### 1. Protected Automated Information Systems Design

The monograph offers a comprehensive and systematic approach to creating protected Information Systems. Issues related to organizational risk management and security policy formulation technology are reviewed, and an overview of the functions and security architectures tools is outlined. As a result, a methodology for designing a protected AIS is proposed. The methodology is verified through an example of designing a protected Information Systems of an organization. The example shows how the analysis starts with general information of the Information Systems and the environment in which it operates, goes through the stages of the methodology and ends with specific architectures of reasonably selected technologies and means of protection. This approach creates the necessary confidence for effective protection.

### 2. Control of the Staff Activities with C4I

The report identifies the place of the actions control of the headquarters' staff during their work with the automated information systems in the frame of the general information security system and offers an invariant technology for creating tools for actions control using the specialized services of the staff automated information systems.

### 3. Access Control Models Analysis

The paper presents the possibilities access and resource using models to be used for AIS access control. Those models are classified and appraised for possibilities to be used for access control.

**4. Penetration Test Method in Automated Information System**

This paper presents a way for Information System Security Testing. The Penetration Test Method is described in the paper. Penetration Testing is basic step in System Security Test.

**5. Architecture of the Information System for Public Access to MoD Spatial Data and Services**

The article analyses the architecture of the developed Information system for public access to MoD spatial data and services. Through the program applications and e-services, implemented in the Information system, the institutions', citizens' and business need of online access to spatial data will be satisfied. The Information system will contribute for the harmonization of spatial data end e-services according to Directive 2007l2lEO INSPIRE.

**6. Distributed relational model for a group report of the mobilization set**

The report discusses theoretical models of relational databases used in data management for a group report of the mobilization set. At different levels in a different way data are exchanged and processed.

**7. Design of the Oracle 7.3 DB Containing Logistics and Materiel Assets Hierarchical System**

This report presents the Designer 2000 capabilities for the design of hierarchical structures using Oracle 7.3 RDB. The process of implementation of the Logistics and Materiel Assents hierarchical system has been used to portray and demonstrate this capability. The role played by the terms supertype and subtype is the conversion of the logical into physical DB model is also presented.

The designer should use the option, taking into account the particularities of the data. The most efficient option to create an ABB containing the hierarchical structure of the list of gable materials was chosen.

**8. Software Solutions for Database Security**

*This paper presents solutions for cryptographic software system for information protection in Database Management Systems. The solutions comprise the authors' experience in development and implementation of systems for information security in the Automated Information Systems of Bulgarian Armed Forces. The methodology, the security policy, the architecture, and a components of software solutions for database protection are being explained.*

### 9. Data Security in ORACLE Data Base

*This report presents the Secure Network Services. They are not standard Oracle DBMS services. The report gives good practices for Secure Network Services using.*

### 10. Information Security Strategy in the Bulgarian Army C4I Systems

*The report incorporates the authors' experience in developing and implementing legal documents and information protection systems in the Bulgarian Army Automated Management Systems, their participation in the development of the Strategy for Development of the Information Society in the Republic of Bulgaria and the conclusions and recommendations of the joint Bulgarian - American Studies of the Bulgarian Army C4I Systems.*

### 11. E-Net Model for Session Protection of Distributed Relation Data Base

*The paper presents two session protection E-net models of distributed relation data base. The one for non-protected session, and the second – for protected session. The models can be used for analyses and security evaluation.*

### 12. Data Base Information Security System's Formal Model

*The report presents Data Base Information Security System's Formal Model. It describes Information and Physical DB structures, considering the data base security. The model allows to be described the links between structures and security tools. It is handy for specification from Data Base description. It is mainly used in the creation of distributed databases in the stages: design (for security policies) and exploitation (for analysis and verification).*

### 13. The Security in Distributed Relation Database

*The paper presents the security in a distributed relational database. A specific part of this protection is the access control to / between the physical database units and the data exchange protection.*

### 14. Access Control in ORACLE Database

*The report presents three practices for ORACLE DB access control. Their priorities and defects are given and a references for their usage are done.*

**15. Relational Databases Model for the educational process planning at the Defense and Staff college "G. S. Rakovski**

*The report presents the opportunity to formalize the curriculum of the Military Academy "G. S. Rakovski". Based on the proposed formal model, a relational database model was created.*

**16. Conducting a split two-tier staff training of for signal unit staff with the distance learning tools**

*The paper shows the possibilities for using distance learning approach in split two-step trending for signal unit staff.*

**17. Relation Database Model on Classified Documents Control in Corporation**

*This paper presents information structure of classified documents control information system. It is based on Relational Data Base.*

**18. Classified Documents Registering Model in a Corporate Organization**

*The report defines the concepts of information unit "classified document" and "life cycle of an information unit "classified document" and proposes a constructive and invariant Formal model of classified documents.*

**19. Passive Network Intelligence Software**

*The report provides an overview of existing software tools that can legitimately collect information from private servers that share different data within the public domain. This data can be used to organize attacks.*

**20. Active Reconnaissance Software for Networks**

*The paper presents software for network active reconnaissance. The active reconnaissance is a part of the attack process. The presented software allows collecting network information which may be used for network attack. The kind of attacks which use this information are presented.*

**21. Information System Security Testing**

*This paper presents a way of Information System Security Testing. The Security Testing and the Risk analyse process are presented in the paper. The*

*Security Testing is an important step in the information security system developing.*

### 22.  IT Antiattack Standard Operation Procedures's Structure

*This paper presents a way for developing Antiattack Standard Operation Procedures (SOP). A structure of SOP is being proposed.*

### 23.  Cyber Operation Technologies

*The paper presents a summary of Cyber Operation Technologies. IT Technologies are classified as Cyber Weapons and Cyber Defence means.*

### 24.  Research of NATO Critical Tasks Dependence on National CIS

*In this paper is presented a methodology for conducting research of NATO critical tasks dependence on national CIS. The methodology is used to find national CIS that are used to supply NATO critical tasks.*

### 25.  Project Management Challenges for Building an Information System for Provision of Public Access to Ministry of Defence Data Space and Service

*The report examines some of the major challenges in the overall management of the first Ministry of Defence project funded under the Operational Program "Administrative Capacity". It shares the experience and the problems that have arisen in the process of developing the project proposal and its implementation. The challenges presented are grouped in the functional areas known by the project management theory. Some of these challenges were foreseeable and typical for such projects, others have occurred unexpectedly, and some have a cumulative effect. In addition, an analysis of the risks threatening the quality and timely implementation of the project is presented.*

### 26.  Determination of the Impact of Critical Information Infrastructure in Risk Assessment

*The paper presents an approach for estimation of negative risk event consequences. The approach is suitable to be used in the risk analyse process.*

**27. Risk Assessment Methodology for Established Critical Infrastructures and their objects in the Defence Sector in the Republic of Bulgaria**

*The risk assessment methodology for established critical infrastructures and their defence objects in the Republic of Bulgaria covers the deficits in the area by offering a unified and systematic approach to risk management. For the implementation of the proposed mathematical apparatus for risk assessment the successive phases of risk management, the risk events for CI objects and the most significant vulnerabilities of the sites associated with each risk event are identified. Document templates are presented to facilitate the work of the experts and a software application has been developed.*

10.07.2019 г.

……………………….. /Зарко Здравков/