu and S.A. Borz 777

Safety Evaluation of the Pipelines Systems for Petroleum Products

M. Minescu and I. Pana 782

Organization of Production Processes through the Multi-Service Method by Performing some Identical Operations of the same Duration and Structure

I.L. Grigorescu and G. Bălan 787

Optimizing the Thermal Physiological Comfort by Introducing Peltier Cells in Simulated Conditions

L. Vlad, S. Mitu and C. Buhai 792

System for the Management of Raw Materials Based on RFID Technology

O. Ionescu and G.C. Ionescu 797

Advanced Product Quality Planning Reference Model in Automotive Industry

B. Chiliban, M. Chiliban and M. Înță 802

A Point of View on Functional Approaches Used in Product Design

F.V. Banciu, G. Drăghici and C. Turc 807

Contributions to Ranking an Ergonomic Workstation, Considering the Human Effort and the Microclimate Parameters, Using Neural Networks

D.C. Anghel and N. Belu 812

Aspects of Quality Assurance in Glass Bricks Manufacturing Process

M. Rus, E. Mereuta and S. Veresiu 817

Improvement of Process Failure Mode and Effects Analysis Using Fuzzy Logic

N. Rachieru, N. Belu and D.C. Anghel 822

Improving the Company Performance by Using Energy Audit Method

A. Aciobanitei, C. Militaru, N. Khassawneh and C. Vladoi 827

Application of Fuzzy Logic in Design Failure Mode and Effects Analysis

N. Belu, D.C. Anghel and N. Rachieru 832

Improving Maintenance Activities of Machine Tools

C. Deneș and V. Grecu 837

Intangible Assets Identification and Valuation in a Company	842
L.M. Gogan and A. Draghici	
Use of Ontological Classes in the Exploration of User Needs	847
A. Oriță, G. Drăghici and J.L. Beney	
Innovative Development of One-Off and Small Series Products	852
S. Ravai Nagy, M. Lobonțiu, I. Kuric and A. Petrovan	
Planned Obsolescence and the Product Lifecycle	857
G. Lobonțiu	
PLM Innovation Matrix for a Complex Product Development Process	862
L.I. Popa and V.N. Popa	
Integrated Product Development Using Different Collaborative Tools in a PLM Multisite Platform	867
S.C. Florica and G. Drăghici	
Using a Systematic Innovative Approach – Acting/Support Matrix to Develop a Product	872
I.L. Taranovschi and P. Dușa	
Broadening the Use of Product Development Ontology for One-Off Products	878
A. Petrovan, G. Lobonțiu and S. Ravai-Nagy	
Method for Determining the Gear Wheels Profile	883
S. Mazuru and M. Casian	
The Role of the Eco-Requirements in the Sustainable Product Development Based on the Axiomatic Design Principles	888
A. Mourão, J. Fradinho, A. Santos, O. Dodun, L. Slătineanu and A. Gonçalves-Coelho	
Conceptual Research Model of Factors that Influence Environmental Knowledge Management at Organizational Level	893
I.V. Herghiliu, M.L. Lupu, C. Robledo and A. Kobi	
Designing Peculiarities and Classification of Compositional Technologies in Mechanical Engineering	898
A. Mikhaylov, D. Mikhaylov, E. Mikhaylova, I. Petryaeva and I. Navka	
Horizontal versus Vertical Heat Distribution in Multi-Storey Buildings	903
R.C. Lefter and D. Popescu.....	
A Conceptual Model of Product Design	908
L.D. Beju, P.D. Brîndașu and G.V. Oniță	
An Approaching on Fuzzy Logic Application for Typical Parts Manufacturing	913
C.G. Turc, F. Banciu and E. Pămîntăș	
Keyword Index.....	919
Author Index.....	927