

PROGRAM

7:45 Registration (B-Club)

8:10 Conference opening (BC 300)

Session 1 (Room: C-502)

Applied Informatics

Chairperson: doc. Ing. I. Sekaj, PhD.

8:30 – 9:50

1. DESIGNING A COMPLEX FACE RECOGNITION SYSTEM

J. Mazanec

2. ANALYSIS OF CLOUD COMPUTING TECHNOLOGIES

Nguyen B. M.

3. DPA OF AN AES IMPLEMENTATION

M. Repka

4. INTELIGIBILITY OF FINGER ALPHABET IN VIDEOCONFERENCE BASED ON LOGATOM RECOGNIZABILITY

P. Heribanová - J. Polec

9:50 – 10:00

Coffee Break

10:00 – 11:40

5. MACHINE LEARNING APPROACH FOR INTRUSION DETECTION SYSTEMS

M. Augustín

6. DIFFERENTIAL CRYPTANALYSIS OF REDUCED-ROUND AES

L. Lacko-Bartošová

7. HARDWARE ACCELERATED STREAM CIPHER RABBIT

J. Tomeček

8. TRACKING OF OBJECTS WITH KNOWN COLOR SIGNATURE

L. Tencer

9. APPROXIMATE MEASURING OF COMPUTER GRAPHICS INTRODUCTORY TOPICS EXTENT

D. Onáčilová – A. Ferko

Session 2 (Room: A-703)

Applied Mechanics

Chairperson: Prof. V. Ferencey, PhD.

8:30 – 9:45

- 1. MESHLESS MLPG METHOD FOR LAMINATED AXISYMMETRIC CIRCULAR PLATES**
P. Staňák – M. Cigánik
- 2. VIRTUAL MODEL OF THE CONTACT IN SOLID AND ELASTIC PARTS**
J. Kapustinec – P. Kintler – M. Cigánik
- 3. VIRTUAL MODELING OF THE ELECTRONIC DIFFERENTIAL SYSTEM**
V. Goga - T. Jediný
- 4. VIBRATION SUPPRESSION OF TWO-DIMENSIONAL SYSTEMS WITH OPTIMAL DISTRIBUTION OF SENSORS AND ACTUATORS**
P. Benkovský - L. Starek
- 5. COMPARISON OF INDENTATION CURVES FOR DIFFERENT APPROACHES OF HARDNESS MEASUREMENT**
I. Benčo

9:45 – 10:00

Coffee Break

10:00 – 11:15

- 6. MULTISCALE MODELING AND SIMULATION -THE QUASICONTINUUM METHOD**
J. Hrabovský
- 7. THERMAL INFLUENCE OF WIRES IN POWER LINE BUNDLES**
J. Paulech
- 8. MODELING OF STRESS IN THIN FILMS OF MICRO-ELECTRO-MECHANICAL-SYSTEMS (MEMS)**
S. Stančík - J. Dzuba
- 9. TYRE MODEL VALIDATION IN MSC.ADAMS**
P. Kintler – J. Kapustinec – P. Lorenc
- 10. THE INFLUENCE OF FLEXIBLE PARTS PRESENT IN OF THE CAR WHEEL SUSPENSION ON GENERATING DYNAMIC LOADS ACTING FROM THE ROAD**
P. Lorenc – P. Kintler – J. Kapustinec
- 11. INFLUENCE OF PEM FUEL CELL PERFORMANCE ON VEHICLE DYNAMICS**
M. Bugár – V. Staňák

Session 3 (Room: C - 417)

Electrical Power Engineering

Chairperson: Mgr. M. Smítková, PhD.

8:30 – 9:50

- 1. OPERATOR MEASURED ELECTRICITY CONSUMPTION DATA**
J. Šedivý – I. Šulc
- 2. SENSITIVITY STUDIES OF FAULT LOCATION METHOD BASED ON UNDERVOLTAGE TRAVELING WAVE IN DISTRIBUTION NETWORK**
J. Ivanecký
- 3. ELECTRICAL POWER SYSTEM RESTORATION USING MULTIAGENT SYSTEM**
M. Kováč
- 4. MODELING OF NONLINEAR V-A CHARAKTERISTIC WITH THE ACTIVE UPPER HARMONICS FILTER**
M. Liška – P. Koval'

9:50 – 10:10

Coffee Break

10:10 – 10:50

- 5. PHYSICAL MODELS OF DISCHARGE ACTIVITY**
P. Arnold
- 6. BIOMASS-TO-LIQUID TECHNOLOGY**
P. Hajducek

Session 4 (Room A-501)

Nuclear and Physical Engineering

Chairperson: prof. Ing. J. Sitek, DrSc.

8:30 – 9:30

1. ISOTOPIC COMPOSITION OF VVER-440 SPENT NUCLEAR FUEL ANALYSIS

Pe. Čudrnák – V. Nečas

2. FUEL ASSEMBLIES WITH HIGHER BURN-UPS IN LIGHT WATER REACTORS

Pa. Čudrnák – V. Nečas

3. EVALUATION OF PERSONNEL EXTERNAL EXPOSURE DURING CONSTRUCTION OF CONCRETE BRIDGE WHICH REUSE RADIOACTIVE STEELS

M. Pánik – T. Hrnčíř – V. Nečas

9:30 – 9:50

Coffee Break

9:50 – 10:30

4. IMPLEMENTATION OF THE GAS COOLED FAST REACTOR INTO THE FUEL CYCLE OF SLOVAKIA

Š. Čerba – V. Nečas

5. THE UTILIZATION OF CONDITIONALLY RELEASED RADIOACTIVE METAL WASTE IN MOTORWAY TUNNEL CONSTRUCTION

T. Hrnčíř – M. Pánik – V. Nečas

Session 5 (Room: D-424)

Cybernetics & Control of Processes

Chairperson: doc. Ing. D. Rosinová, PhD.

8:30 – 9:50

**1. PLM TECHNIQUES IN INNOVATION MANAGEMENT WITHIN
DISTRIBUTED MANUFACTURING SYSTEMS**

M. Cigánik – P. Staňák – J. Kapustinec

2. THE PROCEDURE OF CONTROL DESIGN UNMANNED VEHICLES

A. Šlezárová – I. Hantuch

3. MULTIPLE ROBOTS IN DEMINING PROCESS

M. Masár

4. PARALLEL GENETIC ALGORITHMS

M. Linder - I. Sekaj

9:50 – 10:00 **Coffee Break**

10:00 – 11:40

**5. ADAPTIVE PID CONTROLLER DESIGN BASED ON GENETIC ALGORITHMS
AND NEURAL NETWORKS**

Z. Dideková – S. Kajan

6. MODEL PREDICTIVE CONTROL BASED ON STATE SPACE FORMULATION

J. Škultéty - E. Miklovičová

7. ROBUST MODEL PREDICTIVE CONTROL DESIGN

Nguyen, T. Q

8. ROBUST CONTROLLER DESIGN FOR HYDRAULIC MIMO SYSTEM

I. Holíč

**9. SOFTWARE FOR ROBUST STABILIZATION OF SYSTEMS WITH
PARAMETRIC UNCERTAINTIES**

J. Oravec – M. Bakošová - M. Kačur

Session 6 / Commission 1 (Block E, 6th floor - Library) Electronics

Chairperson: prof. Ing. D. Ďuračková, PhD.

8:30 – 9:50

- 1. CHEMICAL SENSORS USING CARBON NANOTUBES**
M. Kotlár – V. Vretenár – M. Veselý – R. Redhamer
- 2. METHODS FOR SPEECH VISUALIZATION**
V. Sedlák – D. Ďuračková
- 3. MONTE CARLO SIMULATION OF THE ELECTRON BEAM CARRIER GENERATION IN InGaN/GaN NANOSTRUCTURES**
J. Priesol - A. Šatka
- 4. ELECTRONIC SYSTEMS FOR COMPLEX ANALYSIS OF SOIL PROPERTIES**
Ľ. Sládek

9:50 – 10:10 **Coffee Break**

10:10 – 10:50

- 5. PREPARATION AND OPTICAL PROPERTIES OF COMPOUND NiO/TiO₂ BASED THIN FILMS**
I. Kosc - I. Hotovy - V. Reháček - S. Flickingerova 1 – O. Kadar – J. Kovac jr. - M. Predanocy
- 6. APPLICATION OF ERD METHOD FOR HYDROGEN DETERMINATION IN NANOCRYSTALLINE SILICON CARBIDE THIN FILMS**
A. Valovič - J. Huran - A.P. Kobzev – P. Boháček – M. Sekáčová

Session 6 /Commission 2 (B-222)

Electronics

Chairperson: doc. Ing. J. Hríbk, PhD.

8:30 – 9:30

1. ANALYSIS OF ELECTRICAL PROPERTIES OF In_{0.12}Al_{0.88}N/GaN HEMT TRANSISTOR SUPPORTED BY TCAD MODELING AND SIMULATION

M. Molnár - D. Donoval - J. Kováč - J. Marek - M. Florovič - A. Chvála - P. Příbytný

2. STAX - EXTENSIBLE PLATFORM FOR RAPID PROTOTYPING

F. Horínek – M. Daříček - L. Sládek - M. Donoval - M. Horniak - M. Gašparík

3. PROPERTIES AND APPLICATION OF PN SEQUENCES

P. Olšovský – P. Podhoranský

9:30 – 9:50 Coffee Break

9:50 – 10:30

4. OPTICAL FIBER PRESSURE SENSORS

B. Korenko - J. Jasenek – J. Červeňová

5. MICROWAVE HIGH-TEMPERATURE PROBE STATION

M. Mišun – M. Tomáška

Session 7 (Block C, room T 004a)

Power Engineering and Lighting Technologies Chairperson: **prof. Ing. L. Klug, PhD.**

8:30 – 9:50

- 1. RADIAL MAGNETIC FLUXES IN DISC-TYPE MOTORS**
M. Uhrík
- 2. CREDIBILITY OF SIMULATION MODELS OF MOV VARISTOR**
M. Glasa
- 3. PROTECTION AGAINST SURGES AND COORDINATION OF SPD (SURGE PROTECTION DEVICES)**
I. Kertész
- 4. LED LIGHT'S IN NEAR FUTURE**
Z. Balaš

9:50 – 10:10

Coffee Break

10:10 – 10:50

- 5. MODELLING OF SPECTRAL CHARACTERISTICS OF DAYLIGHT**
A. Rusnák
- 6. SUITABILITY FOR USE DE BOER GLARE RATING METHOD IN TRAFFIC**
M. Janík

Session 8 (B-602)

Telecommunications

Chairperson: doc. Ing. R. Róka, PhD.

8:30 – 9:45

1. NOVEL METHOD OF ADAPTIVE GOP STRUCTURE

L. Krulikovská – J. Polec

2. ON THERMAL SENSITIVITY OF UNIFORM AND APODIZED FIBER BRAGG GRATINGS

E. Jurisová – J. Müllerová

3. EFFECT OF IMPLICIT AND EXPLICIT ROUTING ON NETWORK PERFORMANCE IN MPLS NETWORKS

L. Friesse - M. Medvecký

4. UNE UAL IMAGE CODING BY ROI

T. Hirner – J. Polec

5. IMAGE ENHANCEMENT FOR SKIN COLOR DETECTION IN YCBCR COLOR SPACE

M. Beniak – J. Pavlovičová

9:45 – 10:00 **Coffee Break**

10:00 – 10:45

6. PACKET PRIORITIZATION IN QOS SUPPORTING

T. Balogh – M. Medvecký

7. WAVELENGTH ALLOCATION FOR FUTURE COEXISTENCE XGPON NETWORKS

D. Korček - J. Müllerová

8. NOVEL APPROACH IN OBJECTIVE VIDEO QUALITY MEASSURING

M. Mardiak - J. Polec

13:30 Awarding and Conference Closing (BC-300)