

# **PROGRAMME**



Pavle Savic (1909-1994)

# MILITARY TECHNICAL INSTITUTE 1 Ratka Resanovica St, Belgrade, Serbia tel: +381 11 250 8308; www.vti.mod.gov.rs;

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Serbia, Tara, 9-11 October 2024

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## 11<sup>TH</sup> INTERNATIONAL SCIENTIFIC CONFERENCE ON DEFENSIVE TECHNOLOGIES



## **CONFERENCE AGENDA**

## Wednesday, October 9th, 2024

| 17:00 – 20:00 | Participants registration and accommodation |  |
|---------------|---|--|
| 17:30 - 20:00 | Dinner                                      |  |
| 20:00 - 21:00 | Welcome cocktail (Hall)                     |  |

## Thursday, October 10th, 2024

|               | toper 10", 2024  |                     |                   |                |
|---------------|--|---------------------|-------------------|----------------|
| 7:30 - 10:00  | Breakfast  |                     |                   |                |
| 09:00 - 11:00 | Session 1- Young rese  | archers             |                   |                |
| 09:00 - 11:00 | Participants registrati  | on                  |                   |                |
| 11:00 - 11:45 | OPENING CEREMONY  A brief introduction: Military Technical Institute Director, col. Ivan Pokrajac, PhD Eng Conference opening: Head of Defence Technologies Department, bg Slavko Rakić PhD Eng Plenary lecture: "Pavle Savic", Vladimir Cizelj PhD Eng, Vlatacom Institute, Belgrade  (Conference Hall)                             |                     |                   |                |
| 11:45 - 12:15 | Break/Cock   | tail and conference | participants join | t photo (Hall) |
| 12:15 - 13:00 | INTRODUCTORY LECTURE/ INVITATION LECTURE Energetic materials, prof. Thomas Klapotke, PhD Eng - Department of Chemistry, Ludwig-Maximilians Universitat, Munich, Germany INTRODUCTORY LECTURE/ INVITATION LECTURE Fight Against Drones, Boban Sazdic Jotic, PhD Eng, Military Technical Institute, Belgrade Serbia  (Conference Hall) |                     |                   |                |
| 13.00 - 14.30 | LUNCH  |                     |                   |                |
| 14:30 - 17:00 | Round table/Panel (Banket Hall)  |                     |                   |                |
|               | SESSIONS   |                     |                   |                |
| 14:30 - 17:00 | Session 2 - Young researchers  |                     |                   |                |
| 17:00 - 19:00 | Session 3- AFD   | Session 4- ISSRS    | Session 5- MT     | Session 6- AEM |
| 19:00 - 20:00 | Session 7-POSTER presentation (Hall, 1st floor)  |                     |                   |                |
| 20:00 - 23:00 |  | CEREMON             | IIAL DINNER       |                |



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## Friday, October 11th, 2024

| 07:30 - 09:00 | Breakfast   |                                     |           |  |  |  |  |
|---------------|---|-------------------------------------|-----------|--|--|--|--|
| 07.30 - 03.00 | Dicariast   |                                     |           |  |  |  |  |
|               |   | SESSIONS                            |           |  |  |  |  |
| 9:00 - 11:00  | Session 8-Your  | ng researchers                      |           |  |  |  |  |
| 11:00 - 11:30 |   | Cof                                 | fee break |  |  |  |  |
|               |   | SE                                  | SSIONS    |  |  |  |  |
| 11:30 - 13:30 | Session 9- A Session 10- TIS Session 11- MT Session 12-WSCV |                                     |           |  |  |  |  |
| 14:00 - 15:30 |   | Lunch                               |           |  |  |  |  |
|               | SESSIONS  |                                     |           |  |  |  |  |
| 16:00 - 18:00 | Session 13 - C  | Session 13 - QSMME Session 14 - TIS |           |  |  |  |  |
| 18:30 - 19:00 | CONFERENCE CLOSING  |                                     |           |  |  |  |  |
| 19:00 - 20:00 | Cocktail (Conference Hall)                                  |                                     |           |  |  |  |  |
| 20:00 - 21:00 |   | I                                   | Dinner    |  |  |  |  |

## Saturday, October 12th, 2024

| 07:30 - 09:00 | Breakfast              |
|---------------|------------------------|
| 09:00 - 10:00 | Departure via Belgrade |

#### **Lecture halls for SESSIONS**

Lecture hall 1: IDEA HALL
Lecture hall 2: BANKET HALL
Lecture hall 3: CONFERENCE HALL
Lecture hall 4: NEW HALL

| No             | SECTIONS   | NUMBER OF PAPERS |
|----------------|--|------------------|
| 1. AFD - Aer   | odynamics and Flight Dynamics                                  | 9                |
| 2. A - Aircraf | ft   | 8                |
| 3. WSCV - W    | eapon Systems and Combat Vehicles                              | 19               |
| 4. AEM - Am    | munition and Energetic Materials                               | 12               |
| 5. ISSRS - Int | tegrated Sensor Systems and Robotic Systems                    | 14               |
| 6. TIS - Telec | communication and Information Systems                          | 17               |
| 7. MT- Mate    | rials and Technologies   | 36               |
| 8. QSMME -     | Quality, Standardization, Metrology, Maintenance and Exploitat | tion 15          |



| 1. SECTION: AERODYNAMICS AND FLIGHT DYNAMICS - AFD                |  |  |  |  |
|---|--|--|--|--|
| Session 3 HALL 1 Thursday, October 10 <sup>th</sup> 17:00 - 19:00 |  |  |  |  |
| Chairman: Goran Ocokoljiić  |  |  |  |  |

- 1. THE NA-DEL AIRFOIL MODIFICATIONS FOR GENERAL AVIATION AND UAV APPLICATIONS, Zorana Z. Dančuo, Ivan A. Kostić, Olivera P. Kostić, Aleksandar Č. Bengin, Goran S. Vorotović
- 2. AERODYNAMIC OPTIMIZATION OF WINGLETS FOR AN UNMANNED AERIAL VEHICLE, Dušan Ivković, Ivan Kostić, Olivera Kostić, Mirko Dinulović, Aleksandar Simonović
- 3. COMPUTATIONAL ANALYSIS OF ROCKET-ASSISTED PROJECTILE TRAJECTORY, Abdellah Ferfouri, Damir D. Jerković, Aleksandar V. Kari, Saša Živković
- 4. COMPUTING AERODYNAMIC DAMPING IN ROLL AND PITCH OF A SUPER-SONIC FINNER MODEL, Jelena Svorcan, Toni Ivanov, Ognjen Peković, Aleksandar Simonović
- 5. **DESIGN AND EXPERIMENTAL EVALUATION OF A MISSILE LATERAL THRUSTER,** Toufik Allouche, Saša Živković, Marko Karić, Abdellah Ferfouri, Damir Jerković, Nebojša Hristov
- 6. **EXPERIMENTAL RESULTS FROM THE MISSILE MODEL TEST CAMPAIGN IN THE VTI T-38 WIND TUNNEL**, Marija Samardžić, Nataša Vujić, Biljana Ilić, Goran Ocokoljić
- 7. CONTROL DERIVATIVE ESTIMATION OF NONCONVENTIONAL UAV DESIGN, Miodrag Milenković-Babić, Branislav Ostojić, Biljana Dovatov, Ilija Nenadić

| 2. SECTION : AIRCRAFT - A                                       |  |  |  |  |
|---|--|--|--|--|
| Session 9 HALL 1 Friday, October 11 <sup>th</sup> 11:30 - 13:30 |  |  |  |  |
| Chairman: Jelena Svorcan  |  |  |  |  |

- 1. **AIRCRAFT PROTECTION AGAINST LIGHTNING AND STATIC ELECTRICITY**, Marina Ostojić, Tamara Nikolić, Radoje Zarubica, Nikola Bogavac
- 2. **SMALL FIXED-WING UAV PRECISION AERIAL DROP CAPABILITY DEVELOPMENT**, Vuk Antonić, Milenko Trifković, Vojimir Molović
- 3. ANALYSIS OF THE RESCUE SYSTEM IMPLEMENTATION IN THE MEDIUM RANGE UAV, Vanja Stefanović Gobeljić, Miodrag Milenković Babić, Mihailo Zdravković
- 4. ANALYSIS OF THE MASS AND AERODINAMICAL CHANGES DUE TO IMPLEMEN-



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**TATION OF AN EXTERNAL RESCUE SYSTEM ON A MEDIUM RANGE UAV**, Branislava Ostić, Miodrag Milenković-Babić, Vanja Stefanović-Gobeljić, Branislav Ostojić

5. **FAILURE ANALYSIS OF AIRCRAFT STRUCTURAL ELEMENTS**, Stevan Maksimović, Katarina Maksimović, Ivana Vasović Maksimović, Mirjana Đurić, Mirko Maksimović

| POSTER SECTION |        |                                    |               |
|----------------|--------|------------------------------------|---------------|
| Session 7      | HALL 2 | Thursday, October 10 <sup>th</sup> | 19:00 - 20:00 |

1. THE EFFECTIVNES OF THE USE OF DRONES IN MODERN CONFLICT, Stevan Jovičić, Jasminka Jelisavac, Ljubiša Tomić, Ivo Obradovic

| 3. SECTION: WEAPON SYSTEMS AND COMBAT VEHICLES - WSCV            |  |  |  |  |
|--|--|--|--|--|
| Session 12 HALL 4 Friday, October 11 <sup>th</sup> 11:30 - 13:30 |  |  |  |  |
| Chairman: Damir Jerković   |  |  |  |  |

- 1. OPTIMIZATION OF AUTOMATIC SAFETY ALGORITHMS FOR GUIDED MISSILES TO MEET TESTING RANGE BOUNDARIES, Ivana Todić, Luka Miličić, Vladimir Kuzmanović, Miloš Marković, Dejan Jevtić
- 2. SIMULATION MODEL OF PRIORITIZED THREAT SELECTION IN DEFENSIVE MULTITARGET MILITARY SWARMING, Radomir Janković
- 3. ACTIVE GYRO-DUMPING FOR MISSILE WITH PITCH/YAW DISTURBANCE SENSITIVE HOMING HEAD, Miloš Pavić, Ivan Marić
- 4. ANALYTICAL AND NUMERICAL ANALYSIS OF AXIAL STRESSES IN A HIGH EXPLOSIVE ROCKET ASSISTED PROJECTILE BODY DURING ITS LAUNCH, Svetlana Stojnović, Abdellah Ferfouri, Nikola Radovanović, Miloš Pešić, Srećko Manasijević, Vladimir Milovanović
- 5. EFFECT OF EROSIVE BURNING IN ROCKET MOTOR ON THE BALLISTICS OF ROCKET FLIGHT, Srđan Stojković, Nikola Gligorijević
- 6. PREDICTION OF ARTILLERY CORRECTION ELEMENTS BY SOFTWARE FOR BALLISTICS MODULE OF FIRE CONTROL SYSTEMS, Dragoslav R. Petrović
- 7. CHANGE OF SPEED OF COMFORT PARAMETERS IN THE ARMORED COMBAT VEHICLES OF THE SERBIAN ARMY DUE TO ENVIRONMENTAL CONDITIONS, Snežana Mališić, Milica Ivanović, Filip Stanić



| POSTER SECTION |        |                                    |               |
|----------------|--------|------------------------------------|---------------|
| Session 7      | HALL 2 | Thursday, October 10 <sup>th</sup> | 19:00 - 20:00 |

- 1. OPTIMIZATION OF SINGLE STAGE PLANETARY GEARBOX PARAMETERS USING GENETIC ALGORITHM, Miloš Sedak, Maia Rosić
- 2. TESTING OF TECHNICAL SOLUTION FOR ACHIEVING THE OPTIMAL DURATION OF THE ACTIVATION CADENCE OF THE FRONT AND MAIN WARHEAD IN THE TANDEM CUMULATIVE WARHEADS, Slobodan Bosiljčić, Miroslav Gluvačević, Rade Stančić, Marinko Ugrčić, Katarina Nestorović
- 3. ANALYSIS OF THE USE OF MODERN FIRE GUIDANCE SYSTEMS AND THEIR IM-PLEMENTATION IN INFANTRY UNITS, Marko Radovanović, Aleksandar Petrovski, Aner Behlić, Rexhep Mustafovski, Kristijan Ilievski, Željko Jokić, Sofija Ackovska
- 4. ASSESSMENT OF EXPOSURE TO PHYSICAL HAZARDS IN THE WORKING ENVI-RONMENT DURING TESTING OF PROTOTYPES, Snežana Jovanović, Dragan Stojadinović, Martin Jovanović, Aleksandar Đurić
- 5. PRESENTATION OF THE USE OF MODERN FIRE CONTROL SYSTEMS AND THEIR IMPLEMENTATION IN INFANTRY UNITS, Marko Crnogorac, Marko Radovanović
- 6. A NEW APPROACH TO MUZZLE CLIMB REDUCTION IN ASSAULT RIFLES, Ranko Babić

| 4. SECTION: AMMUNITION AND ENERGETIC MATERIALS - AEM              |  |  |  |  |
|---|--|--|--|--|
| Session 6 HALL 4 Thursday, October 10 <sup>th</sup> 17:00 - 19:00 |  |  |  |  |
| Chairman: Predrag Elek  |  |  |  |  |

- 1. MODELING OF SHAPED CHARGE JET PENETRATION DEPTH: ANALYTICAL AND NUMERICAL APPROACH, Predrag Elek, Miloš Marković, Dejan Jevtić, Radovan Đurović
- 2. PARTICLE SIZE SENSITIVITY IN SMOOTH PARTICLE HYDRODYNAMICS NUMERI-CAL SIMULATION OF NATURAL FRAGMENTATION PHENOMENA, Miloš Marković, Predrag Elek, Ivana Todić, Dejan Jevtić, Martin Macko
- 3. CALCULATION OF SAFE DIAMETAR OF PROPELLANTS USING HEAT FLOW MEASUREMENTS, Vesna Petrović, Slaviša Stojiljković, Jelena Šultans
- 4. INFLUENCE OF GUNPOWDERS AND ROCKET PROPELLANTS SAMPLE PREPARATION ON TEST RESULTS, Jelena Šultans, Slaviša Stojiljković, Vesna Petrović
- 5. BLAST PERFORMANCE OF ISOPROPYL NITRATE BASED THERMOBARIC EXPLO-



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**SIVES VS. CAST-CURED PBX,** Danica M. Bajić, Slavica Terzić, Mladen Timotijević, Radoslav Sirovatka, Dragan Knežević, Igor Blagojević, Maja Radmanovac

6. UNSTEADY INTERNAL BALLISTIC CALCULATION OF ATYPICAL PROCESSES IN ROCKET MOTOR, Saša Živković, Saša Antonović, Miloš Filipović, Mirko Karić, Marko Karić

| POSTER SECTION |        |                                    |               |
|----------------|--------|------------------------------------|---------------|
| Session 7      | HALL 2 | Thursday, October 10 <sup>th</sup> | 19:00 - 20:00 |

- 1. MONITORING PLASTICIZER'S MIGRATION IN THE HMX/DOA MIXTURE UNDER ELEVATED TEMPERATURES, Mirjana Krstović, Danica Bajić, Teodora Stančić, Mladen Timotijević, Bojana Fidanovski
- 2. **NUMERICAL MODELING OF EXPLOSIVELY FORMED PROJECTILES FORMATION**, Andjela Mitrović, Saša Savić, Milan Vučković, Nebojša Hristov, Damir Jerković, Mladen Josijević
- 3. **DEVELOPMENT OF LINER FOR CASE-BONDED GRAIN WITH END-BURNING CONFIGURATION**, Tihomir Kovačević, Slavko Mijatov, Alen Crnalić, Jelena Gržetić, Darko Kuprešak, Saša Brzić
- 4. INFLUENCE OF DIFFERENT HMX/RDX CONTENTS IN COMPOSITE ROCKET PRO-PELLANTS ON THE VACUUM STABILITY TEST RESULTS, Bojana Fidanovski, Slavko Mijatov, Mirjana Krstović, Marica Bogosavljević, Mirjana Dimić

| 5. SECTION: INTEGRATED SENSOR SYSTEMS AND ROBOTIC SYSTEMS - ISSRS |  |  |  |  |
|---|--|--|--|--|
| Session 4 HALL 2 Thursday, October 10 <sup>th</sup> 17:00 - 19:00 |  |  |  |  |
| Chairman: Miodrag Vračar / Rade Pavlović                          |  |  |  |  |

- 1. THE IMPORTANCE OF PINHOLE SIZE TARGET IN THERMOGRAPHIC AND RADIO-METRIC MEASUREMENT, Katarina Mišković
- 2. IMPROVEMENT OF THE SIGNAL-TO-NOISE RATIO BY USING A STATISTICAL FILTER, Miodrag Vračar, Stevo Vračar
- 3. **DESIGN OF A SERVO MECHANISM FOR CONTROLLING MISSILE FINS IN PITCH AND YAW PLANES**, Nebojša Jovičić, Aleksandar Stefanović, Marijana Stojanović, Miloš Pavić
- 4. **MULTISENSOR IMAGE FUSION: DATASET, METHODS AND PERFORMANCE EVALUATION**, Mohammed Zouaoui Laidouni, Boban Bondžulić, Dimitrije Bujaković, Touati Adli, Milenko Andrić



- 5. COMPARATIVE ANALYSIS OF YOLO ALGORITHMS FOR AIRCRAFT DETECTION IN REMOTE SENSING IMAGES, Touati Adli, Dimitrije Bujaković, Boban Bondžulić, Mohammed Zouaoui Laidouni, Milenko Andrić
- 6. **HIGH ACCURACY WEAPONS**, Dragan Knežević, Milan Popović, Miloš Simić, Goran Marjanović

| POSTER SECTION |   |  |  |  |
|----------------|---|--|--|--|
| Session 7      | Session 7 HALL 2 Thursday, October 10 <sup>th</sup> 19:00 - 20:00 |  |  |  |

- 1. NOVEL INSTRUMENT FOR AERODYNAMIC PRESSURE MEASUREMENTS WITH EXCHANGEABLE MULTISENSOR MODULES, Miloš Frantlović, Miloš Vorkapić, Žarko Lazić, Milče M. Smiljanić, Ivana Jokić, Predrag Poljak, Dušan Nešić, Dragan Tanasković
- 2. **AZIMUTH ANGLE EROR DEPENDING OF THE INERTIAL NAVIGATION SISTEM MOUNTING ERROR**, Vladimir Vukmirica Phd, Ivana Trajkovski Msc, Nada Asanović Eng, Adrijana Jovanović Msc
- 3. APPLICATION OF SCREW THEORY AND ITS IMPLEMENTATION IN PYTHON FOR CONTROLLING A NIRYO ONE MANIPULATOR, Vuk Todorović, Milan Blagojević, Nikola Nešić
- 4. UWB SENSOR PERFORMANCE IN UGV 'FOLLOW ME' APPLICATIONS WITH OB-STACLE INTERFERENCE, Rade Pavlović, Nina Mitričević, Srđan Savić

| 6. SECTION: TELECOMMUNICATION AND INFORMATION SYSTEMS - TIS      |  |  |  |  |  |
|--|--|--|--|--|--|
| Session 10 HALL 2 Friday, October 11 <sup>th</sup> 11:30 - 13:30 |  |  |  |  |  |
| Chairman: Boban Sazdić-Jotić                                     |  |  |  |  |  |

- 1. SIMPLE ENERGY DETECTOR FOR TWO-STAGE CLASSIFICATION FOR ANTIDRONE SYSTEMS, Snežana Zurovac, Nikola Petrović, Vasilija Joksimović, Ivan Pokrajac, Darko Mikanović, Boban Sazdić-Jotić
- 2. **AN EXAMPLE OF VHF RADAR SIGNAL PROCESSING**, Darko Pijević, Aleksandar Ristić, Dragan Nikolić, Dejan Ivković, Zvonko Radosavljević
- 3. THE POWER CONSUMPTION OF EMBEDDED GPU COMPUTERS FOR DEEP LEARNING APPLICATIONS, Boban Sazdić-Jotić, Snežana Zurovac, Nikola Petrović, Dragana Bojić
- 4. THE USE OF GEOGRAPHIC INFORMATION SYSTEMS (GIS) IN THE TEACHING OF MILITARY TOPOGRAPHY, Marko Stojanović, Nenad Galjak, Jasmina M. Jovanović, Marko Simić, Vladimir Vučenov



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- 5. SENTINEL-1 SAR INTERFEROMETRY FOR TERRAIN MONITORING: A CASE STUDY OF MINE DYNAMICS, Miloš Basarić, Dušan Jovanović
- 6. **ANALYSIS OF TRAFFIC ACCIDENTS IN NOVI SAD USING GIS TECHNOLOGY**, Dejan Djordjević, Miloš Basarić, Ivan Garić

| 6. SECTION: TELECOMMUNICATION AND INFORMATION SYSTEMS - TIS      |  |  |  |  |
|--|--|--|--|--|
| Session 14 HALL 2 Friday, October 11 <sup>th</sup> 16:00 - 18:00 |  |  |  |  |
| Chairman: Ivan Vulić / Ivan Pokrajac                             |  |  |  |  |

- 1. CONTEMPORARY CRYPTOGRAPHY: RECENT ACHIEVEMENT AND RESEARCH PERSPECTIVES, Boriša Jovanović, Ivan Tot, Silvana Ilić
- 2. PROPOSITION OF LABORATORY EQUIPMENT AND ITS UTILISATION FOR COM-PLEX BATTLEFIELD IP NETWORK SIMULATION, Đorđe Nešković, Marko Marković, Lara Kašca, Stefan Stanković, Miroslav Perić, Mladen Koprivica, Dejan Drajić
- 3. PERFORMANCE CHARACTERIZATION OF SECURE IP COMMUNICATION SYSTEMS FOR VARIOUS INTERACTIVITY LEVEL APPLICATIONS, Lara Kašca, Đorđe Nešković, Marko Marković, Stefan Stanković, Miroslav Perić
- 4. GRE TUNNEL UTILIZATION FOR MINIMIZING MULTI-VENDOR NETWORK EQUIPMENT ISSUES FOR VARIOUS TRANSMISSION CHANNELS, Marko Marković, Lara Kašca, Đorđe Nešković, Stefan Stanković, Miroslav Perić, Mladen Koprivica, Goran Marković
- 5. STANDARD CUMULANTS- BASED AUTOMATIC MODULATION CLASSIFICATION PERFORMANCE UNDER COLORED NOISE CHANNEL CONDITIONS, Rade R. Božović, Vladimir D. Orlić

| POSTER SECTION |        |                                    |               |
|----------------|--------|------------------------------------|---------------|
| Session 7      | HALL 2 | Thursday, October 10 <sup>th</sup> | 19:00 - 20:00 |

- 1. **DETERMINATION OF ELECTROMAGNETIC FIELD STRENGTH IN AREAS OF INCREASED SENSITIVITY AROUND RADIO TRANSMITTERS**, Ana Matović, Elmedin Biberović, Milan Gligorijević
- 2. DIGITAL RADIO SYSTEM FOR REMOTE MONITORING AND CONTROL ON THE MEDIUM VOLTAGE DISTRIBUTION NETWORK USING THE PDR 300 RADIO DEVICE AS A TRANSMITTER, Marija Matović, Ana Matović, Ivica Marjanović
- 3. THE LEVEL CROSSING RATE OF THE NAKAGAMI-M RANDOM PROCESS, Ivica Marjanović, Ana Matović, Marija Matović

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- 4. **EXAMINATION OF THE PROTECTION FACTOR WITH A LASER PHOTOMETER**, Miljan Miletic, Marina Ilic, Tatjana Markovic
- 5. OPTIMAL SOURCE LOCALIZATION IN A REAL RADIO CHANNEL BASED ON TOOA APPROACH USING THE HYBRID DIFFERENTIAL EVOLUTION ALGORITHM, Maja Rosić, Miloš Sedak

| 7. SECTION: MATERIALS AND TECHNOLOGIES - MT                       |  |  |  |  |
|---|--|--|--|--|
| Session 5 HALL 3 Thursday, October 10 <sup>th</sup> 17:00 - 19:00 |  |  |  |  |
| Chairman: Saša Brzić  |  |  |  |  |

- 1. THE INFLUENCE OF DESIGN CONDITIONS ON THE FAILURE OF THE UNIVERSAL CROSS JOINT (UCJ) OF THE CARDAN COUPLING, Saša Spasenić, Mileta Ristivojević, Vladimir Milovanović, Aleksandar Dimić, Stefan Dikić, Sreten Spasenić
- 2. SIGNIFICANT CHARACTERISTICS OF LEAD AND ALLOYS WITH ANTIMONY IN THE PRODUCTION OF SMALL ARMS AMMUNITION, Miroslav Papović
- 3. **EFFECTS OF DIFFERENT SURFACE PREPARATIONS ON BONDING PROPERTIES OF ALUMINIUM ALLOY EN AW-5754**, Nataša Zdravković, Damjan Klobčar, Dragan Milčić, Miodrag Milčić, Vukašin Pavlović, Aleksija Đurić
- 4. CAVITATION EROSION MONITORING OF MULLITE CERAMIC SAMPLE USING IMAGE ANALYSIS, Sanja Martinović, Ana Alil, Tatjana Volkov Husović
- 5. CORROSION OF 42CrMo4 STEEL IN MARINE ENVIRONMENT USING SEM/EDS ANALYSIS, Stanica Nedović, Ana Alil, Sanja Martinović, Tatjana Volkov-Husović
- 6. **ADHESIVE JOINING OF 3D PRINTED PARTS**, Aleksija Đurić, Biljana Marković, Dragan Milčić, Srđan Samardžić, Miodrag Milčić, Nataša Zdravković
- 7. CORROSION PROPERTIES OF LOW-CARBON STEEL WELDED JOINT IN SYNTHET-IC SEA WATER ENVIRONMENT, Mihael Bučko, Milan Jovanović Sreten Perić, Dragana Lazić, Jelena Marinković, Radovan Radovanović

| 7. SECTION: MATERIALS AND TECHNOLOGIES - MT                      |  |  |  |  |
|--|--|--|--|--|
| Session 11 HALL 3 Friday, October 11 <sup>th</sup> 11:30 - 13:30 |  |  |  |  |
| Chairman: Maja Vitorović-Todorović                               |  |  |  |  |

1. THE INFLUENCE OF THE PHASE TRANSFORMATION: Fhyd → FE3O4, OCCURS DURING THE ANNEALING TREATMENT OF SOL-GEL SYNTHESIS, ON THE ABSORPTION PROPERTIES OF THE FINAL SYNTHESIS PRODUCT (Fe3O4/C HOLLOW-SPHERE NANOPARTICLES), Violeta Nikolić, Zoran Ivić, Jose F. M. L. Mariano



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- 2. THE DESIGN AND PREPARATION OF CERIUM-DIOXIDE AND ZIRCONIUM(IV)HY-DROXIDE-INCORPORATED NANOFIBERS FOR THE DEGRADATION OF CHEMICAL WARFARE AGENTS, Maja Vitorović-Todorović, Tamara Vujatović-Velimirov, Stevan Stupar, Danica Bajić
- 3. CATALYTIC PROPERTIES OF PAPER-IMMOBILIZED HORSE SERUM BUTYRYLCHO-LINESTERASE, Sonja Bauk, Nataša Pajić
- 4. MAGNETOIMPEDANCE EFFECT OF NANOCRYSTALLINE FeNISIB and FeCuVSiB RIBBONS, Radoslav Surla, Milica M. Vasić, Dragica M. Minić, Ljubica Radović, Nebojša Mitrović, Pavel Crnomarković
- 5. Cu -DECORATED TIO2 NANOPARTICLES AS THE PHOTOCATALYTIC MATERIAL FOR CIPROFLOXACIN DEGRADATION, Marija Kovačević, Sanja Živković, Miloš D. Milović, Dragana Vasić Anićijević
- 6. PRELIMINARY INVESTIGATION OF BAMBOO FIBRE METALLIZATION VIA CHEMI-CAL/ELECTROCHEMICAL METHODS, Ivana Mladenović, Dušan Nešić, Marko Obradov, Miloš Vorkapić, Marija Vuksanović, Nebojša Nikolić, Dana Vasiljević Radović
- 7. **STRUCTURAL AND MAGNETIC PROPERTIES OF CoFeSiB AMORPHOUS WIRE GMI ELEMENT**, Nebojša Mitrović, Jelena Orelj, Borivoje Nedeljković, Radoslav Surla. Vladimir Pavlović

| POSTER SECTION |        |                                    |               |
|----------------|--------|------------------------------------|---------------|
| Session 7      | HALL 2 | Thursday, October 10 <sup>th</sup> | 19:00 - 20:00 |

- 1. EXAMINING FATIGUE OF FIBER REINFORCED POLYMER: A COMPREHENSIVE REVIEW, Amer. Alsammarraie, Muraja S. Slman
- 2. **REVIEW ON GRAPHITE PLUGGED BRONZE BUSHINGS**, Amir Alsammarraie, Bmaki H. Zaidan, Cali K. A. Aljboury
- 3. IMPACT OF ACTIVE FILLER COMPOSITION MODIFICATION ON THE SORPTION CHARACTERISTICS OF FILTERS, Biljana Mihajlović, Marina Ilić, Tatjana Marković, Vukica Grković
- 4. EFFECT OF TEMPERING PARAMETERS ON MICROSTRUCTURE AND HARDNESS OF A LOW ALLOY ARMOR STEEL, Gvozden Jovanović, Dragomir Glišić, Stefan Dikić, Esmail Ali Salem Ahmed, Nenad Radović
- 5. ENHANCED METHOD FOR MEASURING MATERIAL RESISTANCE TO BURNING NAPALM MIXTURE, Tatjana Markovic, Marina Ilic, Zeljko Senic, Sonja Bauk, Miljan Miletic



- 6. CAVITATION EROSION MONITORING OF 42CrMo4 STEEL SAMPLES USING THE IMAGE AND MORPHOLOGICAL ANALYSIS, Ana Alil, Stanica Nedović, Sanja Martinović, Tatjana Volkov Husović
- 7. SELECTIVE ELECTRODEPOSITION TO EXTRACT COBALT AND NICKEL FROM LEACHING SOLUTION, Jonas Mitterecker, Milica Košević, Marija Mihailović
- 8. ALTERNATIVES TO CADMIUM PROTECTION IN DEFENSE AND AEROSPACE IN-DUSTRY, Konstantin Komatina, Milan Ignjatović, Stefan Tomić, Dunja Crnogorac
- 9. PORTABLE RAMAN SPECTROSCOPY FOR DETECTION OF AMMONIUM NITRATE—FUEL OIL EXPLOSIVE PRECURSORS, Denis Dinić, Branislav Stojković, Dijana Aksentijević, Milan Tanić, Negovan Ivanković, Nemanja Jovanović, Marko Anđelković
- 10. ADSORPTION OF ORGANOPHOSPHATE PESTICIDES ON NITROGEN-DOPED CARBON CRYOGELS AND THE ASSESSMENT OF THEIR NEUROTOXIC EFFECTS, Vladan J. Anićijević, Tamara Tasić, Vedran Milanković, Dalibor B. Jovanović, Radovan M. Karkalić, Miloš Baljozović, Biljana M. Babić, Igor A. Pašti, Tamara D. Lazarević-Pašti
- 11. ADSORBING DANGER: CARBON MATERIAL COMBATTING ORGANOPHOS-PHATE, Tamara Tasić, Vedran Milanković, Vladan Anićijević, Igor Pašti, Tamara Lazarević-Pašti
- 12. **ORGANOPHOSPHORUS NEUROTOXINS REMEDIATION IN DYNAMIC CON- DITIONS**, Vedran Milanković, Tamara Tasić, Vladan Anićijević, Igor Pašti, Tamara Lazarević-Pašti
- 13. MICROSTRIP DC-BLOCK ON TEXTILES USING ONLY SELF-ADHESIVE COPPER TAPE, Dušan Nešić, Dragan Tanasković, Miloš Vorkapić
- 14. DETERMINATION OF NATURAL BACKGROUND RADIATION IN AN URBAN AREA AS AN ASPECT OF NUCLEAR SECURITY DETECTION ARCHITECTURE: AN EXAMPLE FROM THE CITY OF KRUŠEVAC, SERBIA, Milan Tanić, Denis Dinić, Stevan Stupar
- 15. **DETERMINATION OF THE TEMPERATURE PROFILE OF SELECTED MOBILE PHONE CHARGERS AS A SAFETY FACTOR IN TERMS OF THERMAL RADIATION**, Ljubiša Tomić, Saša Veselinović, Marina Simović Pavlović, Katarina Nestorović, Darko Janković, Darko Vasiljević
- 16. **INFLUENCE OF SMALL ARMS AMMUNITION ON TARGETS MADE OF GRANU- LAR MATTER**, Marina Simović Pavlović, Vladimir Obradović, Darko Janković, Maja Pagnacco, Ljubiša Tomić, Darko Vasiljević



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| 8. SECTION: QUALITY, STANDARDIZATION, METROLOGY, MAINTENANCE AND EXPLOITATION - QSMME |  |  |  |  |  |  |
|---|--|--|--|--|--|--|
| Session 13  | Session 13 HALL 1 Friday, October 11 <sup>th</sup> 16:00 - 18:00 |  |  |  |  |  |
| Chairman: Srđan Živković  |  |  |  |  |  |  |

- 1. ANALYSIS OF RESULTS OBTAINED DURING CALIBRATION OF FORCE TRANSDUC-ERS, Igor Goršić, Saša Antonović, Violeta Brnin, Saša Gundelj
- 2. COORDINATE METROLOGY DATA MANAGEMENT OF MACHINE PARTS MADE BY METAL ADDITIVE MANUFACTURING, Srdjan Živković, Slobodan Malbašić, Miloš Stepanović
- 3. IMPLEMENTATION OF ZIGBEE TECHNOLOGY IN THE PROCESS OF SENSOR CALIBRATION IN WIRELESS SENSOR NETWORK SYSTEMS, Igor Medenica, Miloš Jovanović, Slobodan Subotić, Dragan Lazić
- 4. **GROUNDWATER AS AN IMPORTANT RESOURCES IN EMERGENCY SITUATIONS OF THE REPUBLIC OF SERBIA**, Boris Vakanjac, Radoje Banković, Vesna Ristić Vakanjac, Saša Milanović, Ljiljana Vasić, Saša Bakrač, Nikola Kozić
- 5. RISK MANAGEMENT IN INDUSTRIAL SECURITY IN THE FIELD OF PRODUCTION AND TRADE OF WEAPONS AND MILITARY EQUIPMENT, Nenad Komazec, Katarina Janković, Milica Mladenović
- 6. **IMPROVEMENT OF PRODUCT QUALITY BY IMPLEMENTATION QFD METHODS**, Branko Vujatović, Marija Vujatović, Darko Grubač, Nenad Stojanović
- 7. COMPARATIVE ANALYSIS OF INFORMATION SECURITY STANDARDS APPLICATION IN DIFFERENT IT SECTOR REGIONS, Predrag Ranitović, Siniša Mitić
- 8. THE NEW METHOD FOR SOLVING GAMMA-GAMMA, X-X, X-GAMMA COINCI-DENCE SUMMING IN GAMMA SPECTROSCOPY, Dragana Jordanov, Laslo Nadjdjerdj, Milena Rosić
- 9. **DEFENSE ACQUISITIONS AND INTERNATIONAL POLITICS**, Marko Jovanović, Goran Vukadinović

| POSTER SECTION |        |                                    |               |  |
|----------------|--------|------------------------------------|---------------|--|
| Session 7      | HALL 2 | Thursday, October 10 <sup>th</sup> | 19:00 - 20:00 |  |

- 1. THE IMPACT OF DIVERSIFICATION STRATEGY ON COMPANY PERFORMANCE IN DEFENSE INDUSTRY, Srđan Mirković, Mihajlo Ranisavljević, Igor Đorić
- 2. STUDY AND ANALYSIS THERMAL PERFORMANCE OF TAZA GAS POWER PLANT

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IN KIRKUK -IRAQ, H. J. Khalafa, M. I. Qaddouri

- 3. **RELIABILITY OF ARTIFICIAL INTELLIGENCE**, Slavko Pokorni
- 4. TEST SETUP FOR QUALIFICATION OF POWER SUPPLY FOR GENIII NIGHT VISION IMAGE INTENSIFIERS, Slobodan Petričević, Peđa Mihailović, Petar Atanasijević
- 5. BENFORD'S LAW IN SERVICE OF DATA QUALITY: TWO CASES OF NATURAL NUMBERS, Igor Đorić, Slađana Vujičić, Mihajlo Ranisavljević
- 6. THE ROLE OF INTELLECTUAL CAPITAL REPORTING IN THE PROCESS OF SUPPLY CHAIN INTEGRATION OF THE MILITARY TECHNICAL INSTITUTE, Aleksandar Savić, Mihajlo Ranisavljević, Milan Mihajlović

| SECTION: YOUNG RESEARCHERS  |  |  |  |  |
|---|--|--|--|--|
| Session 1 HALL 1 Thursday, October 10 <sup>th</sup> 09:00 - 10:30 |  |  |  |  |
| Chairman: Aleksandar Kari   |  |  |  |  |

- 1. **ANALYSIS OF THE BEHAVIOUR OF THE MOBILE PLATFORM DURING FIRING**, Milan Simonović, Marko Simonović, Aleksandra Živković, Ana Gačić, Aleksandar Kari
- 2. THE CONCEPT OF REMOTE CONTROLLED WEAPON STATION FOR SELF-PRO-PELLED MORTARS, Aleksandra Živković, Milan Simonović, Goran Dragović, Marija Milovanović, Nina Mitričević
- 3. **DESIGN OF MORTAR BARREL 82 mm ON BASIS OF ANALYSIS OF INTERNAL BALLISTICS PARAMETERS**, Marija Milovanović, Nikola Radovanović, Nebojša Hristov, Lazar Arsić, Aleksandra Živković
- 4. **SIMULATION MODEL OF TANK COMBAT**, Marko Simonović, Milan Simonović, Lazar Arsić, Ana Gačić, Dušan Božić
- 5. **PROBABILITY OF HITTING AND DESTROYING A SURFACE TARGET FOR ARTIL- LERY ROCKETS**, Katarina Nestorović, Marina Simović Pavlović, Miloš Pavić, Srđan Stojković, Slobodan Bosiljčić
- 6. PERSPECTIVES ON THE DEVELOPMENT OF THE ARTILLERY BRANCH OF THE SERBIAN ARMY, Katarina Janković, Nenad Komazec

| SECTION: YOUNG RESEARCHERS  |  |  |  |  |
|---|--|--|--|--|
| Session 2 HALL 1 Thursday, October 10 <sup>th</sup> 14:30 - 17:00 |  |  |  |  |
| Chairman: Dragomir Glišić   |  |  |  |  |

1. INFLUENCE OF TEMPERING TEMPERATURE ON MECHANICAL PROPERTIES OF G42CrMo4 CAST STEEL, Đorđe Ivković, Dušan Arsić, Anđela Mitrović, Vladimir



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Milovanović, Dragan Adamović, Vesna Mandić, Marko Delić

- 2. INFLUENCE OF PROCESS PARAMETERS IN ADDITIVE MANUFACTURING ON THE QUALITY OF PRODUCED METAL PARTS, Maja Mladenović, Jovana Mandić, Aleksandar Ćitić, Vesna Pejović, Aleksa Grubić, Srđan Živković
- 3. FAILURE ANALYSIS OF WELDED JOINT BETWEEN ROCKET MOTOR CASE AND FINS, Aleksandar Ćitić, Nada Ilić, Maja Mladenović, Vesna Pejović
- 4. THE DESIGN AND SYNTHESIS OF THE FOUR NOVEL DUAL REVERSIBLE INHIBITORS OF ACETYLCHOLINESTERASE BASED ON THE TACRINE AND AROYLACRYLIC ACID PHENYLAMIDE SUBSTRUCTURES, Tamara B. Vujatović-Velimirov, Milan R. Nikolić, Maja D. Vitorović-Todorović
- 5. INVESTIGATION OF THE DEPENDENCE OF PRESSURE DROP AND PARTICLES FLOW RATE ON THE PARTICLE DIAMETER IN SPOUT-FLUIDIZED BED, Teodora Stančić, Mihal Đuriš, Tatjana Kaluđerović Radoičić
- 6. **USAGE OF MULTI-HOLE PROBE ON UAV WITH WARHEAD**, Ilija Nenadić, Dijana Damljanović, Biljana Dovatov, Marko Bek-Uzarov
- 7. **DESIGN AND VERIFICATION OF A PNEUMATIC LAUNCH SYSTEM FOR A SIN-GLE-USE UAV WITH A WARHEAD**, Marko Bek-Uzarov, Ilija Nenadić, Stefan Rašić

| SECTION: YOUNG RESEARCHERS |        |                                  |               |
|----------------------------|--------|----------------------------------|---------------|
| Session 8                  | HALL 1 | Friday, October 11 <sup>th</sup> | 09:00 - 11:00 |
| Chairman: Rade Pavlović    |        |                                  |               |

- 1. **EVALUATION OF THE INFLUENCE OF POWER SETTING ON AIRCRAFT PER- FORMANCE IN A SPIN**, Jelena Šobot, Đorđe Jankuloski, Miša Živković, Jasminka Jelisavac, Ivan Vesić
- 2. NUMERICAL INVESTIGATION OF THICKNES, ASPECT AND TAPER RATIO INFLUENCE ON DIVERGENCE VELOCITIES OF COMPOSITE PLATES AT SUBSONIC MACH NUMBERS, Aleksa Maljević, Mirko Dinulović, Nemanja Deura
- 3. CASE STUDY: IMPLEMENTATION PERSPECTIVES OF END-TO-END ENCRYPTION IN MILITARY IOT, Kristina Živanović, Dimitrije Kolašinac, Stefan Ivanović, Jovana Mihailov, Marija Šekler
- 4. TESTING THE ROLL STABILIZATION OF A SUPERSONIC SURFACE-TO-AIR GUIDED MISSILE, Marijana Stojanović, Aleksandar Stefanović, Nebojša Jovičić, Ivan Marić
- 5. FRACTIONAL ORDER ITERATIVE LEARNING CONTROLLER WITH PSO-BASED PARAMETERS TUNING FOR ROBOTIC SYSTEMS, Nikola Živković, Mihailo Lazarević,

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Jelena Vidaković, Stjepko Pišl

- 6. ANALYSING USAGE OF COMMERCIAL GRADE SINGLE ANTENNA INERTIAL NAVIGATION SYSTEM IN COMBAT UNMANNED GROUND VEHICLES FOR ESTIMATING ORIENTATION AND POSITION, Goran Dragović, Nedeljko Dučić, Stefan Jovanović, Marko Simonović, Dušan Božić
- 7. IMPLEMENTATION OF AN ALGORITHM FOR AUTONOMOUS MOVEMENT ON A ROBOTIC PLATFORM, Nina Mitričević, Rade Pavlović