



FEDERATION OF THE SCIENTIFIC ENGINEERING UNIONS (FSEU)

**XXVI INTERNATIONAL SCIENTIFIC
CONFERENCE**

**trans &
MOTAUTO
- 2018 -**

PROGRAM

ORGANIZER:

SCIENTIFIC -TECHNICAL UNION OF MECHANICAL ENGINEERING

*27 – 30.06.2018
BURGAS, BULGARIA*

93	WAVELET ANALYSIS OF ACOUSTIC SIGNALS	M.Sc. Eng. Yordanov N. K. National Military University "Vasil Levski", Land Forces Faculty, Veliko Tarnovo	125	BG
94	THEORY OF PROJECT PREPARATION OF AGROENGINEERS ON THE BASIS OF SCIENTIFIC WORK ON THE DEVELOPMENT OF AGRICULTURAL MACHINERY	Assoc. Prof. Dr. Viktor Pryshliak Ukraine, Vinnytsia National Agricultural University	122	UA

THURSDAY (28.06)		09:00 – 19:00	POSTER SESSION "SECURITY, SAFETY & ECOLOGY"	CONFERENCE HALL	
FRIDAY (29.06)		09:00 – 13:00			
95	MAINTENANCE OF TECHNICAL SYSTEMS IN THE FUNCTION OF SAFETY AT WORK	Veljanovski D. MSc., Jovanovska V. PhD. Faculty of biotechnical sciences – Bitola, University of "St.Kliment Ohridski" - Bitola	67	MK	
96	EVALUATION OF RESCUE TIMING FOR AEROPLANE PASSENGERS FROM CABIN FIRE ON GROUND	Vladislav Turko, Dr.sc.ing., expert for Latvian Council of Science, Riga, Leonid Vinogradov, Institute of Aeronautics of Riga Technical University Yulija Soldatova, Master Sc. Eng. Institute of Aeronautics of Riga Technical University., Riga	104	LV	
97	SILENT ROAD CLOTHING. LABORATORY STUDIES	PhD student, Ursanu Ovidiu, Faculty of Constructions and Installations, Iasi, Romania	38	RO	
98	CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR THREATS IN THE HYBRID WAR CONTEXT	Nikolay I. Padarev, PhD Land Forces Faculty - "Vasil Lewski" NMU – V. Tarnovo	53	BG	
99	STUDY ON WATER INTENDED FOR THE SANITARY DECONTAMINATION	Chief. Assist. Prof. Nikolay I. Padarev PhD, Prof. Pavlina Peneva, PhD Land Forces Faculty - "Vasil Lewski" NMU – V. Tarnovo,	54	BG	
100	HISTORY AND DEVELOPMENT OF NUCLEAR WEAPONS	Chief Ass. Prof. Dr. Dolchinkov N. T., National Military University „Vasil Levski”, Veliko Tarnovo, Bulgaria, National Research University "Moscow Power Engineering Institute", Moscow, Russia	56	BG/RU	
101	NUCLEAR WEAPONS IN NATO	Chief Ass. Prof. Dr. Dolchinkov N. T., National Military University „Vasil Levski”, Veliko Tarnovo, Bulgaria, National Research University "Moscow Power Engineering Institute", Moscow, Russia	58	BG/RU	
102	NUCLEAR WEAPONS IN RUSSIA	Chief Ass. Prof. Dr. Dolchinkov N. T., National Military University „Vasil Levski”, Veliko Tarnovo, Bulgaria, National Research University "Moscow Power Engineering Institute", Moscow, Russia	59	BG/RU	

*time for presentation 10-12 minutes,
questions after each presentation*

103	ESSENCE OF EARTHQUAKE EARLY WARNING SYSTEMS	Assos. Prof. Milen Ivanov PhD, Yavor Yankov PhD NMU „Vassil Levski“ Veliko Tarnovo	73	BG
104	CONSUMPTION OF ALCOHOL AND TOBACCO OF PARTICIPANTS IN EXPEDITIONARY OPERATIONS	Glushkov P. PhD. National Military University „Vasil Levski“ – Veliko Tarnovo	85	BG
105	FLEXIBILITY RELATED TO THE NUTRITION OF PARTICIPANTS IN EXPEDITIONARY OPERATIONS	Glushkov P. PhD. National Military University „Vasil Levski“ – Veliko Tarnovo	86	BG
106	MAIN ASPECTS OF THE ECOLOGICAL POLICY OF THE EUROPEAN UNION AND ENERGY RESOURCES IN BULGARIA	Assoc. prof. Galina Todorova, PhD Aviation Faculty, National Military University, Bulgaria	120	BG
107	LAWFUL GROUNDS FOR ATTRACTING OF UNITS FROM MILITARY FORCE FOR PROTECTION OF POPULATION AT DISASTERS	Chief. Assist. Prof. Dimitrov B. K. National Military University “Vasil Levski” – Veliko Turnovo	126	BG
108	CRITERIA FOR EFFECTIVENESS OF CBRN UNITS IN THEIR PARTICIPATION IN OPERATIONS FOR PROTECTION OF POPULATION	Chief. Assist. Prof. Dimitrov B. K. National Military University “Vasil Levski” – Veliko Turnovo	127	BG
109	AVIATION SAFETY DEVELOPMENT BY OPTIMIZATION OF AIRSPACE	MSc Eng. Peneva V. Aviation Faculty, National Military University „Vasil Levski“, Dolna Mitropolia, Bulgaria	128	BG
110	DETERMINATION OF CHARACTERISTICS OF PROBABILITY ERROR BOMBING	Stoykov S. PhD, Assoc. Prof. Atanasov M. Aviation faculty - Vasil Levski National Military University	129	BG
111	SOME ASPECTS OF THE SPECIFIC ABSORPTION RATE SIMULATION	Assoc. Prof. PhD. Shterev Y., cadet Hristov N. I. Land Forces Faculty - “Vasil Levski” National Military University, Veliko Turnovo	134	BG

19:30 – 24:00	“WELCOME” COCKTAIL - The restaurant for breakfast
----------------------	--

29.06.2018 (FRIDAY)

10:00	CLOSING OF THE CONFERENCE WINE AND CHEESE PARTY	CONFERENCE BAR
--------------	--	-----------------------

NEXT CONFERENCE “trans & MOTAUTO 2019”
17.06-20.06.2019, VARNA, HOTEL AQUA AZUR

*time for presentation 10-12 minutes,
questions after each presentation*



**SCIENTIFIC AND TECHNICAL
UNION OF MECHANICAL ENGINEERING BULGARIA
AWARDS**

**A
DIPLOMA
FOR THE PARTICIPATION IN THE**

**XXVI INTERNATIONAL SCIENTIFIC CONFERENCE
trans & MOTAUTO 2018**

TO

Candidate of Technical Sciences, Assoc. Prof. Pryshliak V.

FOR THE REPORT

**THEORY OF PROJECT PREPARATION OF AGROENGINEERS ON THE BASIS OF SCIENTIFIC WORK ON THE DEVELOPMENT OF
AGRICULTURAL MACHINERY**

27.06-30.06.2018, Burgas, Bulgaria



**Prof. D.SC. Eng. Georgi Popov
Chairman of the
Scientific-Technical Union of Mechanical Engineering**

Пришляк В.М.

Доповідь

THEORY OF PROJECT PREPARATION OF AGROENGINEERS ON THE BASIS OF SCIENTIFIC WORK ON THE DEVELOPMENT OF AGRICULTURAL

The conducted scientific researches on the theory of project preparation of agroengineers based on scientific research on agricultural engineering was based on regulatory documents, including the Law of Ukraine "On Higher Education", which states that the educational process is an intellectual, education and science, which is being carried out in institutions of higher education through a system of scientific and methodological and pedagogical activities. The study of the influence of cross-cutting, scientifically substantiated sequencing and step-by-step pedagogical technology of training on the formation of readiness for future activities of future specialists in agroengineering was conducted. In a scientifically substantiated system of cross-cutting design of technical means of mechanization, the key stage is the implementation of a professionally relevant for agro-engineer coursework on agricultural machines, which students perform at the 3rd year of study at the university. In these scientific studies, the readiness of a future specialist in agroengineering to design and research activities was assessed by motivational-value, cognitive-cognitive and activity-practical criteria

The Law of Ukraine "On Higher Education" (Article 47) states that the educational process is an intellectual, creative activity in the field of higher education and science, which is being implemented in higher education institutions (HEI) through a system of scientific and methodological and pedagogical activities [1]. The training of future agroengineers in HEI is based on the formation of professional competences in a harmoniously developed personality capable of solving the tasks of production activity. The educational process in HEI is carried out in the following forms (Article 50 [1]): training sessions, independent work, practical training, control activities. The main types of training in agricultural institutions of higher education (AIHE), as well as in other, are: lectures, laboratory and practical classes, consultations. The main participants of the educational process are the scientific and pedagogical workers and the applicants of higher

education. According to the Law of Ukraine "On Higher Education", scientific and pedagogical workers are those who, in their main place of work, conduct educational, methodological, scientific, technical and organizational activities. In their professional activity, the scientific-pedagogical staff of the AAU chooses methods and means of training aimed at ensuring the high quality of training of agroengineering specialists. Scientific and pedagogical workers are obliged to provide teaching of disciplines at a high scientific and theoretical level, to conduct scientific activities in the ZOO. Persons who study in ZOO have the right to participate in research, development and scientific works, scientific conferences, symposiums, exhibitions, competitions, publish their works in Ukraine and abroad [1]. Scientific, scientific and technical and innovative activities are a necessary and integral part of educational activity. The subjects of scientific and technological innovation activity are scientific-pedagogical workers of ZOO, employees of enterprises that cooperate with educational institutions and, of course, students. The main purpose of scientific and technical activity is to obtain competitive innovative results of theoretical and experimental research and development aimed at the creation and introduction into the educational process and production of new technologies, machines and equipment for agricultural production, training of specialists in accordance with socio-economic needs.

New standards for higher education include significant changes in the objectives and tasks of training agroengineering specialists. In this context, the design training of future specialists in agroengineering has a dominant role. In [2] presents basic components forming readiness for project activities ahroinzhenera a specialist who united in physics and mathematics, general and special units and general and professional competence which should have 208 bachelor specialty "Ahroinzheneriya." For example: to design equipment and equipment for production areas, agricultural machines, their knots, mechanisms, various connections; carry out standard design calculations of knots and machine parts and non-standard equipment; rational assembly of machine aggregates in existing production lines of plant production and livestock production; to determine the technical condition of tractors, cars and aggregates of complex equipment [2], to optimize transport processes, etc. There is also [2] presented the results of studies on the role of physical and mathematical education to the general and professional competencies of

future achievement and impact of educational activities of teachers preparing students for the project.

General questions of the theory of design training were studied: Bryukhanova N.O. [3], Kolesnikova IA [4], Gorchakov-Siberian MP [4], Nychalko N.G. [5], Skyba M.E. [5], Anishchenko O.V. [5] et al. The theory, methodology and practice of design training for agroengineering, including in view of the design of agricultural machinery, were studied and investigated: Bendera I.M. [6, 7, 8], Duganets V.I. [9], Prishlyak V.M. [2, 10] and others. Also, the questions of improving the methodology of preparing future engineers are devoted to the work of A. Asherova, O. Kovalenko, M. Lazareva, D. Chernilevsky, P. Yakovyshina, and the methodological aspects of the future of agroengineering have been reflected in the scientific researches of I. Buzik, A. Demin, S. Daukilas, A. Esaulov, P. Luzan, V. Manke, I. Palamara, S. Pastushenko, V. Yaroshenko, transformation of independent educational activity into readiness for professional self-development by means of technologies of personally oriented education - is reflected in the monograph Bond p NN Zhuravsky LM Ostapenko EO, Przyszlak VM Kutsenko AG [11].

The theory of project preparation for agroengineering based on scientific research on agricultural engineering involves cross-cutting, scientifically based sequencing and step-by-step achievement of the goal. At the final stage of training in the Agricultural Aviation Administration for agroengineering, this is the implementation and successful defense of the diploma project. It is important that the graduation project is related to real agricultural production. This would ensure the introduction of the latest developments in technological processes, would promote the development of the agro-industrial complex and increase the welfare of people.

Growth of the gross collection of grain, root crops, vegetables, fruits, berries and others. Types of agricultural products is possible only on the basis of intensification of agro-industrial production, what is meant by the growth of volumes of harvest as a result of more productive use of cultivated lands due to the application of new high-tech equipment and competitive technologies, that is, obtaining from the same areas more products, better quality and with less costs production resources. Intensive crop growing technologies are based on the industrialization of production, a solid technical basis.

Industrialization involves masses, specialization, co-operation, rhythm, standardization, complex mechanization, electrification and automation of production.

The level of mechanization of production processes in agriculture in Ukraine is on average 80 ... 85%. He is especially low in horticulture, vegetable growing, household management. In addition to the insufficient level of mechanization in crop production, it is necessary to indicate low performance indicators of technical means. Thus, the coefficient of readiness of the means of mechanization of domestic production is on average 0,87 ... 0,92, and the coefficient of their use varies from 0,4 to 0,6. In fact, the period of operation of individual machines in crop production before carrying out repair works is 1.4 ... 1.5 times lower than normative. The low level of reliability of equipment for the mechanization of plant growing is due not only to its structural imperfection, but also to the technology of manufacturing machines, the correctness of their operation. Therefore, the development and production of competitive technical equipment for agricultural enterprises, especially the level of mechanization in which low, the scientific training of agro-engineering specialists is still an unresolved problem and requires profound fundamental research.

In a scientifically based system of cross-cutting design of technical means of mechanization, the key stage is the implementation of a professionally meaningful agro-engineer course project on agricultural machines, which students perform at the 3rd year of study at the university. In these research studies, the readiness of a future specialist in agroengineering to design and research should be evaluated by motivational, cognitive, cognitive, and operational-practical criteria, although some scholars use other.

It is known that designing this is one of the leading forms of human creative activity. As a rule agroengineering designing involves the creation of a new agricultural object with predefined parameters. It is based on forecasting, planning, research, scientific and technical developments, decision-making, which are reflected in the design documentation, models, models, laboratory facilities, designs of agricultural machines. Agrotechnical design is a special type of project activity, as it touches on very changing soil-climatic and weather conditions, not always sufficiently developed infrastructure and service and storage of agricultural machinery. Today, agrotechnical design is defined as a

creative, labor-intensive and science-intensive process, the result of which is an individual or team project that is created by a person or a creative team for themselves or custom and implemented in real agricultural production

Some scientists define agrotechnical design at the same time and as a goal and as a means that performs certain functions and roles in the professional activity of a specialist in agroengineering. Designing activates development of creative abilities of agroengineering, promotes realization of individual personal approach to project activity, allows to take into account the actual needs of agricultural production and the ability and competence of a trained specialist. Designing at the stage of preparation of agroengineering activates the formation of its agrotechnical thinking, promotes the practical development of design and research skills, ensuring the improvement of intellectual culture and professional competence of a specialist.

In defining the essence of the design and research activities in general and the development of a specific project of agrotechnical innovation in the context of this scientific work, they adhered to the fact that scientific activity is a creative process of joint operation of two or more subjects aimed at finding a solution to the actual problem or problem, in the course of which a new technology or agricultural machine is being developed on the basis of cost-economic values and conclusions of agrotechnical practice. As a subject of design and research, a specialist in agroengineering must be able to: analyze the initial data and identify the need for carrying out design and research activities for the implementation of agrotechnical innovations, able to formulate design and research tasks, plan research, carry out design and research, evaluate the results researches.