

TECHNICAL UNIVERSITY – SOFIA
PLOVDIV BRANCH

**FORTH INTERNATIONAL CONFERENCE
“ENGINEERING, TECHNOLOGIES AND SYSTEMS”**

TECHSYS 2015

28 - 30 May, Plovdiv

PROGRAM



ПРОГРАМА



ТЕХНИЧЕСКИ УНИВЕРСИТЕТ – СОФИЯ
ФИЛИАЛ ПЛОВДИВ

**ЧЕТВЪРТА МЕЖДУНАРОДНА НАУЧНА КОНФЕРЕНЦИЯ
“ТЕХНИКА, ТЕХНОЛОГИИ И СИСТЕМИ”**

ТЕХСИС 2015

28 - 30 май, Пловдив



TECHNICAL UNIVERSITY - SOFIA
TRADITION OF SUCCESS!

The conference will be held within the framework of the **70th anniversary of the Technical University of Sofia** and under the patronage of Prof. DSc Georgi Mihov - Rector of the Technical University of Sofia.

Конференцията ще се проведе в рамките на **70 годишнината на Технически университет – София** и под патронажа на проф. дтн. Георги Михов - Ректор на Технически Университет - София

TECHNICAL UNIVERSITY – SOFIA, PLOVDIV BRANCH

**FORTH INTERNATIONAL CONFERENCE
“ENGINEERING, TECHNOLOGIES AND SYSTEMS”**

TECHSYS 2015

28 - 30 May, Plovdiv



ТЕХСИС 2015

28 - 30 май, Пловдив

ТЕХНИЧЕСКИ УНИВЕРСИТЕТ – СОФИЯ, ФИЛИАЛ ПЛОВДИВ

**ЧЕТВЪРТА МЕЖДУНАРОДНА НАУЧНА КОНФЕРЕНЦИЯ
“ТЕХНИКА, ТЕХНОЛОГИИ И СИСТЕМИ”**



IEEE

youngprofessionals

This conference was technically co-sponsored by:

IEEE Bulgaria Section

IEEE Young Professionals Affinity Group of Bulgaria

Тази конференция е технически подпомогната от:

Българска секция на IEEE

група IEEE Млади Професионалисти, България

TECHNICAL UNIVERSITY - SOFIA, PLOVDIV BRANCH

Organizing Committee:

Honorary Chairman: Prof.DSc Eng. Georgi Mihov

Chairman: Prof. Dr. Eng. Michail Petrov

Vice Chairman: Assoc. Prof. Dr. Eng. Valyo Nikolov

Members:

Assoc. Prof. Dr. Eng. Galidia Petrova,

Assoc. Prof. Dr. Eng. Krum Kutryansky

Prof. Dr. Eng. Grisha Spasov

Assoc. Prof. Dr. Eng. Ivan Kostov

Assoc. Prof. Dr. Eng. Stanislav Alexiev

Assoc. Prof. Dr. Eng. Borislav Penev

Assoc. Prof. Dr. Eng. Nikola Georgiev

Prof. Dr. Sonya Tabakova

Assoc. Prof. Dr. Eng. Pepo Yordanov

Assoc. Prof. Dr. Eng. Nikolaj Petrishki

Assoc. Prof. Dr. Toni Mihova

Assoc. Prof. Dr. Eng. Svetoslav Ivanov

Prof. Dr. Eng. Dobrin Seyzinski

Assoc. Prof. Dr. Valentina Proycheva

Assoc. Prof. Dr. Eng. Dimitar Petrov

Assoc. Prof. Dr. Valentin Vladimirov

International Programme Committee

Chairmen: Prof. Dr. Veselka Boeva, Prof. Dr. Eng. Teofil Yamboliev

Members:

Prof. Dr. Eng. Dr.h.c.mult. Uwe Heisel, Germany

Acad. Prof. DSc Yuri Kuznetsov, Ukraine

Prof. Dr. Eng. Marsel Popa, Rumania

Acad. Prof. DSc Nikolaj Mishkin, Belarus

Prof. DSc Mark Himbert, France

Prof. DSc Okyay Kaynak, Turkey

Prof. DSc Andre Barraco, France

Prof. Dr. Eng. Frantisek Zezulka, Czech Republic

Prof. Dr. Nikola Kasabov, New Zealand

Prof. Dsc Eng. Peteris Grabusts, Latvia

Assoc. Prof. DSc Eng. Edmunds Teirumnieks, Latvia

Prof. DSc Eng. Ivan Jachev, Bulgaria

Prof. DSc Eng. Emil Nikolov, Bulgaria

Prof. DSc Eng. Todor Stoilov, Bulgaria

Prof. DSc. Phys., DSc. Eng. Marin Nenchev, Bulgaria

Prof. DSc Eng. Vesko Panov, Bulgaria

Prof. DSc Eng. Ognyan Nakov, Bulgaria

Prof. Dr. Eng. Vladimir Pulkov, Bulgaria

Prof. Dr. Eng. Petar Gecov, Bulgaria

Prof. Dr. Eng. Georgi Todorov, Bulgaria

Prof. Dr. Eng. Lubomir Dimitrov, Bulgaria

Prof. Dr. Mladen Velez, Bulgaria

Prof. Dr. Eng. Boncho Bonev, Bulgaria

Prof. Dr. Eng. Ivan Kralov, Bulgaria

Prof. Dr. Eng. Valeri Mladenov, Bulgaria

Technical Secretary: Eng. Tsvetan Petrov, Eng. Christo Christev, Eng. Lalka Boteva

ТЕХНИЧЕСКИ УНИВЕРСИТЕТ – СОФИЯ, ФИЛИАЛ ПЛОВДИВ

Организационен комитет

Почетен председател: проф. д-р инж. Георги Михов

Председател: проф. д-р инж. Михаил Петров

Зам. председател: доц. д-р инж. Вълчо Николов

Членове:

доц. д-р инж. Галидия Петрова

доц. д-р инж. Крум Кутрянски

доц. д-р инж. Никола Георгиев

доц. д-р инж. Иван Костов

доц. д-р инж. Станислав Алексиев

доц. д-р инж. Борислав Пенев

доц. д-р Тони Михова

проф. д-р Соня Табакова

доц. д-р инж. Пепо Йорданов

доц. д-р инж. Николай Петришки

проф. д-р инж. Гриша Спасов

доц. д-р инж. Светослав Иванов

проф. д-р инж. Добрин Сейзински

доц. д-р Валентина Проичева

доц. д-р инж. Димитър Петров

доц. д-р Валентин Владимиров

Програмен комитет:

Председатели: проф. д-р Веселка Боева, проф. д-р инж. Теофил Ямболиев

Членове:

проф. д-р инж. д.х.к. Уве Хайзел, Германия

акад. проф. д-р инж. Юрий Кузнецов, Украйна

проф. д-р инж. Марсел Попа, Румъния

акад. проф. д-р инж. Николай Мишкин, Беларус

проф. д-р инж. Марк Химберт, Франция

проф. д-р инж. Окияй Кайнак, Турция

проф. д-р инж. Андре Барако, Франция

проф. д-р инж. Франтишек Зезулка, Чехия

проф. д-р инж. Никола Касабов, Нова Зеландия

проф. д-р инж. Петерис Грабустс, Латвия

доц. д-р инж. Едмундс Тейрумниекс, Латвия

проф. д-р инж. Иван Ячев, ФНТС, ТУ – София, България

проф. д-р инж. Емил Николов, ТУ – София, България

проф. д-р инж. Тодор Стоилов, БАН, България

проф. д-р инж. Марин Ненчев, ТУ – София, филиал Пловдив

проф. д-р инж. Веско Панов, ТУ – София, България

проф. д-р инж. Бончо Бонев, ТУ – София, България

проф. д-р инж. Владимир Пулков, ТУ – София, България

проф. д-р инж. Огнян Наков, ТУ – София, България

проф. д-р инж. Петър Гецов, ИКИ, БАН, България

проф. д-р инж. Георги Тодоров, ТУ – София, България

проф. д-р инж. Любомир Димитров, ТУ – София, България

проф. д-р инж. Младен Велев, ТУ – София, България

проф. д-р инж. Иван Кралов, ТУ – София, България

проф. д-р инж. Валери Младенов, ТУ – София, България

Технически секретариат: инж. Цветан Петров, инж. Христо Христов, инж. Лалка Ботева

CONTENTS / СЪДЪРЖАНИЕ

TIME SCHEDULE

Разпределение на заседанията и секциите по зали и време6

SECTION 1 • СЕКЦИЯ 1

AUTOMATION AND CONTROL SYSTEMS

Автоматика и Системи за Управление.....8

SECTION 2 • СЕКЦИЯ 2

ELECTRICAL ENGINEERING AND ENERGETICS

Електротехника и Електроенергетика9

SECTION 3 • СЕКЦИЯ 3

INFORMATICS AND COMPUTER SYSTEMS AND TECHNOLOGIES

Информатика и Компютърни Системи и Технологии 11

SECTION 4 • СЕКЦИЯ 4

ELECTRONICS AND ELECTRONIC TECHNOLOGIES

Електроника и Електронни Технологии 13

SECTION 5 • СЕКЦИЯ 5

COMMUNICATIONS, QUANTUM AND OPTOELECTRONICS

Комуникации, Квантова и Оптиелектроника 14

SECTION 6 • СЕКЦИЯ 6

MECHANICAL ENGINEERING

Машиностроителна Техника и Технологии..... 15

SECTION 7 • СЕКЦИЯ 7

MECHANICAL AND INSTRUMENT ENGINEERING

Машиностроене и Уредостроене..... 17

SECTION 8 • СЕКЦИЯ 8

TRANSPORT AND AVIATION ENGINEERING

Транспортна и Авиационна Техника 18

SECTION 9 • СЕКЦИЯ 9

NATURAL SCIENCES

Природни науки..... 19

SECTION 10 • СЕКЦИЯ 10

INDUSTRIAL MANAGEMENT

Индустриален Мениджмънт..... 20

TIME SCHEDULE

РАЗПРЕДЕЛЕНИЕ НА ЗАСЕДАНИЯТА И СЕКЦИИТЕ ПО ЗАЛИ И ВРЕМЕ

| | | | | |
|--------------------|--|--|-------------------------|------------------------|
| 27 MAY 2015 | Registration from 14:00 till 17:00 | | | |
| 28 MAY 2015 | Registration from 09:00 till 12:00 | | | |
| 28 MAY 2015 | 13:00-16:00 h | TECHSYS 2015 Conference Opening - AULA Plenary Papers | | |
| | 16:00-16:30 h | Coffee Break | | |
| | Session 1 | | | |
| | 16:30-17:30 h | Section 1 Hall 4326 | Section 2 Hall 4328 | Section 3 Hall 4422 |
| | | Section 4 Hall 4425 | Section 5 Hall 4327 | Section 6 Hall 4325 |
| | | Section 7 Hall 4322 | Section 8 Hall 4302 | Section 9 Hall 4324 |
| | | Section 10 Hall 4323 | | |
| 19:30-23:00 h. | Conference Dinner | | | |
| 29 MAY 2015 | Session 2 | | | |
| | 09:30-16:00 h <i>Coffee Break 10:45-11:15</i> | Section 1 Hall 4326 | Section 2 Hall 4328 | Section 3 Hall 4422 |
| | | Section 4 Hall 4425 | Section 5 Hall 4406 | Section 6 Hall 4325 |
| | | Section 7 Hall 4322 | Section 8 Hall 4302 | Section 9 Hall 4324 |
| | | | Section 10 Hall 4323 | |

| Sections | Секции |
|--|--|
| 1. Automation and Control Systems | 1. Автоматика и Системи за Управление |
| 2. Electrical Engineering and Energetics | 2. Електротехника и Електроенергетика |
| 3. Informatics and Computer Systems and Technologies | 3. Информатика и Компютърни Системи и Технологии |
| 4. Electronics and Electronic Technologies | 4. Електроника и Електронни Технологии |
| 5. Communications, Quantum and Optoelectronics | 5. Комуникации, Квантова и Оптиелектроника |
| 6. Mechanical Engineering | 6. Машиностроителна Техника и Технологии |
| 7. Mechanical and Instrument Engineering | 7. Машиностроене и Уредостроене |
| 8. Transport and Aviation Engineering | 8. Транспортна и Авиационна Техника |
| 9. Natural Sciences | 9. Природни науки |
| 10. Industrial Management | 10. Индустриален Мениджмънт |

TECHNICAL UNIVERSITY – SOFIA, PLOVDIV BRANCH

FORTH INTERNATIONAL CONFERENCE
“ENGINEERING, TECHNOLOGIES AND SYSTEMS”

TECHSYS 2015

28 - 30 May, Plovdiv

OPENING CEREMONY ACTIVITIES

I. Opening speech

II. Plenary Talks

1. „Cathode focussed TIG – welding technology and application“

Prof. Dr-Ing. Habil. Uwe Füssel
Technical University Dresden, Germany

2. “Research Nanomaterials and Nanotechnology at the Technical University in Liberec”

Prof. Ing. Petr Louda, CSc.
Department of Material Science, Technical University of Liberec, Czech Republic

3. “Intuitionistic Fuzzy Sets”

Prof. Dr. Sc. Krassimir Atanassov
Institute of Biophysics and Biomedical Engineering, BAS, Bulgaria
Invited by IEEE Young Professionals

III. Accompanying event

Introducing the Bulgarian IEEE Young Professionals Affinity Group

Dr. Yancho Todorov
Chair - IEEE YP AG Bulgaria



IEEE

youngprofessionals

SECTION 1
СЕКЦИЯ 1

AUTOMATION AND CONTROL SYSTEMS
Автоматика и Системи за Управление

Hall 4326

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

Chairman: Andon Topalov
Secretary: Nikola Shakev

1. **T. Cetin Akinci, Unal Sever, Levent Gunaydin, Emine Ayaz, Serhat Seker**
ANALYSIS OF LIGHT LEVELS IN A CLASS IN A DAY USING WAVELET METHOD
2. **Angel Ivanov, Stefan Biliderov, Petar Getsov**
OPEN SOURCE PRODUCTS AND SCADA FOR AUTONOMOUS UNMANNED SYSTEMS
3. **Galina Cherneva, Antonio Andonov**
EVALUATION OF THE SPECTRAL PROPERTIES OF INREGULAR PROCESSES IN DISCRETE DISCRETE NONLINEAR DYNAMIC SYSTEMS
4. **Alexander Angelov, Nikola Shakev, Georgi Ganev**
ELECTRICITY CONSUMPTION FORECASTING OF PUBLIC FACILITY

29 MAY 2015
09:30 – 11:00

5. **Rositsa Kazakova**
STOCHASTIC EVOLUTIONARY ALGORITHMS FOR ESTIMATION - SITUATION AND OUTLOOK
6. **Vladimir Ivanov, Aldeniz Rashidov**
AUTOMATIC LIGHTING CONTROL SYSTEM
7. **Stefan Kiranov**
DYNAMIC SIMULATION OF ATMOSPHERIC DISTILLATION COLUMN
8. **Zachary Kavroshilov, Georgi Kavroshilov**
RATIO CONTROL SYSTEMS

29 MAY 2015
11:15 – 16:00

SECOND SESSION/ ВТОРА СЕСИЯ

Chairman: Ivan Ganchev
Secretary: Albena Taneva

9. **Georgi Terziyski, Ivan Dragotinov**
AUTOMATION IDENTIFICATION OF PI AND PID CONTROLLERS
10. **Margarita Terziyska, Yancho Todorov, Lyubka Doukovska**
NEO-FUZZY NEURAL NETWORK FOR MODELLING OF NONLINEAR MIMO DYNAMICS

11. **Robert Kazala, Albena Taneva, Stoicho Penkov**
NETWORKED SENSORS FOR ROBOT MONITORING AND CONTROLLING
12. **Verica Aleksovska, Albena Taneva, Ivan Ganchev**
TRAFFIC LIGHTS CONTROL VIA WEB APPLICATION
13. **Ivan Kostov**
MODELING OF INDUCTION MOTORS BY MEANS OF AN EQUIVALENT CIRCUIT
14. **Ivan Ganchev, Albena Taneva, Sevil Ahmed, Michail Petrov**
REAL-TIME SIMULATION OF PLANTS IN PROCESS CONTROL
15. **Dimitar Spirov, Nikolay Komitov**
INVESTIGATIONS OF SOFT-SWITCHING INVERTER WITH TWO AUXILIARY SWITCHES FOR AN INDUCTION MOTOR DRIVE
16. **Bojidar Markov**
SIMULATION DEVELOPMENT OF LINEAR INDUCTION MOTOR WITH SYSTEM OF DIRECT ELECTROMAGNETIC FORCE CONTROL

SECTION 2
СЕКЦИЯ 2

ELECTRICAL ENGINEERING AND ENERGETICS
Електротехника и Електроенергетика

Hall 4328

Chairman: Nikola Georgiev
Secretary: Vania Garbeva

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

1. **Frantisek Zezulka, Petr Marcon, Ondrej Sajdl, Ivo Vesely, Zdenek Bradac**
STABILIZATION OF GRIDS WITH SIGNIFICANT CONTRIBUTION OF RENEWABLE ENERGY SOURCES
2. **Zdenek Roubal, Petr Marcon, Zoltan Szabo, Ondrej Saidl, Ivo Vesely, Frantisek Zezulka**
REMOTE MEASUREMENT AND PERFORMANCE MODELING FOR SMART GRID A-12
3. **Miroslav Atanasov, Vasil Spasov**
COIL OPTIMISATION OF THE FAST SWITCHED CHOPPER DIPOLE MAGNET FOR THE MEDAUSTRON PROJECT
4. **Ivan Hadziev, Dian Malamov, Ivan Yatchev, Vesko Milev, Ivanka Dekova**
DEFINING THE COEFFICIENT OF ADDITIONAL LOSSES BETWEEN BUSBARS

5. **Stefan Chobanov**
TESTS OF MOTOR DIFFERENTIAL PROTECTION
6. **Nikolina Petkova**
DIAGNOSTIC OF POWER TRANSFORMERS
7. **Stefan Chobanov**
SETTINGS AND TESTS OF TRANSFORMER DIFFERENTIAL PROTECTION (ANSI CODE 87T)
8. **Dinjo Kostov, Georgi Ganev**
CURRENT LIMITING AIR REACTORS ADDITIONAL LOSSES
9. **Svetlin Antonov**
MODELLING THE DIFFUSION OF HEAT AND POLLUTION IN CASE OF TWO-PHASE NATURE OF THE FLOW
10. **Sevdalina Manolova, Georgi Stoimenov, Stanislav Stojnev**
DETERMINATION OF ENERGY CHARACTERISTICS OF BIOMASS DRYING WITH MICROWAVE
11. **Yordan Epitropov, Dimitar Fidanov, Kiril Kolikov**
EVALUATION OF THE MAXIMUM ABSOLUTE INACCURACY OF AN INDIRECTLY MEASURABLE VARIABLE
12. **Stefan Bozhkov**
CONNECTION BETWEEN COULOMB'S POTENTIAL AND THE POTENTIAL ENERGY OF INTERACTION BETWEEN TWO CHARGED CONDUCTING SPHERES
13. **Rumen Popov, Stefan Lishev, Aleksandar Georgiev, Nadezhda Vasileva**
OPTIMAL POSITION SENSOR FOR ORIENTATION OF PHOTOVOLTAIC PLANTS
14. **Nikolay Paunkov**
FACTORS INFLUENCING ON THE ENERGY NEEDS OF THE DOMESTIC ECONOMIES. STRATEGIES FOR SAVING OF ENERGY

SECTION 3
СЕКЦИЯ 3

INFORMATICS AND COMPUTER SYSTEMS AND TECHNOLOGIES
Информатика и Компютърни Системи и Технологии

Hall 4422

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

Chairman: Veselka Boeva
Secretary: Dobrinka Petrova

1. **Seda H. Bostanci**
SHANNON ENTROPY AND URBAN SKYLINES
2. **Yasin Akman, Tarik Yerlikaya**
ENCRYPTION TIME MEASUREMENT OF AES
3. **Plamen Vasilev**
ISO 22400 KEY PERFORMANCE INDICATORS FOR SOFTWARE INDUSTRY
4. **Lilyana Boneva**
A SURVEY OF EXPERTISE RETRIEVAL APPROACHES

29 MAY 2015
09:30 – 11:00

5. **Gergana Lazarova, Todor Tsonkov**
SENTIMENT ANALYSIS OF TEXTS IN BULGARIAN
6. **Petya Pavlova, Svetlozar Kamishev**
COMPUTER BASED TESTING OF VISUAL MEMORY FOR COLOUR
7. **Dimitar Garnevski, Petya Pavlova**
STUDY OF OPPORTUNITIES FOR REMOTE SUPPORT CORONAGRAPH'S DATABASE AT NAO ROZHEN
8. **Svetlana Vasileva**
SOME APPLICATIONS OF THE GPSS WORLD EXTENDED EDITOR TO CREATE OF EDUCATIVE SIMULATION MODELS

29 MAY 2015

11:15 – 16:00

SECOND SESSION/ ВТОРА СЕСИЯ

Chairman: Nikolay Kakanakov

Secretary: Mitko Shopov

9. Vladimir Dimitrov, Nadezhda Strazhakova

DEVELOPMENT OF IPTV SYSTEM THROUGH WINDOWS MEDIA® PLATFORM

10. Maria Marinova

SOFTWARE TOOLS FOR MULTITHREADED EXECUTION OF PROGRAMS

11. Ivaylo Nikolov

MODELING OF SYSTEMS FOR INCREMENTAL BACKUP IN PUBLIC SECTOR
INFORMATION SECURITY DEVELOPMENT

12. Dimitar Vasilev

OPEN SOURCE SOFTWARE FOR SIMULATION AND MONITORING OF COMPUTER
NETWORKS

13. Swetlozar Tsankov, Valentina Voinohovska

INFORMATION SYSTEM PEDIATRICS AND MEDICAL GENETICS

14. Dorina Kabakchieva

USING DATA MINING METHODS FOR SOLVING STUDENT RETENTION
PROBLEMS

15. Antonio Hadzhikolev, Krasen Penchev

METHODS FOR IMPROVING THE IMPLEMENTATION OF INFORMATION
TECHNOLOGIES IN THE HIGHER EDUCATION IN BULGARIA

16. IVAN KANEV

COMPARATIVE ANALYSIS OF SOFTWARE AND HARDWARE FPGA-BASED
IMPLEMENTATION OF WEIGHTED AVERAGE LINEAR SPATIAL FILTERS

17. IVAN KANEV

AN APPROACH TO FPGA-BASED DESIGN OF WEIGHTED AVERAGE LINEAR
SPATIAL FILTERS

Hall 4425

Chairman: Svetoslav Ivanov
Secretary: Boryana Pachedjieva

28 MAY 2015 **FIRST SESSION/ ПЪРВА СЕСИЯ**
16:30 – 17:30

1. Veselin Vasilev

DISTRIBUTION OF POWER LOSSES OF TRANSMISSION AND SWITCHING IN INVERTER AND RECTIFIER MODE IN DIFFERENT STRUCTURES ON IGBT INVERTERS WITH TWO AND THREE LEVEL ON OUTPUT VOLTAGE

2. Veselin Vasilev

INFLUENCE OF SWITCHING FREQUENCY AND MODULATION COEFFICIENT OVER HARMONIOUS COMPOSITION ON IGBT INVERTERS WITH TWO AND THREE LEVELS AND ACTIVE-INDUCTIVE LOAD

3. Dimitar G. Stoyanov

PHOTOCONDUCTIVITY OF SEMICONDUCTORS. TRANSITION PROCESS DURING A PLANE CASE

4. Aleksandar Vuchev, Nikolay Bankov

AN ANALYTICAL INVESTIGATION OF A SERIES RESONANT DC-DC CONVERTER WITH A UNSYMMETRICAL CONTROLLED RECTIFIER

29 MAY 2015 **SECOND SESSION/ ВТОРА СЕСИЯ**
09:30 – 12:00

5. Katya Asparuhova

SIMULATION OF THE CHARACTERISTICS OF PHOTORESISTOR AND APPLIED CIRCUITS FOR TRAINING IN ELECTRONICS

6. Katya Asparuhova

SIMULATION OF THE CHARACTERISTICS OF PHOTODIODE AND APPLIED CIRCUITS FOR TRAINING IN ELECTRONICS

7. Ivan Rachev

APPLICATION OF LINEAR SENSOR ARRAY TSLXXXX FOR CONTACTLESS MEASUREMENT OF OBJECT POSITIONING

8. Ivan Tanev, Svetoslav Ivanov

COMPARATIVE ANALYSIS BETWEEN DRIVERS WITH ADAPTIVE LIMITATION OF CURRENT DRAIN COUPLED WITH FEEDBACK BY DERIVED OF CURRENT

9. Yanca Kissova, Svetoslav Ivanov

SWITCHING POWER SUPPLY SOURCE FOR CHARGING THE CAPACITOR OF HIGH VOLTAGE

SECTION 5
СЕКЦИЯ 5

COMMUNICATIONS, QUANTUM AND OPTOELECTRONICS
Комуникации, Квантова и Оптиелектроника

Hall 4327

Chairman: Marin Nenchev
Secretary: Margarita Deneva

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

1. **Stoyan Tvetkov, Marian Taslakov, Emilio Mariotti, Sanka Gateva**
LIGHT-INDUCED ATOMIC DESORPTION FOR ALL-OPTICAL CONTROL OF LIGHT
2. **Margarita Deneva, Boyana Deneva**
DEVELOPMENT OF NEW SOLUTION OF TWO-WAVELENGTH, TRANSVERSALLY LASER- PUMPED LASER
3. **Nadejda Kaymakanova, Rayna Bojkova, Margarita Deneva**
LASER REMOVAL OF INAESTETIC BLOOD VESSELS
4. **Vanya Plachkova**
POLARIZATION DEPENDENT GAIN IN ERBIUM DOPED FIBER AMPLIFIER IN OVER THE ITU COMMUNICATION GRID

29 MAY 2015
09:30 – 12:00

SECOND SESSION/ ВТОРА СЕСИЯ

5. **Nikolay Gueorguiev, Aleksandar Kolarov**
CLASSIFICATION OF THE METHODS OF THE WORK OF JAMMER OF UNDERWATER COMMUNICATION SYSTEMS
6. **Nikolay Gueorguiev, Aleksandar Kolarov**
CRITERIA FOR EVALUATION THE EFFECTIVENESS OF THE JAMMER FOR UNDERWATER COMMUNICATION SYSTEMS
7. **Adriana Borodzhieva**
SYNTHESIS OF BCH-CODES DETECTING AND CORRECTING TWO-SYMBOLS ERRORS
8. **Adriana Borodzhieva**
ENCODING AND DECODING USING REED-SOLOMON CODES WITH TWO-SYMBOLS ERRORS
9. **Peter Z. Petkov**
AMBIENT TEMPERATURE IMPACT ON PERFORMANCE SPECS OF SATELLITE COMMUNICATION ANTENNAS

Hall 4325

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

Chairman: Teofil Yamboliev
Secretary: Ivan Panov

1. **Lukáš Voleský, Totka Bakalova, Marcela Kolínová, Michal Kolenič**
NON-DESTRUCTIVE METHODS FOR OBSERVATION AND EVALUATION OF PROPERTIES OF NATURAL STRUCTURES
2. **Totka Bakalova , Karolína Boruvková, Petr Louda, Milka Atanasova**
TYPE LIQUID LUBRICANTS AS AN ACTIVE FULL-FLEDGED ELEMENT OF THE TRIBOLOGICAL SYSTEM
3. **Lyubomir Lazov, Hristina Deneva**
NUMERICAL CALCILATIONS TO STUDY THE INFLUENCE OF THE IMPACT TIME ON THE LASER CUTTING PROCESS OF SHEET STEEL
4. **Violeta Slavova, Nikolay Ivanov, Dimitar Dechev, Petar Petrov**
VACUUM METALIZATION OF ULTRAFILTRATION POLYMERIC MEMBRANES – RESEARCH AND APPLICATION

29 MAY 2015
09:30 – 11:00

5. **Vania Vassileva, Katia Vutova, Maria Naplatanova**
PURE TUNGSTEN OBTAINING BY ELECTRON BEAM REFINING OF TUNGSTEN SCRAP
6. **Viktor Kopanov, Lilyana Kolaklieva**
THICKNESS MEASUREMENT OF NANOCOMPOSITE GRADIENT AND MULTILAYER SUPERHARD COATINGS USING CALOTEST
7. **Elena Koleva, Liliyana Koleva**
PARAMETER OPTIMIZATION OF ELECTRON BEAM MELTING AND REFINING OF TITANIUM
8. **Teofil Iamboliev, Zlatka Evdokimova**
EFFECT OF PULSE FREQUENCY ON THE MICROSTRUCTURE OF TIG WELDS OF DUPLEX STAINLESS STEEL 1.4462

29 MAY 2015

11:15 – 16:00

SECOND SESSION/ ВТОРА СЕСИЯ

Chairman: Stanislav Aleksiev

Secretary: Angel Lengerov

9. Svetlana Koleva, Milko Enchev

INCREASING THE EFFICIENCY OF TURNING OPERATIONS THROUGH THE APPLICATION OF TRIAL CUTS WITH MEASUREMENT THE DIMENSION USING THE CUTTING TOOL

10. Emil Velev

RESEARCH THE AMENDMENT OF PRESSURE OF HYDRAULIC GEROTOR MOTOR, USING COMPUTER SIMULATION

11. Miroslav Aleksiev

GRAPHIC-ANALYTICAL METHOD OF A DETERMINING CUTTING ANGLES FOR TURNING TOOLS

12. Angel Poparov

TOOL ANGLES OF TURNING TOOLS WITH INCLINING LINEAR SMOOTH CUTTING EDGE

13. Stanislav Aleksiev, Stoycho Stoev

PERFORMANCE TESTING OF CONSTRUCTION OF OVERRUNNING RADIAL BEARING SUPPORTS

14. Stoycho Stoev, Stanislav Aleksiev

PLANNING AND CREATION OF A TESTING STAND FOR ONE-WAY CLUTCHES

15. Angel Lengerov, Petar Daskalov, Geno Galchev

ANALYTICAL DETERMINATION OF THE RATE OF STRENGTHENING OF THE SURFACE LAYER WITH SURFACE PLASTIC DEFORMATION OF PLANAR SURFACES

SECTION 7
СЕКЦИЯ 7

MECHANICAL AND INSTRUMENT ENGINEERING
Машиностроене и Уредостроене

Hall 4322

Chairman: Dimitar Petrov

Secretary: Milcho Tashev

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

1. **Stefan Garabitov, Valeri Ivanov**
DINAMIC ANALYSIS OF THE PAIRED HOOKE JOINT
2. **Valeri Ivanov**
INFLUENCE OF THE SUMMARY FRICTION COEFFICIENT IN SELF CONTROLLED PAIRED HOOKE JOINT
3. **Radostin Dolchinkov, Mariana Koleva**
KINEMATIK AND COMPUTER MODELING FRICTION PLANETARY GEAR
4. **Svetlozar Parmakov, Nikolai Anguelov**
OPTIMIZATION INVESTIGATIONS OF COMPRESSIVE STRENGTH ON PORCELAIN SAMPLES

29 MAY 2015
09:30 – 12:00

SECOND SESSION/ ВТОРА СЕСИЯ

5. **Zhivko Iliev, Georgi Dinev**
ABOUT AN EDUCATION OF ENGINEERING SPECIALISTS FOR A COMPUTER DESIGN OF THE TECHNICAL PRODUCTS IN MINING PRODUCTION
6. **Snezhina Andonova, Elena Blagova**
APPLICATION OF MATHEMATICAL METHODS IN THE STUDY OF THE TECHNOLOGICAL PARAMETERS IN THE SEWING INDUSTRY
7. **Ivaleri Bakardzhiev**
A CLASSIFICATION OF TORQUE INERTIAL CONVERTERS
8. **Petko Dobrev, Dimitar Petrov, Petar Shindov**
EXPERIMENTAL RESULTS OF AN INVESTIGATION ABOUT WEAR DURABILITY OF POLYMER (PEEK) GEAR WHEELS
9. **Angel Chekichev**
ALGORITHM FOR DETERMINATION THE SYMMETRY OF GRAPHICAL FORMS

SECTION 8
СЕКЦИЯ 8

TRANSPORT AND AVIATION ENGINEERING
Транспортна и Авиационна Техника

Hall 4302

Chairman: Dobrin Seyzinski
Secretary: Hristian Panayotov

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

1. **Konstantin Metodiev**
A NEW AILERON DESIGNED FOR HAWK-2M UNMANNED AERIAL VEHICLE
2. **Gennady Maklakov, Petar Getsov**
CRITERIA FOR EVALUATION OF PROFESSIONAL SUITABILITY OF THE OPERATOR
ERGATIC SYSTEMS
3. **Hristian Panayotov**
METHODOLOGY FOR RAPID SIZING OF UNMANNED AERIAL VEHICLES
4. **Stanislav Dimitrov, Yordanka Boneva, Todor Stoilov, Krasimira Stoilova**
IDENTIFICATION OF INEXPLICIT RELATIONS BETWEEN SPARE PARTS OF VEHICLES

29 MAY 2015
09:30 – 13:30

SECOND SESSION/ ВТОРА СЕСИЯ

5. **Yordan Hadzhiev**
SIMULATION MODEL OF THE FLIGHT DYNAMICS OF JOINED WING AIRCRAFT
6. **Plamen Roglev**
SCREENING OF THE BOX WING/JOINED WING DESIGN PARAMETERS AT LOW
REYNOLDS NUMBERS
7. **Angel Danailov**
AERODYNAMIC CHARACTERISTICS OF SMALL UAV – TWOBEM WITH U-TAIL
HORIZONTAL AND VERTICAL SURFACES
8. **Dancho Kolibarov**
MODEL FOR OPTIMIZING THE ADMINISTRATIVE PROCEDURES IN THE UNIFIED CIVIL
AND MILITARY AIRSPACE MANAGEMENT (ASM)
9. **Dimo Zafirov**
PROFILE OF THE MISSION OF VERTICAL TAKEOFF AND LANDING ELECTRIC PLANE
10. **Dimo Zafirov**
SELECTION OF A WING PROFILE FOR VERTICAL TAKEOFF AND LANDING
ELECTRIC PLANE

11. Angelina Chozhgova

DETERMINATION OF BENDING VIBRATIONS OF THE TAIL ROTOR SHAFTING OF A SINGLE-ROTOR HELICOPTER

12. Angelina Chozhgova, Nikolay Zagorski

DETERMINATION OF TORSIONAL VIBRATION OF HELICOPTER TRANSMISSION

13. Dancho Kolibarov, Dobrin Seyzinski

UNIFIED SYSTEM FOR CIVIL AND MILITARY AIRSPACE MANAGEMENT (ASM) OF THE REPUBLIC OF BULGARIA

SECTION 9
СЕКЦИЯ 9

NATURAL SCIENCES

Природни науки

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

Hall 4324

Chairman: Sonia Tabakova

Secretary: Dechko Rushev

1. Raluca A. Boțu, Alexandru Șerban, Gabriela S. Bălan, Mugur C. Bălan

NUMERIC MODELLING PRINCIPLES FOR CALCULATION OF THE AMMONIA-WATER ABSORPTION REFRIGERATION SYSTEM

2. Bogdan A. Porumb, Florin Bode, Gabriela S. Bălan, Mugur C. Bălan

COMPARATIVE ANALYSIS OF THREE RESEARCH METHODS IN THE STUDY OF INDIRECT EVAPORATIVE COOLING PROCESS

3. Bernadette E. Teleky, Mugur C. Bălan

ACTUAL KNOWLEDGE ABOUT BIOHYDROGEN PRODUCTION BY ANAEROBIC DIGESTION OF LIGNOCELLULOSE BIOMASS

4. Desislava Shatarova

ASSESSMENT OF BULGARIA IN INDEX "DOING BUSINESS" IN 2015

29 MAY 2015
09:30 – 10:45

5. Dechko Rushev, Raycho Raychev, Chavdar Pashinski

ACCELERATION SENSITIVE MONOTUBE DAMPER MODELING IN LAB AMESIM

6. Chavdar Pashinski, Dechko Rushev, Raycho Raychev

COMPUTER PROGRAM FOR FACILITATION OF UNIVERSAL INDEXING HEAD USAGE

7. Vladimir Angelov, Rossitza Sardjeva

APPLICATION OF HSWO PRINTING AS WATERLESS PROCESS (OVERVIEW)

8. Silvina Ilieva, Kristin Onzarian

DEVELOPMENT OF A GRAPHICAL IDENTITY FOR THE POLIGRAPHY BACHELOR PROGRAM IN UNISON WITH THE LOGO OF TU SOFIA

29 MAY 2015
11:15 – 16:00

SECOND SESSION/ ВТОПА СЕСИЯ

Hall 4324

Chairman: Ivan Badev
Secretary: Iliycho Iliev

9. Iliycho Iliev

NEW TEMPERATURE MODEL FOR HE-SRBR₂ LASER

10. Neli Keranova

MINIMAL CENTRAL IDEMPOTENTS OF GROUP ALGEBRAS OF FINITE P-GROUPS WITH A MINIMAL COMMUTATOR SUBGROUP

11. Angelina Popova, Mihai Christov, Alexei Vasilev, Christian Girginov, Antonina Djambova

INFLUENCE OF THE TEMPERATURE ON THE INHIBITION PROCESS IN PRESENCE OF QUATERNARY AMMONIUM DIBROMIDES AS ACID CORROSION INHIBITORS

12. Georgi Paskalev

NONLOCAL BOUNDARY VALUE PROBLEM FOR A CLASS OF FOURTH-ORDER PDE OF HYPERBOLIC-PARABOLIC TYPE

13. Georgi Paskalev

SMOOTHNESS OF THE GENERALIZED SOLUTION OF A NONLOCAL BVP FOR A CLASS OF FOURTH-ORDER HYPERBOLIC-PARABOLIC EQUATIONS

SECTION 10
СЕКЦИЯ 10

INDUSTRIAL MANAGEMENT
Индустриален Мениджмънт

Hall 4323

Chairman: Toni Mihova
Secretary: Desislava Shatarova

28 MAY 2015
16:30 – 17:30

FIRST SESSION/ ПЪРВА СЕСИЯ

1. Antonia Lazarova

MANAGEMENT CULTURE IN MOLDOVA: COMPARATIVE ANALYSIS OF FACTORS THAT CHARACTERIZE AND MANAGEMENT CULTURE WOODWORKING SECTOR IN BULGARIA IN THE PERIOD 2012-2014

2. Neli Nikolova

THE TIME – A KEY RESOURCE FOR THE EFFECTIVE MANAGER

3. Atanas Totlyakov

EUROPEAN FUNDS - IN SUPPORT OF WINE-GROWERS AND WINEMAKERS IN BULGARIA

4. Katina Valeva

STRATEGIC ASPECTS OF INNOVATIONS IN MANAGEMENT OF ENTERPRISES

29 MAY 2015

09:30 – 13:30

SECOND SESSION/ ВТОПА СЕСИЯ

5. **Stefan Raychev**
TRENDS IN LABOR MARKET PRODUCTIVITY AND WAGE DISPARITIES
6. **Dobrinka Stoyanova**
LABOUR INTEGRATION OF YOUNG PEOPLE IN BULGARIA AND EU
7. **Ivanka Bankova**
PROBLEMS AND CONFLICTS BY THE MANAGEMENT OF SMALL CELLARS IN BULGARIA (ON THE EXAMPLE OF CHATEAU BURGOZONE)
8. **Svetlana Borisova**
MANAGEMENT OF THE TURNOVER OF PERSONNEL IN ORGANISATION
9. **Kiril Aladjov, Svetlana Borisova**
THE ROLE OF A MANAGER FOR SUCCESSFUL SPORTS ACTIVITIES
10. **Toni Mihova**
EMPLOYER RATING EVALUATION SYSTEM
11. **Toni Mihova**
THE PLACE OF BULGARIA IN THE REINDUSTRIALIZATION OF EUROPE
12. **Tanya Gigova**
DYNAMICS OF THE TECHNOLOGICAL DEVELOPMENT
13. **Hristina Daylyanova**
NON-ETHICAL ADVERTISEMENTS
14. **Desislava Shatarova**
ASSESSMENT OF BULGARIA IN INDEX "DOING BUSINESS" IN 2015
15. **Bojcho Bochev, Maya Bocheva**
TRENDS IN THE INTEGRATION BETWEEN MARKETING AND LOGISTICS

