# BULETIN STIINTIFIC Nr. 1 - 2004 PUBLICATIE STIINTIFICA SI DE INFORMARE A ACADEMIEI FORTELOR TERESTRE

#### **SUMAR**

#### SECTIUNEA I

1. Granturile de cercetare finantate de Consiliul National al Cercetarii stiintifice (CNCSIS) –

O noua provocare a cercetarii stiintifice din Academia Fortelor Terestre "Nicolae Balcescu"

#### **Abstract**

"Nicolae Balcescu" Land Forces Academy, an accredited Higher Education Institution, as part of the main University system has imposed a constant effort, in order to increase the performances in the didactic activities field and the scientific research. Yearly, the Academy Staff's efforts, in the scientific research, were materialized by means of elaborated studies, at an individual level, very much appreciated by the Academic scientific community, and not only. Based on the theoretical substantiation need increasing of the entire Academic Educational system, the Commander (Rector) of the Academy established some priority directions of scientific research development, thus underlining the group's action presence of inter-disciplined and inter-institutional research, in developing some complex programmes having certain finality, in order to perfect and specialize the educational decisions.

#### SECTIUNEA II STUDII

1. Network Centric Warfare – istoric si dezvoltare, gl.bg.prof.univ.dr. Nicolae USCOI

#### **Abstract:**

This paper focuses on "network centric warfare", a visionary concept which intends to promote a new type of military engagement based on information superiority. The technological development, especially in the field of information technology, entailed not only important changes, but also the evolution of the "network centric warfare" concept. "Network centric warfare" tailors all the factors which provide the military forces' functionality: doctrine, organization, training, weapon and equipment supplies, leadership, staff and facilities.

### 2. Prioritati legislative nationale pentru fundamentarea transformarii invatamantului militar universitar,

Col.prof.univ.dr. Mircea COSMA

#### **Abstract:**

The identification of the main aspects contained within the laws, governs decisions, the Research and Education Minister and also the Department of Defense Minister, along with other normative acts established at the Land Forces General Staff level, presents a special importance for designing and projecting the university military curriculum. The analysis of the finalities and issues required by the Higher Education Military Learning will carry the mark of those normative restrictions, which are developed with some opinions that are to offer clear and consistent perspective to the educational act. Therefore, this article presents some points of view, meant to be the useful for the rational, scientific and praxiologic transformations achievement of the educational curriculum.

#### 3. Determinarile campului de lupta al viitorului asupra cerintelor luptei armate, Conf.univ.dr. Neculai STOINA

#### **Abstract:**

The battlefield, as a confrontation space of the belligerent parts, will register a permanent evolution, purposely generated by the unprecedented general conceptions regarding the war fighting. These concepts, the cybernetic and digital battlefield, along with the automatized war will be met in the future military actions, thus creating a new dimension of the confrontation space. The modern battlefield will mainly be characterized by: military force mitigation, a stronger concentration of the multinational forces, a rapid and discouraging reaction and an increased maneuver capacity, at all levels.

#### 4. Prezent si tendinte ale operatiilor militare, Mr.asist.univ. Constantin TROCAN

#### **Abstract:**

Operation, as an action, is not only part of the task, but also of the production process, having great implications and different work categories. The task, the smallest individual working unit, has a complete sense, thus representing a clearly stated action, directed towards a specific object accomplishing.

#### 5. Instruirea prin simulare – metoda moderna si eficienta de pregatire, Lt.col.prof.mil. Mihai NEAG<

#### **Abstract:**

Training by means of simulation, as part of the modern and efficient training methods is already a certainty, in our Army. We must still take into account the fact that training by means of simulation does not replace the classical one, but, on the contrary, it supports this one, enlarging its vision.

#### 6. Consideratii privind rolul simulatoarelor in procesul formarii luptatorului polivalent, Lt.col.instr.sup. Adrian CIUCA, Cpt.instr. Daniel SOLESCU

#### **Abstract:**

Le tir avec l'armement portable de l'Infanterie, activité particulièrement complexe, suppose la valorisation de toutes les ressources physiques et psychiques du tireur. La déstruction des objectifis surgis sur le champ de conditions d'une parfaite interaction entre les composantes psychiques et motrices des actions de tireur.

### 7. Directii generale ale evolutiei curriculei Academiei Fortelor Terestre in perioada 2001-2003,

#### Lect.univ. Mariana DORDEA

#### **Abstract:**

From 2001 to 2003 the academic curriculum changed according to the requirements imposed by the labor market and NATO standards. It is important to underline the recognition of the two new specializations: "Public administration" and "Financial and economic management". The new educational program leads towards new possibilities regarding the ungoing changes related to the contemporary European academics (Convention of Bologna).

## 8. Evaluarea unor dimensiuni ale structurii psihice pentru studentii promotiilor 2000, 2001, 2002, 2003, 2004 si 2005 din Academia Fortelor Terestre "Nicolae Balcescu", *Psihol. Dumitru VIJULIE*

#### **Abstract:**

The psychological potential assessment of cadets is realized in order to get to know them better. The means by which this goal can be attained is through "Bateria de teste psihologice pentru cunoasterea studentilor din academiile militare" (the C.I.A. Battery). The data provided by using the Guilford – Zimmerman personality questionnaire (questionnaire that belongs to the C.I.A. Battery) on different Land Forces Academy series of graduates, was processed in order to accomplish a comparative study of those graduates.

#### 9. Evolutia procesului de selectie in Academia Fortelor Terestre in perioada 1994 – 2003, Mr. CS II dr. Vasile CARUTASU

#### **Abstract:**

This article presents statistical analyses regarding the candidates' selection for the admission exam în Land Forces Academy, highlights the main moments in the institution's evolution as well as the transformations that took place not only at the institution level but also at the Department of Defence level leaving their mark upon the selection process. Land Forces Academy trained students for the Department of Defence and other important structures. The selection process for the entrance exam consists of three steps: the filling for the exam, the medical, psychological and physical exams and, lost but not the least the written exams. Starting with 2000, graduates of civil and military high-schools, both girls and boys. The member of places available is still varying, but starting with 1999 it is essentially decreasing, due to the reforms that the military institutions are subjected to.

#### 10. Evaluarea dimensiunii fizice a studentilor din Academia Fortelor Terestre, Lt.col.prof.mil. Robert STANCIULESCU

#### **Abstract:**

The article presents information regarding the level of propelling qualities development, of the acquiring consolidation and improving the capabilities and military-applicative skills, while developing the learning process în the Academy.

### 11. Conceptia de investigare a problematicii rolului liderilor in organizatii, Gl.bg. (r) prof.univ.dr. Lucian CULDA

#### **Abstract:**

Leader type actions emerge when decisions affect people and constraints prove only partly useful; among these, there is the wirl that people should be guided according to the decision-makers interests, thus, they could be in favour of the actions established for their participation, full of enthusiasm and abnegation. But, the success is inevitable partly, because it is affected by the leaders socialization. The process theoretical analysis of this problem has generated a new approaching modality.

#### 12. Studiu privind corelatia dintre potentialul de lider si abilitatile de lucru in echipa, Col.dr. Benoni SFARLOG, Mr. Daniel-Sorin CONSTANTIN

#### **Abstract:**

The issue of the leader development, in its complexity, includes the necessity to concurrently form the skills of team working. These two formative desiderate are compatible, correlative and complementary.

#### 13. Evolutii ale problematicii leadership-ului in organizatia militara, *Cpt.asist.univ. Dumitru IANCU*

#### **Abstract:**

The Romanian military organization and society consider leadership as a new means of developing an efficient management. But this command method is not by any means new having manifested itself for ages. In order to accomplish an efficient leadership, it is vital to draw an explicit difference between the role of commander and that of leader.

### 14. Modelarea absorbtiei campului de radiofrecventa in structuri biologice omogene si eterogene folosind metode analitice si numerice,

Lect.univ.dr. Simona MICLAUS, Prof.univ.dr.ing. Stefan DEMETER, CS II dr.ing. Paul BECHET, Conf.univ.dr.ing. Octavian BOGDAN, Stud. Ovidiu C. OLARIU

#### **Abstract:**

Radiofrequency field absorption in homogeneous and heterogeneous biological objects is computed by using analytical and numerical dozimetric tools. The spherical model is analysed by means of electromagnetic scattering theory of Mie, and more complicated models are analysed by means of finite-difference time method and method of moments respectively, which solve the Maxwell equation in time domain and frequency domain respectively. Present work results are part of the ones obtained under a project granted to Land Forces Academy, by The Romanian Ministery of Education and Research – National Council for Scientific Research in University Institutions.

#### 15. Reprezentarea sistemelor de receptie si prelucrare a imaginilor pe baze perceptive, Mr.lect.univ.dr.ing. Mircea POPA

#### **Abstract:**

The goal of this research is to find, if possible, a link between the natural and artificial systems of image acquisition and processing.

### 16. Analiza alternativelor – suport in luarea deciziilor in cadrul sistemului de planificare bazat pe capabilitati,

Lt.cdor conf. univ.dr.ing. Ghita BARSAN

#### **Abstract:**

Capability planning is based upon defense planning guidance. Its objective is to develop capabilities that ensure future armed forces have the operational capabilities to fight and prevail anytime, anywhere. Analyses of alternatives are an important element of the defense acquisition process. An analysis of alternatives is an analytical comparison of the operational effectiveness and cost of proposed materiel solutions to shortfalls in operational capabilities. Analyses of alternatives document the rationale for identifying and recommending a preferred solution or solutions to the identified shortfalls. Threat changes, deficiencies, advances in technology or the obsolescence of existing systems can trigger an analysis of alternative. The objective of this paper is to demonstrate

how analysis of	alternatives proces	ss contributes a	nd supports th	ne defense acau	isition manageme	nt
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