



**TECHNICAL UNIVERSITY OF SOFIA
FACULTIE OF MACHINE TECHNOLOGY**



SCIENCE DAYS`2010

26-th INTERNATIONAL SCIENTIFIC CONFERENCE

65 YEARS FACULTY OF MACHINE TECHNOLOGY

100 BIRTH ANNIVERSARY OF ACAD. ANGEL BALEVSKI

13-16 September, 2010

Sozopol, BULGARIA

PROGRAM

2010

PROGRAMME COMMITTEE

Local Members:

Corr. mem. Prof. Ph. D. Dimitar BUCHKOV, TU-Sofia
Corr. mem. Prof. D Sc Venelin JIVKOV, TU-Sofia
Corr. mem. Prof. D Sc Stefan VODENICHAROV, BAS
Prof. D Sc Aleksandar JELEV, TU-Sofia
Prof. D Sc Vencislav TOSHKOV, TU-Sofia
Prof. D Sc Viktor ANCHEV, TU-Sofia
Prof. D Sc Vitan GALABOV, TU-Sofia
Prof. D Sc Vladimir VITLIEMOV, RU „Angel Kanchev” - Ruse
Prof. D Sc Georgi POPOV, TU-Sofia
Prof. D Sc Dimitar GEORGIEV, TU-Varna
Prof. D Sc Mihail MILKOV, TU-Sofia
Prof. D Sc Nikolay LOLOV, TU-Sofia
Prof. D Sc Nikolay MINCHEV, TU-Varna
Prof. D Sc Sasho GERGOV, TU-Sofia
Prof. D Sc Svetoslav SIMEONOV, TU-Gabrovo
Prof. Ph. D. Angel DIKOV, TU-Sofia
Prof. Ph. D. Vassil GEORGIEV, TU-Plovdiv
Assoc. Prof. Ph. D. Peter DOBREV, TU-Sofia
Assoc. Prof. D Sc Georgi MISHEV, TU-Plovdiv
Assoc. Prof. D Sc Nikolay ANGELOV, TU-Sofia
Assoc. Prof. Ph. D. Emil MANOACH, BAS
Assoc. Prof. Ph. D. Kostadin KOSTADINOV, BAS
Dipl. Eng. Nikolay KALBOV, “Sparki Eltos” Plc
Eng. Jacko PILLOSSOF, KONTRAX, Sofia
Ph. D. Eng. Vencislav SLAVKOV, SPESIMA GmbH, Sofia
Boriana KADMONOVA, EVRIKA Foundation, Sofia

International Members:

Prof. Ph. D. Jivka OVTCHAROVA, LESK, Karlsruhe, Germany
Prof. Ph. D. Stefan DIMOV, MEC, Cardiff, Wales
Prof. Ph. D. Josef BRICHTA, Ostrava, Czech Republic
Prof. Ph. D. Leon KUKIELKA, Koszalin, Poland
Prof. Ph. D. Aleksandar DIMITROV, Skopje, Macedonia
Prof. Ph. D. Lai YINAN, HUST/Harbin University of Science and Technology
Prof. Ph. D. Nenad D. PAVLOVIC, Nis, Serbia
Prof. Ph. D. Miodrag ZLOKOLICA, Novi Sad, Serbia

MAIN TOPICS:

- **Materials Science and Technology**
- **Virtual engineering, CAD/CAM/CAE, Rapid Prototyping & Tooling, MEMS**
- **Nanotechnology and Nanomaterials**
- **Environmental Engineering and Ecology**
- **Synthesis and Analysis of Mechanisms and Machines**
- **Mechatronics and Mechatronics Systems**
- **Technology of Mechanical Design and Manufacturing**
- **Manufacturing Automation and Robotics**
- **Tribology and Tribotechnologies**

ORGANIZING COMMITTEE:

Chairman: Prof. D Sc Jordan GENOV

Honorary Chairman: Prof. Ph. D. Kamen VESSELINOV, Rector of TU-Sofia

Honorary Chairman: Prof. Ph. D. Nikola KALOYANOV, Vice Rector – Research and Development Activities – TU-Sofia

Vice Chairmen: Assoc. Prof. Ph. D. Georgi TODOROV, Dean of MTF

SCIENTIFIC SECRETARY:

Assoc. Prof. Ph. D. Jordanka PETROVA, MTF, TU-Sofia

Assoc. Prof. Ph. D. Nikolay NIKOLOV, MTF, TU-Sofia

SECRETARIAT:

Assoc. Prof. Ph. D. Pancho DANAILOV, Vice Dean of MTF

Assoc. Prof. Ph. D. Vutko DRAGANOV, Vice Dean of MTF

Assoc. Prof. Ph. D. Valentin KAMBUROV, Department MST, MTF

Assoc. Prof. Ph. D. Georgi SAEV, Department MST, MTF

Assoc. Prof. Ph. D. Ilario ASTINOV, Department TMMM, MTF

Eng. Lyuben TZANKOV, M Sc, MTF

Eng. Bojidar PETRAKIEV, M Sc, ELEMAG, Sofia

COORDINATOR:

Assoc. Prof. Ph. D. Nikolay NIKOLOV, TU-Sofia, MTF

E-mail: nickn@tu-sofia.bg

Tel.: 0895 590 383

SCHEDULE

Monday, 13 September, 2010

12:00÷20:00 – Registration

Tuesday, 14 September, 2010

10:00÷10:30 – Hall 1 – Opening Ceremony of Science Days`2010 – Welcome Speeches

Prof. Ph. D. Kamen VESSELINOV, Rector of TU-Sofia, Honorary Chairman of the Org. Committee

Prof. D Sc Jordan GENOV, Chairman of the Org. Committee

Assoc. Prof. Ph. D. Georgi TODOROV, Dean of FMT, Vice Chairmen of the Org. Committee

10:40÷12:00 – Hall 1 – Plenary Session

Corr. mem. Prof. Ph. D. Dimitar BUCHKOV (TU-Sofia, Bulgaria). Oration About the Scholar and Personality Angel Balevski

Prof. Ph. D. Jivka OVTCHAROVA (Karlsruhe Institute of Technology, IMI, Germany). A Systematic Approach Towards Virtual Engineering.

Prof. Ph. D. Stefan DIMOV (Cardiff University, MEC, UK). Micro and Nano Manufacturing: Challenges and Opportunities.

Prof. D Sc Iovka DRAGIEVA (IEES-BAS, Bulgaria). Nanoscale State – Identity of Living and Non-Living Matter

12:20÷14:00 – Hall 1 – Companies Presentations

14:00÷17:00 – Lunch Break, Exhibitions

17:00÷20:15 – First Session

Hall 1 Session: TT-1 Papers: TT-1÷TT-12	Hall 2 Session: MST-I Papers: MST-1÷MST-12	Hall 3 Session: TMDM-I Papers: TMDM-1÷TMDM-8
--	---	---

20:30 – Official Dinner at Restaurant of the Technical University Hostel

Wednesday, 15 September, 2010

09:00÷13:15 – Second Session

Hall 1 Session: TT-II Papers: TT-13÷TT-27	Hall 2 Session: MST-II & EEE-I Papers: MST-13÷MST-21, EEE1÷EEE2	Hall 3 Session: VE-I Papers: VE-1 ÷VE-16
--	---	---

13:15÷16:00 – Lunch Break, Exhibitions

17:00÷20:15 – Third Session

Hall 1 Session: TT-III Papers: TT-28÷TT-35 Meeting of Balkan Tribological Association	Hall 2 Session: SAMM-I, MMS-I & MAR-I Papers: SAMM-1÷ SAMM-5, MMS-1÷MMS-3, MAR-1÷MAR-3	Hall 3 Session: NN-I Papers: NN-1÷NN-6
---	--	---

Thursday, 16 September, 2010

09:00÷12:00 – Round Table “Science, Research, Business”

12:00÷12:30 – Hall 1 – Conference Closure

12:30÷14:00 – Lunch Break

14:00 – Ship Trip

Monday, 13 September, 2010	
Reception desk of the Technical University Hostel	
12:00÷20:00	Registration

PAPERS

Tuesday, 14 September, 2010		
PLENARY SESSION		Hall 1
Time	PAPER	
10:40÷11:00	PP-1	<i>BUCHKOV, D. (Bulgaria)</i> Oration about the Scholar and Personality Angel Balevski
11:00÷11:20	PP-2	<i>OVTCHAROVA, J. (Germany)</i> A Systematic Approach towards Virtual Engineering
11:20÷11:40	PP-3	<i>DIMOV, S. (UK)</i> Micro and Nano Manufacturing: Challenges and Opportunities
11:40÷12:00	PP-4	<i>DRAGIEVA, I. (Bulgaria)</i> Nanoscale State – Identity of Living and Non-Living Matter

Tuesday, 14 September, 2010		
Section 1. MATERIALS SCIENCE AND TECHNOLOGY (MST)		
Session MST-I		Hall 2
Chairperson: Assoc. Prof. Ph. D. Manahil TONGOV		
Time	PAPER	
17:00÷17:15	MST-1	<i>ZHELEV, A., SAEV, G. (Bulgaria)</i> About the Concept of Applied Harmonized Standards for Quality Assurance of Welded Constructions - Part I: Categorization of Welded Joints/Constructions

17:15÷17:30	MST-2	<i>ZHELEV, A., SAEV, G. (Bulgaria)</i> About the Concept of Applied Harmonized Standards for Quality Assurance of Welded Constructions - Part II: Requirements and Proof of Conformity
17:30÷17:45	MST-3	<i>KIRCHGABNER, M. (Austria), MARKOVSKI, I. (Bulgaria)</i> Innovative Wearfacing Solutions as Part of Comprehensive Maintenance Concepts
17:45÷18:00	MST-4	<i>IAMBOLIEV, T., DIMITROV, D. (Bulgaria)</i> Effect of Frequency on the Properties of Pulse Tig Welded Joints
18:00÷18:15	MST-5	<i>SERAFIMOV, S., TODOROV, K., BARAMOVA, R. (Bulgaria)</i> Optimization of Technological Processes During Manufacturing and Installation of Tanks in Petroleum Terminals
18:15÷18:30	MST-6	<i>TASHEV, P., HRISTOV, St., ALEKSIEV, N. (Bulgaria)</i> Evaluating the Cold Cracking Resistance of Welded Joints with Small Diameter
18:30÷18:45	Coffee Break	
18:45÷19:00	MST-7	<i>TONGOVI, M. (Bulgaria)</i> Hybrid Welding (Review)
19:00÷19:15	MST-8	<i>KALEICHEVA, J., MISHEV, V. (Bulgaria)</i> Modeling the Quantity of Retained Austenite in Austempered Ductile Irons by Artificial Neural Networks
19:15÷19:30	MST-9	<i>ZUMBILEV, A., ZUMBILEV, I. (Bulgaria)</i> About the Influence of the Process of Carbonitriding in Low Temperature Plasma over the Residual Stresses
19:30÷19:45	MST-10	<i>DASKALOV, P., MITEV, R. (Bulgaria)</i> Quantitative Metallographic Analysis with “Matlab”

19:45÷20:00	MST-11	LAKOV, L., TONCHEVA, K., ASENOV, S., PETROV, V. (Bulgaria) Construction Solutions for Building Macro Dispersion Protection Modules
20:00÷20:15	MST-12	TONCHEVA, K., LAKOV, L., CHORBOV, I. (Bulgaria) Construction of Foam Glass Production Installation Model in Compliance with Patent № 65718/24.11.2004

Tuesday, 14 September, 2010		
Section 7. TECHNOLOGY OF MECHANICAL DESIGN AND MANUFACTURING (TMDM)		
Session TMDM-I Chairperson: Prof. D Sc Georgi POPOV		Hall 3
Time	PAPER	
17:00÷17:15	TMDM-1	GESHEV, T., BATCHKOVA, I., POPOV, G., KARAMISHEV, H., STAMBOLOV, G. (Bulgaria) Diagnostic of Technological Drilling Using Reusable Function Blocks
17:15÷17:30	TMDM-2	STAMBOLOV, G., BATCHKOVA, I., GESHEV, T., POPOV, G., KARAMISHEV, H. (Bulgaria) Control of Milling and Drilling Operations Using Reusable Function Blocks
17:30÷17:45	TMDM-3	NIKOLCHEVA, G., LIKOV, I. (Bulgaria) Computer Modeling of Twist Drills
17:45÷18:00	TMDM-4	JORDANOV, G., STOYCHEV, G. (Bulgaria) Investigation of the Cartridge-Chamber Grip Forces
18:00÷18:15	TMDM-5	STOEV, L., HRISTOV, S. (Bulgaria) Modeling of the Axis Deviation of Low Stability Parts Supported with a Prism

18:15÷18:30	TMDM-6	<i>STOEV, L., TURLAKOV, I. (Bulgaria)</i> Cold Rolling Tools. Turning, Plastic Deformation and Grinding of Workpieces of a Single Clamping
18:30÷18:45	TMDM-7	<i>DANAİLOV, P. (Bulgaria)</i> Comparison of Technological Characteristics with Straight and Reverse Polarity into Electrical-Discharge Machining
18:45÷19:00	TMDM-8	<i>UGRINOV, P. (Bulgaria)</i> Classification of Horizontal Machining Centers on Structure Criteria

Tuesday, 14 September, 2010		
Section 9. TRIBOLOGY AND TRIBOTECHNOLOGIES (TT)		
Session TT-I		Hall 1
Chairperson: Assoc. Prof. Ph. D. Mara KANDEVA Assoc. Prof. Ph. D. Emilia ASENOVA		
Time	PAPER	
17:00÷17:15	TT-1	<i>HABEEB, AI J., ANTONESCU, N., PETRESCU, M. (Romania)</i> Researches Concerning the Influence of the Polyt-Ionic Acid Solutions on the Stainless Steel
17:15÷17:30	TT-2	<i>KALELIH, H. (Turkey)</i> The Effect of the Additive's Level on The Surface of Diesel Engine Cylinder Liner
17:30÷17:45	TT-3	<i>BABIC, M. (Serbia)</i> Investigation into Sliding Wear Behavior of ZA-27/Al2O3 Composite In Dry And Lubricated Conditions
17:45÷18:00	TT-4	<i>RADULESCU, A., RADULESCU, I. (Romania)</i> Experimental Researches Concerning the Grease Squeeze Film

18:00÷18:15	TT-5	<i>DRUMEANU, A., PARASCHIVOIU, S., TUDOR, I., RIPEANU, R. (Romania)</i> Microstructure Transformations that Characterize Thermal Fatigue Wear of the Forging Die Steels
18:15÷18:30	TT-6	<i>CRISTESCU, C., DRUMEA, P., DUMITRESCU, C. (Romania)</i> The Theoretical Evaluation and Experimental Measuring of the Friction Forces from the Sealing of Rod at the Hydraulic Cylinders
18:30÷18:45	Coffee Break	
18:45÷19:00	TT-7	<i>RIPEANU, R., TUDOR, I., ONITIU, O. (Romania)</i> Improving Tribological Behavior of Austenitic Stainless Steels by Nitriding Treatments
19:00÷19:15	TT-8	<i>AKSYONOVA, S., LYUBCHENKO, E. (Ukraine)</i> The Influence of Nano-Particle Additive to Lubricating Oils on the Structure and Properties of Friction Surfaces
19:15÷19:30	TT-9	<i>RÎPĂ, M., DELEANU, L. (Romania)</i> The Effects of Sampling Conditions in Measuring Surface Microtopography. Study Cases
19:30÷19:45	TT-10	<i>ŽIVKOVIĆ, D. (Serbia), POZHIDAEVA, V. (Bulgaria), SOLDAT, D. (Serbia)</i> Flow for Organisation of Machine Lubrication and Quality System Standard Requirements
19:45÷20:00	TT-11	<i>SOVILJ, B. (Serbia), JAVOROVA, J. (Bulgaria), KOVAC, P. (Serbia), SOVILJ-NIKIC, I. (Serbia)</i> Wear of Coated Profiled Tools in Production Conditions
20:00÷20:15	TT-12	<i>KARAMIŞ, B., ERTURUN, V., NAZLI SARI, F. (Turkey)</i> Wear Behavior of 6061Al / SiCp Composites Manufactured By Reciprocating Extrusion

Wednesday, 15 September, 2010

Section 1. MATERIALS SCIENCE AND TECHNOLOGY (MST)

Session MST-II

Chairperson: Prof. D Sc Jordan GENOV

Hall 2

Time	PAPER	
09:00÷09:15	MST-13	<i>KAZANDJIEV, R. (Bulgaria)</i> Admissible Metal Rolling Regimes in a Multi-Cell Rolling Mill
09:15÷09:30	MST-14	<i>PENCHEV, T., ALTAPARMAKOV, I., KAMBUROV, V., GENOV, J. (Bulgaria)</i> Methods and Experimental Device for “Combined Hit” Effect Investigation in Plastic Deformation
09:30÷09:45	MST-15	<i>BODUROV, P., KEMILEV, N., PENCHEV, T. (Bulgaria)</i> Investigation of Milling Balls Form Influence on their Hardness after Hardening
09:45÷10:00	MST-16	<i>MANEVA, A., STANEV, S., GEORGIEV, M., VELIKOV, A. (Bulgaria)</i> Specifications upon Receiving of the Rotomolding Casting “Cap” with Higher Exploitation Requirements from Alloy A357 with the Method of Casting Under Gas Pressure
10:00÷10:15	MST-17	<i>BUSHEV, S., GEORGIEV, I. (Bulgaria)</i> Mathematical Models for Production of Bimetal Castings by Centrifugal Casting
10:15÷10:30	MST-18	<i>PETKOV, R., GELEV, K. (Bulgaria)</i> Effect of kind of Technological test on determination of Hot Cracking susceptibility of Casting Alloys
10:30÷10:45	MST-19	<i>RANGELOV, R., PETROV, K., DOBREV, P., PASHEEV, K. (Bulgaria)</i> Coatings for V–Process

10:45÷11:00	MST-20	<i>KANCHEV, P. (Bulgaria)</i> Testing of Metaloceramics Hard Alloys to Recurrent Endurance
11:00÷11:15	MST-21	<i>KANCHEV, P. (Bulgaria)</i> Examination of the Impact of Thermal Processing of Steel 38HC

Wednesday, 15 September, 2010		
Section 2. VIRTUAL ENGINEERING, CAD/CAM/CAE, RAPID PROTOTYPING & TOOLING, MEMS (VE)		
Session VE-I		Hall 3
Chairperson: Assoc. Prof. Ph. D. Georgi TODOROV		
Time	PAPER	
09:00÷09:15	VE-1	<i>TODOROV, G., PEIKOV, V., KAMBEROV, K., NIKOLOV, N. (Bulgaria), Yinan LAI, Ye DAI (China)</i> Parameters Analysis of Pneumatic Vacuum Mechanism with Moving Cylinder
09:15÷09:30	VE-2	<i>TODOROV, G., KAMBEROV, K. (Bulgaria)</i> Functional Structural Models at Reliability Modeling of Mechanical Products and Components
09:30÷09:45	VE-3	<i>TODOROV, G. (Bulgaria), BOCEVSKA, A. (Macedonia), NESHKOV, T. (Bulgaria)</i> Engineering Design Methods
09:45÷10:00	VE-4	<i>TODOROV, G. (Bulgaria), BOCEVSKA, A. (Macedonia), NESHKOV, T. (Bulgaria)</i> Functional-Cost Analysis (FCA)
10:00÷10:15	VE-5	<i>SOFRONOV, Y., GALABOV, V., TODOROV, G., IVANOV, Tz., NIKOLOV, N., STOYANOVA, Y. (Bulgaria)</i> Optimization of a Manipulator for Turning Bins with Means of the Virtual Engineering

10:15÷10:30	VE-6	<i>TODOROV, G., ROMANOV, B., KOIUMDZHIAN, A. (Bulgaria)</i> Filling Simulation as a Basis of the Plastic Components Virtual Prototyping of Production Process
10:30÷10:45	VE-7	<i>TODOROV, G., IVANOV, I., (Bulgaria)</i> Gating System Development for a Complex High Pressure Die Casted Component, Simulating the Process by NOVA FLOW
10:45÷11:00	VE-8	<i>MANOLOV, E., NIKOLOV, D., HRISTOV, M. (Bulgaria)</i> Energy Harvesting Devices: Basic Technologies and Applications
11:00÷11:15	Coffee Break	
11:15÷11:30	VE-9	<i>KRALOV, I., IGNATOV, I. (Bulgaria)</i> Functional Analysis of MEMS for Noise Pressure Harvesting
11:30÷11:45	VE-10	<i>IVANOV, I., TODOROV, T. (Bulgaria)</i> Natural Frequency Tuning of Mems Oscillator by Capacitive Feedback
11:45÷12:00	VE-11	<i>HRISTOV, M., TODOROV, G., NIKOLOV, N., GROZDANOV, V., GAJDADJIEV, D., KAMBEROV, K. (Bulgaria)</i> Manufacturing Technologies for Micro-Electro Mechanical Systems (MEMS) – Part I
12:00÷12:15	VE-12	<i>HRISTOV, M., TODOROV, G., NIKOLOV, N., GROZDANOV, V., GAJDADJIEV, D., KAMBEROV, K. (Bulgaria)</i> Manufacturing Technologies for Micro-Electro Mechanical Systems (MEMS) – Part II
12:15÷12:30	VE-13	<i>TODOROV, G., NIKOLOV, N., SOFRONOV, Y. (Bulgaria), DIMOV, St., DOBREV, T., PETKOV, P. (UK)</i> Capabilities of the Laser Technology for Manufacturing and Smoothing the Roughness of Different Materials in Engineering Practice
12:30÷12:45	VE-14	<i>ASTINOV, I., PETROVA, Y. (Bulgaria)</i> Process Plan Analysis and Free Production Capacity Estimation

12:45÷13:00	VE-15	<i>ASTINOV, I., STOYADINOV, S. (Bulgaria)</i> System Analysis and Definition of Basic Crossroad Configurations
13:00÷13:15	VE-16	<i>PETROVA, Y., BORISSOV, B. (Bulgaria)</i> A Design Methodology Using ProEngineer

Wednesday, 15 September, 2010		
Section 4. ENVIRONMENTAL ENGINEERING AND ECOLOGY (EEE)		
Session EEE-I		Hall 2
Chairperson: Assoc. Prof. Ph. D. Valentin KAMBUROV		
Time	PAPER	
11:45÷12:00	EEE-1	<i>DIMITROVA, A., SPASOV, A. (Bulgaria)</i> Determination of PCB Levels in Urban Soils of Sofia
12:00÷12:15	EEE-2	<i>TOSHEVSKA, G., ANGELOV, N. (Bulgaria)</i> Investigation of Noise Emissions During Cutting of a Wood-work Billets by Circular Saw Under Manufacturing Condition

Wednesday, 15 September, 2010		
Section 9. TRIBOLOGY AND TRIBOTECHNOLOGIES (TT)		
Session TT-II		Hall 1
Chairperson: Assoc. Prof. Ph. D. Vyara POZHIDAEVA Assoc. Prof. Ph. D. Juliana JAVOROVA		
Time	PAPER	
09:00÷09:15	TT-13	<i>BEZJAZYCHNYJ, V., SUTYAGIN, A. (Russia)</i> Technological Providing of Surface Layer Wear Resistance of Machine Components
09:15÷09:30	TT-14	<i>KANDEVA, M. (Bulgaria)</i> About the Interdisciplinary Approach in Tribology

09:30÷09:45	TT-15	<i>KOZHOUKHAROVA, E. (Bulgaria)</i> Tribometamorphism – A Particular Type of the Metamorphism
09:45÷10:00	TT-16	<i>PETROV, D. (Bulgaria), DEARN, K., WALTON, D., BANKS, R. (UK)</i> Some Experimental Results Concerning the Influence of Surface Coatings on the Wear of Poly-Ether-Ether-Ketone (PEEK) Polymeric Gears
10:00÷10:15	TT-17	<i>HRISTOV, P., ERDEKLIAN, A. (Bulgaria)</i> Current State and Development of the System: Production – Advertising – Consumption
10:15÷10:30	TT-18	<i>VLADIMIROVA, G. (Bulgaria)</i> Examples of Contact Tribosystems in Art and Design
10:30÷10:45	TT-19	<i>STOICHKOV, K. (Bulgaria)</i> Geometrics and Kinematics of Friction C.V.T. without Geometrical Sliding
10:45÷11:00	TT-20	<i>POZHIDAEVA, V. (Bulgaria), ŽIVKOVIĆ, D. (Serbia), ASSENOVA, E. (Bulgaria)</i> Microimpact Analysis by Contact Interaction of Rough Surfaces
11:00÷11:15	Coffee Break	
11:15÷11:30	TT-21	<i>PEICHEV, I. (Bulgaria)</i> Trbotecnological Requirements to Thermal Cladded Coatings Aiming Improvement of Details and Equipment Resource in Industry
11:30÷11:45	TT-22	<i>PEICHEV, I. (Bulgaria)</i> Development, State and Innovation by Thermal Cladded Coatings in Bulgaria
11:45÷12:00	TT-23	<i>ŽIVKOVIĆ, D. (Serbia), POZHIDAEVA, V. (Bulgaria), MEDENICA, M. (Serbia)</i> Lubrication of A Wheat Adapter (Header) as an Element of Preventive Maintenance

12:00÷12:15	TT-24	JAVOROVA, J. (Bulgaria), ALEKSANDROV, V. (Bulgaria), STANULOV, K. (Bulgaria), TARABA, B. (Slovakia), SOVILJ, B. (Serbia) Stability Analysis of Rigid Rotor on EHD Turbulent Journal Bearings
12:15÷12:30	TT-25	MISHEV, G., DISHLIEV, St., BOHCHEDJIEV, H. (Bulgaria) Study of Wearresistance of Nanocoatings on Steel 40X13
12:30÷12:45	TT-26	KANDEVA, M. (Bulgaria) Kinetics of Contact Spots in Technical Joints
12:45÷13:00	TT-27	LUKARSKI, Y., BAYKUSHEV, A., POPOV, S., MANOLOV, V. (Bulgaria) Wear Resistance of Nozzles for Drawing and Rolls for Strengthening of Reinforcement Steel

Wednesday, 15 September, 2010		
Section 3. NANOTECHNOLOGY AND NANOMATERIALS (NN)		
Session NN-I		Hall 3
Chairperson: Prof. D Sc Jordan GENOV		
Time	PAPER	
17:00÷17:15	NN-1	STANEV, S., LAZAROVA, R., KONSTANTINOVA, S., MANOLOV, V. (Bulgaria) Investigation of the Effect from AISi7Mg Alloy Modification with Nanopowders by Thermal and Metallographic Analyses
17:15÷17:30	NN-2	MITEVA, A. (Bulgaria) Electric Field Influence on the Electronic States in Some Nanostructures
17:30÷17:45	NN-3	MITEVA, A. (Bulgaria) Stark Effect in Graded Gap Quantum Wells
17:45÷18:00	NN-4	KAMBUROV, V., RANGELOV, R., VELIKOV, A., JANKOVA, I. (Bulgaria) Mechanical Properties and Recrystallization of Low Melting Alloys for Physical Modeling of Severe Plastic Deformation

18:00÷18:15	NN-5	<i>BOUZEKOVA-PENKOVA, A. (Bulgaria)</i> About the Properties of Some Nanostructures with Uniform Electric Field Presence
18:15÷18:30	NN-6	<i>KAMBUROV, V., GENOV, J. (Bulgaria)</i> Modeling and Simulation of Combined Schemes for Forming with Severe Plastic Deformation

Wednesday, 15 September, 2010		
Section 5. SYNTHESIS AND ANALYSIS OF MECHANISMS AND MACHINES (SAMM)		
Session SAMM-I		Hall 2
Chairperson: Corr. member Prof. D Sc Venelin JIVKOV		
Time	PAPER	
17:00÷17:15	SAMM-1	<i>MILOŠEVIĆ, M., PETKOVIĆ, D., PAVLOVIĆ, N. D. (Serbia)</i> Development of Mechanism for Legs Position Adjusting at Multifunctional Hospital Bed
17:15÷17:30	SAMM-2	<i>TODOROV, G., JIVKOV, V., NIKOLOV, N., KAMBEROV, K., STOEV, S. (Bulgaria)</i> Possibilities for Application of Kinetic Energy Recovery Systems
17:30÷17:45	SAMM-3	<i>STOICHKOV, K., JIVKOV, V. (Bulgaria)</i> Dynamic Analysis of Kinetic Energy Storage System Driving Automobile in Different Regimes Movement
17:45÷18:00	SAMM-4	<i>STOICHKOV, K., JIVKOV, V. (Bulgaria)</i> Control of Kinetic Energy Storage Actuating Automobile through Friction C.V.T. in Different Regimes Movement
18:00÷18:15	SAMM-5	<i>GARABITOV, S. (Bulgaria)</i> One Possibility for the Numerical Solution of the Problem for Optimal Control

Wednesday, 15 September, 2010		
Section 6. MECHATRONICS AND MECHATRONICS SYSTEMS (MMS)		
Session MMS-I		Hall 2
Chairperson: Assoc. Prof. Ph. D. Nikolay NIKOLOV		
Time	PAPER	
18:30÷18:45	SAMM-1	<i>KIRIAZOV, P., VENEVA, I. (Bulgaria)</i> Dynamics and Optimisation in Mechatronics
18:45÷19:00	SAMM-2	<i>KARASTOYANOV, D., SIMEONOV, S. (Bulgaria)</i> Integrated System for Access to Computer Resources for Blind Persons
19:00÷19:15	SAMM-3	<i>NESHKOV, T., DIMITROV, L. (Bulgaria)</i> Education in Mechatronics at the Technical University of Sofia

Wednesday, 15 September, 2010		
Section 8. MANUFACTURING AUTOMATION AND ROBOTICS (MAR)		
Session MAR-I		Hall 2
Chairperson: Prof. D Sc Vitan GALABOV		
Time	PAPER	
19:15÷19:30	MAR-1	<i>PAVLOV, V., AVRAMOV, I. (Bulgaria)</i> The Robots are Coming - are We Ready to Meet Them? Status and Development of the Trinity "Man-Technology-Robot"
19:30÷19:45	SAMM-2	<i>ZAMANOV, V., AVRAMOV, P. (Bulgaria)</i> Microsystems in Robotics
19:45÷20:00	SAMM-3	<i>NIKOLOV, V. (Bulgaria)</i> Mobile Robot for Inspection

Wednesday, 15 September, 2010

Section 9. TRIBOLOGY AND TRIBOTECHNOLOGIES (TT)

Session TT-III

**Chairperson: Prof. D Sc Slavcho IVANOV
Assoc. Prof. Ph. D. Andrei TUDOR**

Hall 1

Time	PAPER	
17:00÷17:15	TT-28	<i>MANOLOV, N. (Bulgaria)</i> About the Historical Mission of Tribology
17:15÷17:30	TT-29	<i>KANDEVA, M. (Bulgaria)</i> State and Development of the Human Resources in Tribology
17:30÷17:45	TT-30	<i>TUDOR, A. (Romania)</i> The Effect of Contact Pressure Distribution on the Tribological Behavior in the Natural and Artificial Joint
17:45÷18:00	TT-31	<i>GROZDANOVA, T. (Bulgaria)</i> Development of Tribological Materials Intended to Operate in Vacuum
18:00÷18:15	TT-32	<i>GROZDANOVA, T. (Bulgaria)</i> Characteristics and Experimental Data of New Self-Lubricating Materials Intended to Operate in Vacuum
18:15÷18:30	TT-33	<i>KANDEVA, M., VASSILEVA, L., RANGELOV, R., YANKOVA, I. (Bulgaria)</i> Characterizing the behavior of New Nanocomposite Materials on Aluminum Base Under Conditions of Abrasive Wear
18:30÷18:45	TT-34	<i>KANDEVA, M., KARASTOYANOV, D. (Bulgaria)</i> New methodological ideas and possibilities for study and qualifying of wear resistant coatings
18:45÷19:00	TT-35	<i>IVANOV, S., IVANOVA, J., KALICHIN, J., BONEVA, M. (Bulgaria)</i> Application of Current Ecologically Safe Fuels for Environment Protection
19:00÷19:15	Coffee Break	
19:15÷20:15	Meeting of Balkan Tribological Association	

COMPANIES PRESENTATIONS

Tuesday, 14 September, 2010

COMPANIES PRESENTATIONS

Hall 1

Time

COPMANY

12:20÷12:40

SPARKY

eng. Velichko PEIKOV

12:40÷13:00

KONTRAX

eng. Viktor MITOV

13:00÷13:20

HAYCAD

eng. Alek KOIUMDZHIAN

13:20÷13:40

SPESIMA

Ph. D. eng. Vencislav SLAVKOV

13:40÷14:00

TECHNIKA CONSULT

eng. Dimitar DIMITROV

**26-th INTERNATIONAL SCIENTIFIC CONFERENCE
65 YEARS FACULTY OF MACHINE TECHNOLOGY
100 BIRTH ANNIVERSARY OF ACAD. ANGEL BALEVSKI**

IS SUPPORTED BY:



SPARKY GROUP

KONTRAX

