



## CONTENTS

### INFORMATION SECURITY APPLICATION

- 9 *Glibovsky P. A., Timashov P. V., Chernyshov V. I.*  
**METHOD OF PROVIDING AND CONDUCTING INTERNAL AUDIT  
OF INFORMATION SECURITY OF ORGANISATIONS  
ON THE BASIS OF RISK-ORIENTED APPROACH**
- 25 *Lebedev I. S., Sukhoparov M. E.*  
**IMPROVING THE QUALITY OF INFORMATION SECURITY STATE IDENTIFICATION  
BASED ON SAMPLE SEGMENTATION**
- 33 *Fedosenko M. Y., Bezzateev S. V.*  
**COMPARATIVE ANALYSIS OF THE PROBLEMS OF THE APPLICATION  
OF STEGANOGRAPHY METHODS IN THE IMPLEMENTATION  
OF ILLEGAL ACTIONS AND ITS ROLE IN DIGITAL FORENSICS**

### SOFTWARE SECURITY

- 58 *Eremeev M. A., Zakharchuk I. I.*  
**RISK ASSESSMENT OF USING OPEN SOURCE PROJECTS:  
ANALYSIS OF EXISTING APPROACHES**
- 70 *Samarin N. N.*  
**SYSTEMATIZATION OF METHODS  
FOR FINDING ERRORS IN SOFTWARE**

### NETWORK AND TELECOMMUNICATION SECURITY

- 82 *Bezzateev S. V., Mylnikov V. A., Starodub A. R.*  
**RANKING MODEL OF THE SYSTEM OF COMPROMISE INDICATORS  
OF NODES OF A CORPORATE DATA TRANSMISSION NETWORK**
- 90 *Birukov D. N., Telbukh V. V., Tkachenko S. F., Kochetkov I. V.*  
**AGENT-BASED MODELLING INFORMATION DISTRIBUTION  
IN SOCIAL-INFORMATION INTERNET SERVICES**
- 103 *Shilova A. D., Vorobeva A. A.*  
**A NETWORK ACCESS DEFINITION METHOD  
TO ENSURE NETWORK INFRASTRUCTURE SECURITY  
BASED ON REMOVAL OF EXCESSIVE NETWORK CONNECTIVITY**

**117** *Pavlenko E. Y.*

**ARTIFICIAL IMMUNIZATION IN HIERARCHICAL  
AND PEER-TO-PEER NETWORKS FOR PROTECTION AGAINST CYBER THREATS**

## **TECHNOLOGICAL SYSTEMS, ALGORITHMIZATION OF TASKS AND CONTROL OBJECTS MODELING**

**126** *Sukhov A. M., Krupenin A. V., Yakunin V. I., Samoylenko D. V.*

**CHARACTERISTICS OF SENSITIVITY AND INFLUENCE OF PARAMETERS  
OF THE INFORMATION SECURITY SYSTEM MODEL  
AND ITS FUNCTIONING PROCESS ON THE EFFICIENCY OF THE OPERATION**

## **RESEARCH, MONITORING AND OPTIMIZATION OF AUTOMATED TECHNOLOGICAL PROCESSES AND PRODUCTIONS CONTROL SYSTEMS**

**138** *Baryshnikov S. O., Ivanyuk V. Yu., Sakharov V. V., Sikarev I. A.*

**BALANCE PRODUCTION MODELS WITH INFORMATION SECURITY**

**148** *Garkushev A. Yu., Lipis A. V., Karpova I. L., Suprun A. F.*

**MODELING OF WORK OF AN EMPLOYEE  
OF THE INFORMATION SECURITY SERVICE OF AN INDUSTRIAL ENTERPRISE**

## **MACHINE LEARNING AND KNOWLEDGE CONTROL SYSTEMS**

**154** *Sheluhin O. I., Rakovskiy D. I.*

**MULTI-LABEL CLASSIFICATION OF LABELS OF SYSTEM LOGS  
OF COMPUTER NETWORKS. FORMALIZATION OF THE TASK**

**170** *Grigoriev M. D., Tatarnikova T. M.*

**DEVELOPMENT OF A TRAINABLE NEURAL NETWORK FOR ANALYSIS OF LINGUISTIC DATA**

**177** *Sikarev I. A., Chestnov A. I., Abramov V. M.*

**CREATION AND PROSPECTS OF DEVELOPMENT  
OF SOFTWARE FOR FINDING SNOW COVER MAXIMA  
FROM DATABASES OF METEOROLOGICAL ARCHIVES**