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PROGRAM of INTERNATIONAL CONFERENCE
ADVANCED APPLIED ENERGY and
INFORMATION TECHNOLOGIES 2021



ICAAEIT 2021

December, 15-17, 2021, Ternopil, Ukraine

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Frantisek DUCHON**

PROGRAM of the INTERNATIONAL CONFERENCE ADVANCED APPLIED ENERGY and INFORMATION TECHNOLOGIES 2021. (Ternopil, 15-17 of December 2021.) – Ternopil : TNTU, 2021.

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CROSS-SECTIONAL TOPICS

1. Electrical engineering and power electronics;
2. Automation and computer integrated technologies;
3. Mechatronics, radars, control systems;
4. Biomedical engineering;
5. Mathematical modeling in power engineering and information technologies

CONTACTS

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PLENARY SESSION

- 10⁰⁰ - 10¹⁰ **Congratulations words of the Pro-Rector on Scientific Work, Sc.D., Professor Maruschak Pavlo Orestovych**
- 10¹⁰ – 10⁴⁵ **Mykhailo Palamar, Vladislavs Bezrukovs, Yuriy Nakonechny, Andriy Palamar, Mykhailo Strembicky Yuriy Pasternak**
MECHATRONIC APPROACH TO THE DESIGN OF A TRIAXIAL ANTENNA WITH BACKLASH MINIMIZATION BY THE CONTROL SYSTEM
- 10⁴⁵ – 11²⁰ **Valeriy Martynyuk, Mykola Fedula, Denys Makaryshkin, Tomasz Kalaczyński**
THE INCREASING OF PHOTOVOLTAIC POWER SUPPLY SYSTEM EFFICIENCY FOR THE MOBILE UNIT OF POLYMER WASTE PROCESSING INTO AN ALTERNATIVE TYPE OF FUEL
- 11²⁰ – 11⁵⁵ **Vyacheslav Kolodyazhnyi, Mykhaylo Lyashenko**
MODELING OF THERMAL PROCESS PARAMETERS IN THE IONOSPHERE DURING THE DECLINE PHASE OF SOLAR ACTIVITY CYCLE
- 11⁵⁵ – 12³⁰ **Volodymyr Savkiv, Roman Mykhailyshyn, Frantisek Duchon, Michal Kelemen**
SUBSTANTIATION OF DESIGN PARAMETERS OF BERNOULLI GRIPPERS WITH AUTOMATED CONTROL OF THE SIZES OF OBJECTS OF MANIPULATION
- 12³⁰ – 13⁰⁰ **Coffee break**

Topic: ELECTRICAL ENGINEERING AND POWER ELECTRONICS

Viktor Gurin, Volodymyr Pavlovskiy, Oleg Yurchenko, Vitaliy Senko
ELECTROMAGNETIC INTERFERENCES IN TRANSISTOR CONVERTERS AND METHODS OF INTERFERENCES MITIGATION

Vadym Koval, Bogdan Orobchuk, Nataliia Kuzemko, Gao Lijin
MEASURING DEVICE FOR PHOTOVOLTAIC MODULES ELECTRICAL CHARACTERISTICS TESTING

Anatolii Lupenko, Ivan Sysak, Michal Frivaldsky, Taras Chomko
ANALYSIS OF TWO-SECTION RESONANT VOLTAGE CONVERTER FOR
MATRIX LED LIGHT SOURCE DRIVERS

Oleksandr Vakulenko, Ivan Sysak, Serhii Babiuk, Bunko Vasyl
FEATURES OF THE ENAMELED WIRES INSULATION DIAGNOSING BY
VOLTAGE

**Volodimir Andriichuk, Myroslav Nakonechyi, Yaroslav Filiuk, Yaroslav
Osadtsa, Gao Xinzhong**
KINETICS OF LEDS WHITE LIGHTING UNDER PULSE POWER SUPPLY
**Mariia Kotyk, Volodymyr Andriychuk, Pavol Spanik, Liubov Kostyk, Sergiy
Potalitsyn**
LIGHT PULSED IRRADIATION IN GROWING PEPPER SEEDLINGS

**Topic: AUTOMATION AND COMPUTER INTEGRATED
TECHNOLOGIES**

**Bohdan Trembach, Rostyslav Trembach , Mykhailo Mykhailyshyn,
Volodymyr Savkiv, Roman Mykhailyshyn**
THE MATHEMATICAL MODELING OF COORDINATE DETERMINATION
OF ACOUSTIC SIGNALS WITH PRIORITY PLACEMENT OF
MICROPHONES

**Serhii Tsyurulnyk, Volodymyr Tromsyuk, Yaroslav Borodai, Artem Metelitsa,
Vasyl Tkachuk**
CONSTRUCTION AND RESEARCH OF REVERSE FREQUENCY DIVIDERS

Vasyl Vasylkiv, Myhajlo Pylypets, Larysa Danylchenko, Dmytro Radyk
USE OF COMPUTER-INTEGRATED TECHNOLOGIES IN TRAINING OF
ENGINEERING SPECIALISTS

Halyna Kozbur, Oleh Shkodzinsky, Ihor Kozbur, Gashchyn Nadiia
COMPUTER MODELING OF THE STRESS-STRAIN STATE OF THIN-
WALLED TUBULAR STRUCTURAL ELEMENTS FOR PREDICTING THE
LIMITING STATE

Volodymyr Medvid, Iryna Beliakova, Vadim Piscio
USING A BROADBAND SIGNAL BASED ON M-SEQUENCE FOR
AUTOMATIC PREVENTING OF ACOUSTIC RESONANCE IN HIGH
PRESSURE DISCHARGE LAMPS

Ihor Konovalenko, Pavlo Maruschak, Frantisek Duchon, Michal Kelemen
CLASSIFICATION OF ROLLED METAL DEFECTS USING RESIDUAL
NEURAL NETWORKS

Larysa Danylchenko

COMPARATIVE ANALYSIS OF COMPUTER SYSTEMS FOR CASTING PROCESSES SIMULATION

Topic: MECHATRONICS, RADARS, CONTROL SYSTEMS

Oleksandr Bogomaz, Volodymyr Barabash, Dmytro Iskra

SOME ASPECTS OF DEVELOPING A MULTIPURPOSE RADIO SYSTEM FOR MONITORING THE GEOSPACE

Mykhaylo Palamar, Myroslava Yavorska, Vladislavs Bezrukovs, Anatolii Poikhalo, Volodymyr Kruglov, Yuriy Apostol, Vitaliy Batuk

METHODS TO IMPROVE THE ACCURACY OF GUIDANCE OF TERRESTRIAL ANTENNA STATION

Serhij Duda, Hryhorij Khymych

ELABORATION OF THE POLARIZER'S CONSTRUCTION FOR WORK IN KA-BAND

Topic: BIOMEDICAL ENGINEERING

Yuri Palaniza, Halyna Shadrina, Mykola Khvostivskyy

THE CORONAVIRUS DISEASE COVID-19 SPREADING PREDICTION IN UKRAINE BY MEANS OF MICROSOFT EXCEL

Pavlo Tymkiv

ANALYSIS OF THE COMPLEXITY OF ALGORITHMS FOR FINDING THE COEFFICIENTS OF THE MATHEMATICAL MODEL OF LOW-INTENSITY ELECTRORETINOSIGNAL

Oksana Dozorska, Vasil Dozorskyi, Evhenia Yavorska, Yuriy Kapatsila, Iryna Pankiv, Andriy Kubashok

THE METHODS OF BIOSIGNALS PROCESSING AND THEIR IMPLEMENTATION IN THE STRUCTURE OF THE SYSTEM OF IMPAIRED HUMAN COMMUNICATIVE FUNCTION COMPENSATION

Roman Tkachuk, Andriy Tkachuk, Diana Stadnik, Oleksiy Yanenko

ENSURING HIGH-PRECISION TESTING OF IMPLANTS IN THE REGULATION OF INTRA-EYE PRESSURE

Topic: MATHEMATICAL MODELING IN POWER ENGINEERING AND INFORMATION TECHNOLOGIES

Hennadiy Cherchyk, Bohdan Diveyev, Roman Yuzefovych

THEORETICAL AND EXPERIMENTAL ASPECTS OF OPTIMAL DESIGNING OF DVA – ROTATING MACHINES SYSTEM

**Anna Yaskiv, Keyue Smedley, Alexander Abramovitz, Volodymyr Yaskiv,
Natalia Kasatkina**
MATHEMATICAL MODELING OF HIGH-FREQUENCY MAGAMP SWITCH
B-H CHARACTERISTIC

**Taras Dubynyak, Volodymyr Kruhlov, Roman Dzhydzhora, Manziy
Oleksandra, Andreichuk Stanislav**
THE PROCESS OF SHELL FORMATION AND OPTIMIZATION BY THE
CRITERION OF ACCURACY OF THEIR GEOMETRIC SHAPE

Leonid Romaniuk, Ihor Chykhira, Halyna Tulaidan, Andriy Mykytyshyn
MODEL OF MOTION ROUTE OF UNMANNED AERIAL VEHICLES
OPERATIONS WITH OBSTACLES AVOIDANCE

Lilya Khvostivska, Iryna Dediv, Mykola Khvostivskyy, Leonid Dediv
COMPUTER TOOL FOR GENERATING OF TEST RADIO SIGNALS FOR
VERIFICATION OF THE RADIO COMPUTER SYSTEMS SOFTWARE

**Vasyl Dunets, Anatoly Martsenyuk, Kateryna Kamchatna-Stepanova,
Bohdan Andreichuk**
METHOD OF DETECTING RADIO SIGNALS WITH PHASE MODULATION
IN A MIXTURE WITH NOISE

**Serhii Lupenko, Iaroslav Lytvynenko, Oleg Nazarevych, Grigorii Shymchuk,
Volodymyr Hotovych**
APPROACH TO GAS CONSUMPTION PROCESS FORECASTING ON THE
BASIS OF A MATHEMATICAL MODEL IN THE FORM OF A RANDOM
CYCLIC PROCESS

