

## **SUMAR**

### **1. Consideratii privind presiunea informationala exercitata de campul de lupta modern asupra statelor majore**

**Lt.col. Rizescu Alexandru, Lt.col. Barbulescu Ionel**

**Abstract:**

*In the modern war, information tends to substitute the force elements, being a qualitative factor able to compensate, to some extent the quantitative inferiority and the potential discrepancy. The decision making process is founded on a broad informational activity meant to provide data concerning the enemy, own forces and action area.*

*In the circumstances of the cybernetised war, the excess of information is a real disaster, being – as previously stated – the main cause of the functional obstructions of the military system and therefore of the unfulfilled missions.*

*The most significant advantage of the warfare means will result from the quantity, quality, the big degree of processing and the way of using the information.*

*The information and the up – dated technologies together with proper doctrinaire concept, mean power.*

*The price of progress is enormous, but once reached it offers great possibilities, advantages and benefits.*

### **2. Eficienta luptatorului individual si colectiv în actiunea militara tactica desfasurata pe timp de noapte sau in conditii meteorologice deosebite**

**Mr. Laurentiu Grigore, Lt. col. lect. univ. drd. Barbulescu Ionel**

**Abstract:**

*The tactical military action during night or special meteorological conditions requires a supplementary effort whose absolute value may overtake few times the average one. In this article are expressed a series of ideas by which the supplementary effort may be diminished and the action being made affective. Besides, the qualities of the individual and collective fighter are approached from a systemic point of view.*

*The darkness, the isolation and the taft wheather conditions might be advantageous factors for gaining the victory if they are appropriately used by those who generate the armed combat.*

### **3. Luptatori informationali pentru un razboi viitor**

**Col. conf. univ. dr. Cosma Mircea**

**Abstract:**

*The present informational society but especially the XXI<sup>st</sup> century rewrites the history of mankind of progress and civilisation. In the general frame of changings, information and informational technology. Identifying the main characteristics of the informational fighter and of the changing at the level of the army structure of introducing an efficient coherent informational strategy remain fields of both theoretical and practic informational interest for the Romanian army. Something is sure: the XX<sup>st</sup> century will more and more take into consideration the presence, utility and power of information and informational technology.*

#### **4. De la dezavantajele unui razboi traditional la avantajele razboiului virtual** **Col. conf. univ. dr. Cosma Mircea**

##### **Abstract:**

*For preparation and conduct of combat actions, the man created extensions of the combat capabilities in order to move away as much as possible the direct danger of its physical destruction. If these capabilities were tested at the beginning directly in tactical field meanwhile, their evolution is performed within an abstract reality. Thus, the using of simulation devices in which the performances of computing technics are the most significant ones, became a practice of preparing the modern warfare. The present article concerns such problems.*

#### **5. Impactul razboiului informational asupra societatii contemporane** **Lt. prep. univ. Solescu Mihai**

##### **Abstract:**

*One of the problems with Information Warfare is that there isn't still official definition. The main reason is that this kind of warfare is relatively new and that the term Informational Warfare has many different meanings. The information warfare weapons could more likely be used in the near future as terrorist weapons rather than on the battlefield by the regular armies. Today's communication society is extremely vulnerable to disruptions. Information warfare,, in its wider sense, is daily used between individuals and corporations. Computer system penetrations are reported daily to emergency report teams that are in charge to take countermeasures.*

#### **6. Coordonate ale evolutiei armatei Romaniei la inceputul secolului XXI** **Lt. col. lect. univ. drd. Barbulescu Ionel, Mr. lect. univ. drd. Laurentiu Grigore**

##### **Abstract:**

*In present situation establishes the reorganization of the armed forces, being designed to be adjusted for the defence missions specific to Romania, derived form the subregional and regional geostrategic context as well as from the accomplishment of interoperability with the european and euro-atlantic military structures.*

#### **7. Binomul tanc-elicopter in lupta moderna** **Col. drd. Saramet Puiu**

##### **Abstract**

*In modern warfare the tank – helicopter binom is considered a very up-to-date intervention which will be present in the armed confrontations of the future millennium. The motivation of using these two components belonging to a single entity is clearly defined by the military strategists: the great effectiveness of combat actions of the two binomial components – the tank and the helicopter – as well as the maximum reducing of losses in own force human lives (the strategy of no loss). The tanks and helicopters actions for joint missions may be designed for any kind of combat action. Involving the tank and helicopter subunits or units into a rapid reaction (intervention) unit (during crisis), simultaneously with the development of certain using alternatives, in which the two structure categories cooperate in joint operations, constitutes a very efficient option as far as the success of these interventions concern.*

*In accordance with the changes in the realm of modernization of means of combat a theoretical - applicative approach is necessary in order to determine the opinion exchange, development of appropriate regulations and enforcement of suitable training means, so that the modern means of combat being at the most used, both due to technical performance and to new concepts of using as well as to a high efficiency of their exploitation.*

## **8. Natura viitoarelor conflicte si prevenirea acestora**

**Cpt. lect. univ. drd. Ispas Teofil**

### **Abstract:**

*Analyzing the potential causes of the future conflicts emphasizez the changing of their nature and maybe of their ways of development. The demographical problem and the accentuated polarization of population and wealth, the coming of the global system near the limits of the human activity, militarization withant limits as well as the ways and attitudes that appeared due to the military conflicts that belong somehow to the past, are only some of the threatenings that may generate or produce new conflicts or may sustaing the already existing ones. Due to its diverse, complex, unpredictable and multidirec?ional character of the new threatenings imply a difficult way of adopting and applying the measures for preventing conflicts and there may be a need to rediscuss and even emprove them.*

## **9. Razboiul secolului XXI**

**Col. conf. univ. dr. Babos Alexandru, Lt.col.univ.drd. Barbulescu Ionel**

### **Abstract:**

*The essence of the future war will be with no doubt be marked by the technico-military revolution and the advanced technologies, profoundly changing the ways and means, techniques or military action.*

*The war of the future will have a multidimensional character and it will take place in all the fields: in the air, on the ground, on the sea, in space, in the electromagnetic spectrum and in the informational sphere.*

*The conception will be in the sphere of human thinking and action, the decision will be of informational nature, and the performance depends on the specialized, intelligent, selective and of high-efficiency means.*

## **10. Razboiul informational si agresiunea informational**

**Lt. col. lect. univ. dr. Telespan Constantin**

### **Abstract:**

*Ce processus d'ajustement long et douloureux a provoque de multiples conflicts et de nombreux licenciements. Il n'a cependant pas encore amene tous les changements institutionnels et sociaux necessaires pour favoriser la diffusion du nouveau paradigme tehno-economique.*

## **11. Componenta electronica – liantul campului de lupta integrat**

**Col. conf. univ. dr. Ionescu Stefan**

### **Abstract:**

*The necessity of increasing the viability, the level of adaptability to face destructive influences and the functioning during sevions and repeatable discontinuities for military system in campaign, influenced the implementation of high-tech electronic equipment in troops command systems and weapon systems.*

## **12.Revolutia tehnico-stiintifica contemporana, factor de progres social si militar**

**Lector univ. Dacian Ion**

### **Abstract:**

*During a relatively period of time, science became one of the most important factors of socio-economical development. It came out of the laboratories 'science and became a progress force. It offers to people the necessary knowledge for changing the psychical and social environment.*

*scientific knowledge is materialized in new source of energy, performant technical buildings, technological steps and new materials. Social and economic development is based on broad scientific investigations.*

### **13. Armele neletale si razboaiele viitorului**

**Lt. col. Martin Constantin**

#### **Abstract:**

*The concern for development of non-lethal weapons is one of the newest tendency in defence industry. The operational development and exploitation of non-lethal disarming technologies (NDT) as integrated functional systems will provide decision factors with a supplement and/or an alternative for conventional weapons and nuclear, biological and chemical mass destruction weapons used or proposed to be used at present.*

### **14. Tehnologii, mijloace si utilaje moderne pentru depozitarea, manipularea si transportul materialelor militare**

**Lt. col. asist. univ. Turcu Mircea**

#### **Abstract:**

*The rapid rhythm of development, the frequent and sudden changing of situation, the firmness and dynamism that characterizes the military actions even from the beginning of the outburst of conflicts, require certain conditions concerning the transport of troops and materials. One of these requests is that transports should be made on very short periods of time and at high speed. According to some assessments, the troops make various movements in approximately two thirds of time and only one-third real fights.*

*The modern transport technologies have as a main objective to reduce the times for charge-discharge with good effects, concerning the reduction of transport duration. Thus acting in favor of reducing the allocated time for troops movement will increase the possibility of making force and means of maneuver, frequent and important activity in the modern war.*

### **15. Aspecte privind relatiile dintre cresterea economica si investitiile in capitalul uman**

**Mr. lect. univ. drd. Stanciu Leontin, Lect. univ. dr. Merce Eugeniu**

#### **Abstract**

*The authors of this article tried to emphasize some of the aspects concerning the relation between economical increasing and investments in human capital. Supporting the role of investments in education, training and health, the authors sustain the idea of adapting the human resources to the structural changes of the economy imposed by the technico-scientific progress on efficiency criteria.*

### **16. Spre o definire si cunoastere a paradigmei, concept fundamental a cunoasterii stiintifice**

**Dr. Batar Dumitru**

#### **Abstract:**

*Scientific knowledge, using paradigms specific to the evolution of the knowledge domains, has to define the paradigm, and after that to use its role. Known like a scientific, remarkable and recognized achievement, for a practical base, any paradigm supposes a lot of standard applications of a theory optional approached.*

*As a result of the growing up at the scientific discipline, a paradigm requires: the forming and evaluation of a development model of the discipline; the reconstitution of its domain; the setting up of a new type for the research act, as for a new group of researchers with specific concepts and methodology.*

**17. Romania in contextul regionalizarii si globalizarii**  
**Col. (r) prof.univ.cons.dr.ing. Siteanu Eugen**

**Abstract:**

*This paper describes the evolution of the national interests in the context of regionalization and globalization. Essentially, the paper concerns with the defence of the national interests of Romania in the core of the globalization and Euro-Atlantic integration phenomenon. Obviously, the globalization occurs after the regionalization phenomenon will be fully completed.*

**18. Comerțul internațional cu sisteme de armament, forma de manifestare a războiului economic din secolul XXI<---->**

**Lector univ. Dacian Ion**

**Abstract:**

*The complex international situation, and many aspects the same with period before the two world wars, political initiatives regarding a reestimation of security and partially some relevant analysis lead to the idea that together with military threats there are also other types of threats: economical, ecological, political, religious etc. From easily understood reasons (concerning politico-economical spheres) the attention was focused on military threat even it is asserted that their importance has diminished and the dominant ones are the economical which are only sometimes mentioned.*

**19. Modele ale duelurilor de foc realizate cu ajutorul lanțurilor Markov omogene**

**Lector univ. drd. Rachitan Daniela**

**Abstract:**

*Computers era means a new type of warfare, an electronic one, a warfare of information, where the decisions are scientifically founded by using modelling and simulation. Our paper presents a new approach of classical model of Tachenco, using the homogenous Markov Chains. In the last paragraph we developed a computer program (software) based on this model. This program may underline the importance of quantity, quality and tactical factors on the result of military confrontation. For example, choosing the right moment for applying a decision and action or for surprising the enemy represents two tactical factors and their importance may be deduced from the results of this program.*

**20. Despre optimalitatea soluțiilor eficiente în programarea stocastică vectorială**

**Lt. col. Hampu Alexandru, cpt. Carutasu Vasile**

**Abstract:**

*The work deals with study of the optimality conditions of vectorial stochastic programming problems with simple recourse, being presented two theorems in which are given the conditions necessary and sufficient so that a solution to be efficient. The deterministic equivalent of the vectorial stochastic programming problem is found and by using a result of the fractionary programming, a problem with a simple objective function is attained with whose dual is studied the condition of optimum*

**21. Utilizarea operatorilor Fredholm pentru obținerea unor inegalități integrale și aplicații**

**Cpt. lector univ. Carutasu Vasile, Lt. col. prof. mil. Hampu Alexandru**

**Abstract**

*With the help of a Gronwall type lemma and of a fixed point theorem of Maia type, few kinds of integral inequalities are emphasized by using Uryson, Hammerstein and linear integral operators.*

**22. Pusca mitraliera Bushman cu dispozitiv electronic de control al tragerii**

**Lt. col. ing. Keresztes László**

**23. Utilizarea gradului de uzura pentru planificarea activitatilor de mentenanta preventiva**

**Conf.univ.dr.ing. Bogdan Octavian-Ioan**

**Abstract:**

*This papers shows the possibility to use the degradation degree of systems, calculated by the fuzzy inferential method, for the planing of the maintenance actions.*

**24. Sistemul de mentenanta dupa necesitate, pe baza de diagnostic**

**Col. (r) prof. univ. cons. Dr. ing. Siteanu Eugen, Col. conf. univ. dr. ing. Urechiatu Gheorghe**

**25. Aparataj electric militar. Abordari ale modelarii fiabilitatii elementelor cu stari continue active**

**Lector univ. ing. Ratiu Gheorghe**

**Abstract:**

*Failure in mechanic components is important to everybody in some forme or other. Rebility is a measure of an item's ability to remain functional during a specified time or a number of stresses expressed by the probability that the item will perform is required function under stated conditions for a stated interval of time or a number of stresses approaches for reliability modelling of continuous state devices are presented in this paper.*

*Topics for further investigation in continuous device reliability modelling include further investigation of the mixture model, application of these models to practical situations and using complex statistical distributions to fit degradation data.*

**26. Asupra detectiei microundelor cu dispozitive semiconductoare: observatii experimentale**

**Asist. univ. Miclaus Simona, Surducun Emanoil**

**Abstract:**

*Semiconductor microwave detection devices represents a simpler solution and an alternative for evaluation of the power density of radiofrequency/microwave fieds, when not high accuracy is needed. The paper's aim is to present an experimental approach by using a diode detector to measure the power density of an 400 MHz low level field, irradiated by a rod antenna inside a non-anechoic room. Calibration of the detector, experimental measurement of the power level of the incident field and the calculation of the power density are presented. Specific observations are outlined, and a comparison of the results with the value measured by a professional Narda survey meter are discussed.*

**27. Model discret de analiza a zgomotelor sursei de referinta in sinteza indicata de frecventa**

**Mr. lector univ. ing. Bechet Paul**

**Abstract:**

*The phase noise performance of a synthesizer can be described using a simplified model. In this model we consider reference noise components, which appears at the system output. The dynamic behavior of system will be analyzed by simulation using the Simulink package.*