

BULETIN STIINTIFIC
Nr. 2/18-2004
PUBLICATIE STIINTIFICA SI DE INFORMARE
A ACADEMIEI FORTELOR TERESTRE

SUMAR

1. Câmpul de aplicare ratione temporis al dreptului conflictelor armate

Gl.mr.prof.univ.dr. Nicolae USCOI

Abstract:

The purpose of the armed conflicts' law is to assure as much protection to the victims, as possible, during an armed conflict. A civilian or a fighter can be a prisoner of some military operations, even if the conflict is over.

Once the hostilities started, the Military Forces cannot judge a combatant as a prisoner, cannot enroll civilians belonging to the adversary forces, cannot refuse the supplies providing or other duties, only because the state of war has not officially been declared or recognized.

2. Fundamentele transformarii sistemului de educatie si instruire in formarea ofiterilor din Fortele Terestre pentru a raspunde cerintelor spectrului de conflicte ale secolului al XXI-lea si standardelor NATO

Gl.mr.prof.univ.dr. Nicolae USCOI

Col.prof.univ.dr. Mircea COSMA

Abstract:

The scientific substantiation of the military university curricula imposes the identification of the significant reference points of the openings in the Higher Military Education, generated by the new profile of the military conflicts and its modernizing requests, according to the new academic learning process directions, not only at a national level, but at an international one, too.

The officer's profession, as part of the military one, has registered essential changes, by means of which, the forming of those military personalities, meant to efficiently manage the Army violence, is enhanced.

It is these succinct arguments that urge to a deep reflection on an efficient strategy knowing and adopting, to accomplish the candidates selection for the Academic training meant to develop the future officer's necessary skills and capabilities for his missions.

All these issues meant to approach the forming process and the development of the qualities that a future graduate needs, are the specific goals and activities underlined within this grant.

3. Cercetari teoretice si experimentale privind leadership-ul in organizatia militara. Modelare pe structuri multinationale specifice NATO. Implicatii de natura curriculara pentru formarea resursei umane

Gl.bg. (r) prof.univ.dr. Lucian CULDA

Abstract:

The Romanian integration in the Euro-Atlantic structures becomes a reality, also creating a process with multiple implications and its managing implies a scientific and methodologic frame. Compulsory, every military structure has an efficient leadership that must form a defining characteristic. Even more, as a new item, there are some multinational structures regarded as items on their own, having some unstudied particularities.

4. Ripostele apararii – momente decisive in cadrul operatiilor de efect *Col.lect.univ.dr. Viorel OSTROPEL*

Abstract:

The creation of some favorable domination in a short period of time and the decisive influences of the enemy decisions will lead to his overwhelming, strategically speaking, a formal and common goal of the parallel war, of the rapid decisive operations, of the operations counting on their effects and of the complete spectrum dominations.

5. Contexte sociale ale conturarii rolurilor de lider militar *Col.lect.univ.dr. Benoni SFÂRLOG*

Abstract:

The leadership issue in the Military environment has always been a central element marking the practicing of the assigned or assumed roles. The social context and the social evolutions plaining, is exercised as an expression of the assumed capabilities of the leader roles.

The solutions assuring these actions aim at the forming and specializing of the human resources, being subjected to the following:

- the interacting modalities assimilation in order to process the information;*
- the competent integration within the team;*
- the Military leader role assuming and interpreting, in the context of the Military decident roles exercising.*

The accomplishing of these objectives implies a theoretical perspective projecting of the practical actions in order to professionally form and train the human resources.

6. Particularitatile procesului de formare a ofiterilor in unele armate moderne din cadrul NATO

Col.prof.univ.dr. Mircea COSMA

Abstract:

The Higher Military Education undergoes a very important transformational period in order to settle itself in a new and necessary becoming, on the modernization and compatibility path, with the Euro-Atlantic University Education.

The creating of an answer, meant to represent these realities and requests developed from the knowledge society's imperatives, imposes a profound analysis of the means the education strategies are created from, in the main military institutions, meant to build up officers from the representative North-Atlantic Alliance countries, these being the underlined aspects of this article. Although the presented data and the conclusions outlined can not offer an exhaustive solution to this problem, we still appreciate that these can represent significant marks in order to protect the educational curricula and the Land Forces Academy.

7. Necesitatea perfectionarii instructiei prin elaborarea unui set de date pe linia experientei acumulate, rezultate din desfasurarea taberelor si aplicatiilor cu studentii la Pregatirea Militara Generala

Mr.ing.instr. sef Dan MOSTEANU

Mr.instr. sef Nicolae MORO

Cpt.ing.instr. Dan POPA

Abstract:

This work presents the necessity of development the military training by using information from learning lessons. It is very important to identify the problems which appear during the training activities because these "learning lessons are very important for the future".

8. Doctrina militara si tendinbe ale spatiului de lupta

Mr.instr.sef Constantin TROCAN

Abstract:

The command act, the control, the communications, the computer and the information are fields holding an important place in the present, and also in the future battlespace. Due to the battle areas, developed everywhere, and to the need to rapid reaction systems, the military leaders will become more and more efficient, if and only if these capabilities receive the necessary attention.

9. Noi provocari in tactica Fortelor Terestre in contextul integrarii euroatlantice

Lt.col.prof.mil. Mihai NEAG

Mr.ing.instr. sef Ioan VIRCA

Abstract:

Developing tendencies approach of the fared Forces unities tactics, now in the new context of NATO rights membership, it is not only very daring mission but also a difficult one. The difficulty arises from the request that the researched phenomena, along with the methods meant to the represent the adopted research should answer to the present requirements and to the land Forces tactics perspectives of fulfilling the mission to be accomplished and the distinction imposed.

10. Fizionomia actiunilor de raspuns la o agresiune armata combinata, declansate si desfasurate in perioada de debut a confruntarii militare

Mr. Gheorghe RADU

Abstract:

In order to understand the physiognomy of response action initiated and deployed at the outset of war, we need to approach them from at least two perspectives: the first one-of relative surprise implies that the aggression is to be initiated before the whole set of actions characterized not only by the strategic deployment but also by the projection of collective defence allied forces into the Romanian theatre of operations has been accomplished, and, the second one-towards the end or after the strategic deployment.

11. Modelarea capabilitatilor unui sistem tehnic militar cu ajutorul conceptului de disponibilitate operationala

Lt.c-dor conf.univ.dr.ing. Ghita BÂRSAN

Abstract:

The operational availability, Ao, of the war fighting systems and equipment is a key component to Department of Defense's ability to prevail in battle by ensuring readiness. Operational availability is a key performance parameter that the weapon system is suitable for production and sustainable through its life cycle.

As a key performance parameter, an acquisition program manager must calculate Ao and demonstrate that the supportability strategy selected for the weapon system will achieve the required Ao threshold.

Supportability and life cycle cost considerations are integral to all tradeoff decisions.

12. Megaterorismul – provocarea mileniului al III-lea

Gl.lt. (r) conf.univ.dr. Neculai STOINA

Abstract:

Megaterrorism has been existing, at a conceptual level, ever since the 70's, when the experts of this phenomenon tried to find a semantic cover for the situations that certain organizations, groups or terrorist or extremist sections would get some Weapons of Mass Destruction Systems.

Actually, the 11th of September tragedy proves that megaterrorism represents the premeditated destruction, the lack of negotiations, of a tactical goal that was to be accomplished by means of a threat.

The megaterrorism actors do not intend to get themselves known to the public, do not require anything do not see the threat as means or device to reach their purpose.

The 21st century megaterrorism simple logic is materialized in the systemic destroying of the enemy, no longer representing a political power or a government, but an entire 'disobeying', 'corrupted', 'unfaithful' population indifferent to the megaterrorist actors' desires.

13. Aplicarea unor metode computationale pentru determinari dozimetrice ale câmpului de radiofrecventa absorbit in modele biologice expuse

Prof.univ.dr.ing.Stefan DEMETER

Lect.univ.dr. Simona MICLAUS

Abstract:

Dosimetry of radiofrequency and microwave fields is connected to the problem of establishing the maximum permissible exposure of human being, exposure that prevents nocivity of biological effects. In order to assess the exposure risk, it is insufficient to measure only the power flux density of the incident wave, but it is necessary to know the specific absorption rate - local or mean value on whole irradiated object. The experimental dosimetric techniques can only be applied in laboratory conditions, on experimental animals or on phantoms. On the other hand, theoretical dosimetry offers nowadays a valuable and efficient alternative to evaluate the absorbed power density in complex biological models, even in human models. For present project proposal we are focused on modeling and simulation of electromagnetic signals ($f > 100\text{MHz}$ and wideband signals, of $3\text{-}400\text{MHz}$) propagation in complex biological targets. The approach is both analitical and numerical. The biological models to be used will be homogeneous and heterogeneous spheres, that are composed of materials having the same dielectric properties as human tissues, or more sophisticated models, digitized, identical to human anatomical components. First we will apply an analitical method (derived from the Mie theory of scattering) to describe the distribution of the absorbed power inside the homogeneous and heterogeneous sphere models. For the second stage, we will establish the theoretical background and we will apply a numerical method (the finite difference time domain method, the method of moments and/or the finite difference method) to compute the distribution of the absorbed field in more complex, digitized models. Computational algorithms will be built and implemented, for each of the methods. The results will be verified and they will serve for bio-electromagnetic compatibility cuantification.

14. Contributii privind modelarea procesarii cognitive a imaginilor in aplicatii militare

Mr.lect.univ.dr.ing. Mircea POPA

Abstract:

A new approach in image processing is to implement visual perception on cognitive basis, in relation with psychological studies. We try to apply this mechanisms for feature detection in complex images, in particular for military applications.

15. Dozimetria biologica a câmpului de radiofrecventa prin metoda momentelor

Lect.univ.dr. Simona MICLAUS

Abstract:

The method of moments and its application is presented here, for solving the problem of radiofrequency field absorption by a biological object. Numerical dosimetry proves to be a valuable way to assess the hazardous effects of electromagnetic irradiation on biological targets.

16. Rezultate privitoare la metodele de imbunatatire a imaginilor

Asist.univ. Romana OANCEA

Abstract:

This article demonstrates methods to explore noise reduction in images using linear and non-linear filtering techniques applied to several kinds of noise. The image's enhancement's refers to make evident of image's characteristics to different types of applications. The enhancement's methods don't add new image informations, only reveal in a different manner its initial content.

17. Modalitati de aplicare a criteriilor de eliminare a valorilor necorespunzatoare dintr-un sir de rezultate obtinute din masuratori.

Procesarea datelor privitoare la caracteristicile imaginilor in vederea clasificarii

Lect.univ. Daniela RACHITAN

Abstract:

The Statistical Analysis of data obtained by different measures of objects, characteristics of random variables which appear frequently in experiments induces inevitable errors which can or can not be admitted. To make the right decision we have to apply specific tests, in correlation with the problem we have to solve. We must establish some application modalities for the elimination from the measuring result sets of the values that doesn't satisfy some specific criteria. The elimination or the maintenance of a result from this set must be based on one of these criteria. We will also verify the independence and the random character of observation and we will obtain indication concerning systematic trends and the homogeneity of the selections. These results will be applied on specific results obtained from measurements of battlefield characteristics by using professional software.

18. Realizarea retelelor Tow-Thomas si Stephensen cu conveioare de curent

Conf.univ.dr.ing. Octavian-Ioan BOGDAN

Abstract:

Active filters use amplifying elements, especially operational amplifiers, with resistors and capacitors in their feedback loops, to synthesize the desired filters characteristics. The paper shows the possibility to achieve the RC active filter networks using current conveyors. This is illustrated by realisation of the Tow-Thomas and Stephensen networks. The transfer function of the new networks is calculated.

19. Proiectarea prin fiabilitate a sistemelor electrice

Lect.univ.dr.ing. Gheorghe RATIU

Abstract:

In the paper one presents, reliability analyses during the design phase of the electrical systems. For complex electrical systems, reliability analysis is generally performed at two different levels. At assembly level, the designer performs failure rate and failure mode analyses to check fulfillment of reliability requirements and to detect and eliminate reliability weaknesses as to early as possible in the design phase. At system level, the reliability engineer also investigates the time behaviour, taking into account reliability, maintainability, and logistical aspects.