

INTERNATIONAL SCIENTIFIC CONFERENCE

**MODERN SAFETY TECHNOLOGIES IN TRANSPORTATION**

# **MOSATT 2011**



## ***CONFERENCE PROGRAMME***

**20 - 22 SEPTEMBER 2011**

**ZLATA IDKA, SLOVAKIA**

## Monday 19<sup>th</sup> September

- 16:00 - 22:00 CONFERENCE PARTICIPANTS ARRIVAL AND ACCOMMODATION  
 19:00 - 22:00 DINNER AND GLASS OF WINE

## Tuesday 20<sup>th</sup> September

- 7:30 - 8:30 BREAKFAST  
 8:00 - 12:00 CONFERENCE PARTICIPANTS ARRIVAL AND ACCOMMODATION  
 8:30 - 12:00 REGISTRATION  
 9:00 - 12:00 KOJSOVSKA HOLA HILL GUIDED TOUR (For interested persons - free of charge)  
 12:00 - 13:30 LUNCH

### PLENARY SESSION - Section 1, Tuesday 20<sup>th</sup> September

**Chairmen:** Tobias LAZAR, Pavel NECAS, Andrzej RENSKI

- 14:00 - 14:10 CONFERENCE OPENING
- 14:10 - 14:30 MEASUREMENT SYSTEM FOR INVESTIGATION OF TYRE-ROAD FRICTION  
*Invited* POKORSKI Janusz – RENSKI Andrzej – SAR Hubert
- 14:30 - 14:50 ACCEPTANCE, APPROVAL AND CERTIFICATION PROCEDURES OF URBAN GUIDED TRANSPORT SYSTEMS – AN EUROPEAN VIEW  
 SAGHI Balazs – TARNAI Geza
- 14:50 - 15:10 STATISTICAL ANALYSIS OF DETECTED VEHICULAR EMERGENCIES IN VARIOUS ROAD ENVIRONMENTS  
 FAZEKAS Zoltan – GASPARD Peter – KOVACS Roland
- 15:10 - 15:30 INDIRECT SAFETY MANAGEMENT REGARDING NOVICE DRIVERS  
 CHALOUPKA-RISSER Christine
- 15:30 - 15:50 DECREASING ROAD ACCIDENT FREQUENCY WITH THE HELP OF ITS  
 KALASOVA Alica
- 15:50 - 16:20 GROUP PHOTO, COFFEE BREAK
- 16:20 - 16:40 ANALYSIS OF ROAD SAFETY TENDENCIES IN BUDAPEST  
*Invited* TANCZOS Katalin – TOROK Adam
- 16:40 - 17:00 PROCEDURES FOR EFFECTIVE TESTING OF LNG CARRIERS CARGO SPACES  
 PIALA Peter – KALINA Tomas
- 17:00 - 17:20 TRACKING RAILWAY CARS TO INCREASE RAILWAY SAFETY  
 SIROKY Jaromir – CEMPIREK Vaclav
- 17:20 - 17:40 TRICHOTOMY OF DRIVERS, VEHICLES AND ROADS IN VIEW OF VEHICULAR EMERGENCIES AND CORRECTIVE ACTIONS  
 BIRO Zsolt – FAZEKAS Zoltan – GASPARD Peter – KOVACS Roland
- 17:40 - 18:00 STRATEGY FOR THE HYDROGEN TRANSITION  
 SOVRESKI Zlatko V. – CAUSEVSKI Anton – TASEVSKI Angel – SIMEONOV Simeon
- 18:30 - 19:30 DINNER
- 19:00 - 23:00 SOCIAL PROGRAMME (For interested persons - 10 € / person):  
 Vital world - Wellness - Water programme in Conference Hotel

## Wednesday 21<sup>st</sup> September

**7:30 - 8:30      BREAKFAST**

### Section 2, Wednesday 21<sup>st</sup> September, 9:00 - 13:00

**Chairmen:      Zlatko V. SOVRESKI, Karoly BENEDA, Petr BOJDA**

- 9:00 - 9:15      THE ELECTRIC BIKE: CHANCES AND RISKS OF A NEW BOOM  
AUSSERER Karin – CHALOUPKA-RISSER Christine**
- 9:15 - 9:30      FAULT INJECTION - A SIMULATION BASED SAFETY ANALYSIS METHOD FOR VEHICLE  
CONTROL SYSTEM DEVELOPMENT  
SZABO Balint – SZALAY Zsolt**
- 9:30 – 9:45      SIMULATION OF OPERATION CONCEPT UNDER REDUCED RAILWAY INFRASTRUCTURE  
CAPACITY  
SOJKA Martin – JANOS Vit – BAUDYS Karel**
- 9:45 - 10:00     EXPERIMENTAL INVESTIGATION OF CENTRIFUGAL COMPRESSOR SURGE PROTECTION  
USING VARIABLE INDUCER SHROUD BLEED  
BENEDA Karoly**
- 10:00 - 10:15    MULTI-POSITION STATIC TEST OF 3-AXIS ACCELEROMETER  
DRAGANOVA Katarina – KMEC Frantisek – HUDAK Jozef – BLAZEK Josef – MIKITA Ivan**
- 10:15 – 10:30    DEVELOPMENT OF SMALL PLATFORM FLY-BY-WIRE SYSTEM  
KOTABA Ondrej**
- 10:30 - 11:00    COFFEE BREAK**
- 11:00 - 11:15    TRANSFER CHARACTERISTICS OF FOUR CHANNEL MAGNETOMETER FOR SECURITY  
SYSTEM  
LIPOVSKY Pavol – HUDAK Jozef – BLAZEK Josef – PRASLICKA Dusan – CVERHA Andrej**
- 11:15 - 11:30    MULTIPLE SOURCE NAVIGATION SIGNAL GENERATOR  
BOJDA Petr – DUB Michal – MAKULA Petr**
- 11:30 - 11:45    INTEGRATED DATA LINK CONCEPT - AN ADAPTIVE SYSTEM FACILITATING CONTROLLER  
PILOT DATA LINK COMMUNICATION  
DORNEICH Michael – VASEK Jiri – KEINRATH Claudia – KRUPANSKY Petr – PASSINGER  
Bretislav – WHITLOW Stephen – HAMBLIN Chris**
- 11:45 - 12:00    ENHANCED AND SYNTHETIC VISION: CREW INFORMATION REQUIREMENTS  
KOLCAREK Pavel – KOUKOL Ondrej – VERVERS Patricia May**
- 12:00 – 12:15    DUAL OPERATION HUMAN-MACHINE INTERFACE  
KRUPANSKY Petr – VASEK Jiri – KEINRATH Claudia – DORNEICH Michael – BALL Larry**
- 12:15 – 12:30    OFDM COMMUNICATION SYSTEM OPTIMIZATION BASED ON ADAPTIVE LOADING  
MAKULA Petr – DUB Michal – BOJDA Petr**
- 12:30 - 12:45    PUBLIC-KEY ALGORITHMS FOR AIR FORCE COMMUNICATION SYSTEMS  
TURCANIK Michal**
- 12:45 – 13:00    RUNWAY END SAFETY AREA  
PAVLIN Stanislav – BRACIC Matija**
- 13:00 - 14:00    LUNCH**

**Section 3, Wednesday 21<sup>st</sup> September, 9:00 - 13:00**

**Chairmen:** *Rudolf JALOVECKY, Jan LABUN, Mariana KUFFOVA*

**9:00 - 9:15** *PARAMETERS IDENTIFICATION OF THE HUMAN BEHAVIOUR MODEL IN THE AIRCRAFT FLIGHT CONTROL*

**JALOVECKY Rudolf – BORIL Jan**

**9:15 - 9:30** *THE IMPORTANCE OF ATM SYSTEMS IN THE RNAV*

**JERABEK Jaroslav – VASEK Milan**

**9:30 – 9:45** *RADIO ALTIMETER DURING THE FINAL LANDING APPROACH PHASE*

**LABUN Jan – KURDEL Pavol**

**9:45 - 10:00** *LED LIGHT SOURCES IN THE AIRPORT LIGHTNING SYSTEMS*

**BLOUDICEK Radim**

**10:00 - 10:15** *ELECTRIC MOTOR WHEELTUG*

**CAPKOVA Marketa**

**10:15 – 10:30** *ALGORITHMS OF PROCESSES OF THE WINTER MAINTENANCE ON KOŠICE AIRPORT*

**BEREZNY Stefan**

**10:30 - 11:00** **COFFEE BREAK**

**11:00 - 11:15** *SAFETY INCREASE IN MILITARY TECHNIQUES OPERATION*

**KUFFOVA Mariana**

**11:15 - 11:30** *FUEL ADDITIVE EXPERIMENT IN THE AREA OF OIL STABILITY AND QUALITY*

**KORECKI Zbysek – POMAZALOVA Natasa – MARES Jaromir**

**11:30 - 11:45** *SPECIFIC ASPECTS OF BRAKE FLUIDS ASSESSMENT REGARDING TO THE TRAFFIC SAFETY*

**CORNAK Stefan**

**11:45 - 12:00** *ROAD LINE TRAFFIC CONTROL – KNOWLEDGE AND EXPERIENCES FROM TESTING OPERATION*

**KRAJCIR Dusan – KNAKAL Martin – SKODACEK Martin**

**12:00 – 12:15** *MOBILE TECHNOLOGY IN POSTAL SECTOR*

**VACULIK Juraj – TENGLER Jiri**

**12:15 - 12:30** *TRAFFIC SAFETY OF MULTI-LANES ROUNDABOUTS*

**RADIMSKY Michal – SMELY Martin – APELTAUER Tomas**

**12:30 – 12:45** *DEPARTURE OF VEHICLES FROM A LIGHT-CONTROLLED INTERSECTION*

**KRCAL Jan**

**12:45 – 13:00** *AUTHENTICATION USING ZERO-KNOWLEDGE TECHNIQUE FOR ITS APPLICATIONS*

**JERABEK Michal**

**13:00 - 14:00** **LUNCH**

## **Wednesday 21<sup>st</sup> September**

**14:00 - 18:30**    **SOCIAL PROGRAMME (For interested persons - free of charge):**

**1. MUSEUM OF AVIATION IN KOSICE GUIDED VISIT**

*or*

**2. JASOVSKA CAVE GUIDED TOUR**

*or*

**3. GUIDED SIGHTSEEING TOUR OF KOSICE**

*or*

**4. OPTIMA SHOPPING CENTER VISIT**

*or*

**5. VITAL WORLD – WELLNESS – IN CONFERENCE HOTEL**

**19:00 - 23:00**    **MOSATT Best Paper & MOSATT Best Student Paper AWARDS WILL BE GRANTED  
SOCIAL EVENING**

## Thursday 22<sup>nd</sup> September

7:30 - 8:30      **BREAKFAST**

### Section 4, Thursday 22<sup>nd</sup> September, 9:00 - 13:00

**Chairmen:**      **Stefan CORNAK, Marek SMETANA, Jan ROHAC**

- 9:00 - 9:15      *INVESTIGATING OCCURRENCE OF TRAFFIC ACCIDENTS IN MORAVIAN-SILESIA REGION*  
**SMETANA Marek – MALY Radek**
- 9:15 - 9:30      *ELIMINATION OF RISKS OF TRANSPORT STRUCTURES IN RISKS AREAS*  
**SEIDLER Tomas – MIHOLA Marek – CIHLAROVA Denisa – KRAJCOVIC Marian**
- 9:30 – 9:45      *EUROPEAN RAIL TRAFFIC MANAGEMENT SYSTEM – WAY FOR INCREASE A COMPETITIVENESS OF RAIL SECTOR*  
**IHNAT Peter – MAJERCAK Jozef**
- 9:45 - 10:00      *NEW MANDATORY SAFETY SYSTEMS FOR ROAD VEHICLES*  
**MORAVCIK Lubomir**
- 10:00 - 10:15      *THE ADMINISTRATION OF ROAD TRAFFIC INFORMATION SYSTEMS AUTHORITIES FOR ROAD TRANSPORTATION AND GROUND COMMUNICATION*  
**GALANDA Jozef – SEDLAK Pavol – STANCL Miroslav**
- 10:15 – 10:30      *SAFETY RISKS CONNECTED WITH PARKING OF CNG VEHICLES IN UNDERGROUND CAR PARKS*  
**SERAFIN Jiri – BERNATIK Ales**
- 10:30 - 11:00      **COFFEE BREAK**
- 11:00 - 11:15      *SENSORS AND DATA PROCESSING METHODS USED IN NAVIGATION SYSTEMS*  
*Invited*      **ROHAC Jan – SIPOS Martin**
- 11:15 - 11:30      *THE USE OF COMPLEX PILOTLESS SYSTEMS IN POLICE PRACTICE*  
**HRINKO Martin**
- 11:30 - 11:45      *SELECTED PROBLEMS OF THE IN-FLIGHT AIRCRAFT TESTS*  
**NOWAKOWSKI Miroslaw**
- 11:45 - 12:00      *THE CONCEPT OF SAFETY AT THE AIRPORT*  
**KOSCAK Peter – PETRUF Martin**
- 12:00 – 12:15      *OPTIMIZATION OF THE PROFESSIONALS IN TERMS OF MILITARY AVIATION OF THE ARMED FORCES OF THE SLOVAK REPUBLIC*  
**BANAS Tomas – NECAS Pavel**
- 12:15 - 12:30      *INTERACTION OF THE TYPE OF TRANSPORT AND ITS IMPACT ON TRAFFIC SAFETY*  
**KRAMNY Jan – PETRU Jan – ZEMAN Karel – MIHOLA Marek**
- 12:30 – 12:45      *LOAD SECURING OF BIG-BAGS WITH DANGEROUS GOODS IN MARITIME CONTAINERS FOR ROAD, RAIL AND DEEP SEA CARRIAGE*  
**JAGELCAK Juraj**
- 12:45 – 13:00      *MOBILE MONITORING CENTRE*  
**SOLDAN Kamil – KVARCAK Milos**
- 13:00              **CONFERENCE CLOSURE**
- 13:10 – 14:00      **LUNCH**

## Section 5, Thursday 22<sup>nd</sup> September, 9:00 - 13:00

**Chairmen:** *Milan DZUNDA, Stefan BEREZNY, Milos SOTAK*

- 9:00 - 9:15** *MODERN BILLING SYSTEMS FOR AIRCRAFT IN FLIGHT ENTERTAINMENT  
DZUNDA Milan – ZAK Peter – NOSWITZ Melanie – DRAXLER Daniel*
- 9:15 - 9:30** *MODELLING OF TRAFFIC COLLISION AVOIDANCE SYSTEM IN THE MATLAB ENVIRONMENT  
KLECUN Rudolf – KOVER-DORCO Lubomir*
- 9:30 – 9:45** *CFD SIMULATION OF DEEP STALL CONDITION ON THE SWEEPBACK WING  
GASPAROVIC Peter*
- 9:45 - 10:00** *SIMULATORS AND TRAINERS - HOW IMPROVE THE SAFETY OF AIR SERVICES  
GREGA Matus – NECAS Pavel – SCHOBER Tomas – ANTOSKO Matej*
- 10:00 - 10:15** *HEADED FOR COMPREHENSIVE SECURITY: ENHANCED VIRTUAL SIMULATED EDUCATION  
AND TRAINING BASED ON AVIS PLATFORM  
KELEMEN Miroslav – NECAS Pavel – SOUSEK Radovan – GREGA Matus*
- 10:15 – 10:30** *THE INFLUENCE OF STRUCTURAL CHANGES ON BUS BEHAVIOR DURING ROLLOVER  
ELESZTOS jr. Pavel – MACAJ Juraj – SOLEK Peter – ELESZTOS Pavel*
- 10:30 - 11:00** **COFEE BREAK**
- 11:00 - 11:15** *INFLUENCE OF BUILDING WIND-POWER PLANTS ON THE OPERATION OF RADIO  
LOCATIONS SYSTEM  
DZUNDA Milan – DRAXLER Daniel – ZAK Peter – REHANEK Peter – JUHAS Martin*
- 11:15 - 11:30** *THERMOGRAPHY AND THE FACTORS AFFECTING THE MEASUREMENT OF SURFACE  
TEMPERATURES  
ADAMCIK Frantisek – POVAZAN Jozef – FOZO Ladislav – JUDICAK Jozef*
- 11:30 - 11:45** *EXPERIMENTAL MEASUREMENT OF PARAMETERS OF SENSOR ADIS16350  
BREDA Robert – BENO Vladimir – KADUK Pavol*
- 11:45 - 12:00** *CALIBRATION AND ALIGNMENT PROCEDURES OF INERTIAL NAVIGATION SYSTEM  
SOTAK Milos*
- 12:00 – 12:15** *THEORETICAL PREREQUISITES FOR PASSENGER CHECK-IN TIME OPTIMIZATION IN AIR  
TRANSPORT  
SOUREK David*
- 12:15 - 12:30** *STATISTICAL METHOD AS THE MEANS OF MEASURING THE EFFECTIVENESS OF  
MANAGEMENT COURSES  
HAJDUOVA Zuzana – ANDREJKOVIC Marek – MIXTAJ Ladislav*
- 12:30 – 12:45** *UNIVERSAL SIMPLE DATA LOGGER  
KMEC Frantisek – DRAGANOVA Katarina – LIPOVSKY Pavol*
- 12:45 – 13:00** *EFFICIENCY AND THE THRESHOLD LEVEL OF TECHNOSPHERE SAFETY  
LAZAR Tobias – MADARASZ Ladislav*
- 13:00** **CONFERENCE CLOSURE**
- 13:10 – 14:00** **LUNCH**