

**Science Book Publishing House, USA**  
**Baku State University, Azerbaijan**  
**Lipetsk State Technical University, Russian Federation**  
**Academy of Federal Security Guard Service of the Russian**  
**Federation, Orel, Russian Federation**  
**Don State Technical University, Rostov-on-Don, Russian**  
**Federation**  
**Vologda State University, Russian Federation**

**MODERN INFORMATIZATION PROBLEMS**  
**IN ECONOMICS AND SAFETY**  
**MIP-2019'ES**

**Proceedings of the XXIV-th**  
**International Open Science Conference**  
**(Yelm, WA, USA, January 2019)**



**Science Book Publishing House**

**Yelm, WA, USA - 2019**

**Modern** informatization problems in economics and safety (MIP-2019'ES):  
Proceedings of the XXIV-th International Open Science Conference (Yelm,  
WA, USA, January 2019)/ Editor in Chief Dr. Sci., Prof. O.Ja. Kravets. -  
Yelm, WA, USA: Science Book Publishing House, 2019. – 132 p.

**ISBN 978-1-62174-114-5**

Proceedings summarizing the results of the XXIV-th International Open Science Conference "Modern informatization problems in economics and safety" (MIP-2019'ES), held in November 2018 - January 2019. It contains information within the following areas: **information systems and their applications, information systems in economics.**

Data gathered within collected papers may be useful to researchers and engineering technicians, whose work involves various aspects of modern society informatization, as well as to postgraduates and students studying subjects related to informatics and computer engineering.

#### **Proceedings Editorial Board:**

**O.Ja. Kravets**, Dr. Sci., Prof. (editor in chief, Science Book Publishing House, USA); **A.A. Aliyev**, Dr. Sci., Prof. (Baku State University, Azerbaijan); **S.L. Blumin**, Honored Scientist of Russian Federation, Dr. Sci., Prof. (Lipetsk State Technical University, Russian Federation); **E.V. Lebedenko**, Dr. (Academy of Federal Security Guard Service of the Russian Federation, Orel, Russian Federation); **A.D. Lukyanov**, Dr. (Don State Technical University, Rostov-on-Don, Russian Federation); **S.L. Podvalny**, Honored Scientist of Russian Federation, Dr. Sci., Prof. (Voronezh State Technical University, Russian Federation); **A.M. Vodovozov**, Dr., Prof. (Vologda State University, Russian Federation)

**ISBN 978-1-62174-114-5**

Ó **Authors, 2019**

## Preface

Dear Colleagues!

Present proceedings were published to summarize the results of the XXIV International Open Conference "Modern informatization problems in economics and safety" (MIP-2019'ES). The conference was held through the joint efforts of Science Book Publishing House (USA), Baku State University (Azerbaijan), Vologda State University, Lipetsk State Technical University, Don State Technical University (Rostov-on-Don), and the Academy of Federal Security Guard Service of the Russian Federation (Orel), in November 2018 – January 2019.

Proceedings contain information within the following areas: information systems and their applications, information systems in economics.

The conference was held to encourage exchange of experience between leading experts in utilization of information technologies in various spheres of science, engineering, and education. The conference followed the traditions established by its predecessors.

Representatives of leading research centers and educational institutions from some countries introduced the audience to the results of their research, which are available not only in this collected works, but on <http://www.sbook.ru/spi>.

Organizing Committee Chair,  
Editor in Chief  
Dr. Sci., Prof.

O.Ja. Kravets

## Contents

<b>Preface</b> .....	<b>3</b>
Abramov K.A., Stelmashchuk I.V. Integrated means of protecting protocols of supporting IP telephony: a brief analysis.....	4
Aliyev A.A. Credit surveillance of an individual in the logical basis of the neural network ..	9
Barabanov V.F., Donskikh A.K. Blockchain technology basics .....	16
Baranov I.Yu. Suitability checking of the information flows model for the situational center at its structural expansion .....	23
Belenkiy V.M., Prus Yu.V., Putin V.S. Information model of safety indicators for Russia EMERCOM .....	27
Bronfeld G.B. Methodological analysis of the notions "information" and "knowledge" on the basis of modern structural ideas.....	32
Choporov O.N., Preobrazhenskiy A.P. About simulation problems of wireless networks ...	37
Dzhevaga K.A., Izotova T.Yu. Approaches to the modeling of event-oriented process of the network subscriber access fragment .....	41
Efremov Y.V. An overview of the cryptographic mechanism blockchain. The means of achieving security .....	45
Eskov S.S. Approaches to improving efficiency transaction processing in the distributed ledger systems based on blockchain technology .....	49
Filimonov P.A. Influence of hybrid content delivery networks on internet logical structure simulation for a particular purpose of the information monitoring .....	53
Goryanina K.I., Lukyanov A.D., Katin O.I., Vernezi M.A. Sensors of the sensor system of the general-purpose adaptive robot manipulator .....	59
Gromey D.D., Bykova A.S. To the question of management of the diagram database in the problems of horizontal scalability of autonomous DBMS .....	63
Ivaschenko A., Korchivoy S. Intermediary models of digital economy .....	67
Konovalov A. Overview of cryptocurrency, virtual money, mechanisms of their work.....	71
Kozachok A.I., Kutsakin M.A., Altunin I.L. The information security's problem of the mail service in the operating system "Linux" .....	78
Likhotin M.A. Advantages and disadvantages of blockchain technology .....	82
Merkulova Yu.V. Matrix technology of formation of databases .....	86
Moiseev O.V., Yakovlev D.A. Approaches to access differentiation in automated system for performance assessment of organization units .....	93
Mostovaya N.V., Lebedenko E.V. Security ensuring, control and organization of data access in database engine PostgreSQL For Astra Linux SE.....	97
Nikolaev D.A. To the question of multi-camera support in video surveillance systems....	101
Sergeev S.M., Sumenkova V. Mathematical modeling of an adaptive automated warehouse .....	107
Statnikov I.N., Firsov G.I. Application of information technologies for rational selection of parameters of mechanical systems by the method of a planned computational experiment .....	114
Tcarev A.A. Using thematic modeling algorithm to automatically assign defects to developers .....	120
Vitkalov K.A. Options of the blockchain technology application except cryptocurrency ..	126
<b>Author's index</b> .....	<b>132</b>

**Author's index**

Abramov K.A. ....	4	Korchivoy S. ....	67
Aliyev A.A. ....	9	Kozachok A.I. ....	78
Altunin I.L. ....	78	Kutsakin M.A. ....	78
Barabanov V.F. ....	16	Lebedenko E.V. ....	97
Baranov I.Yu. ....	23	Likhotin M.A. ....	82
Belenkiy V.M. ....	27	Lukyanov A.D. ....	59
Bronfeld G.B. ....	32	Merkulova Yu.V. ....	86
Bykova A.S. ....	63	Moiseev O.V. ....	93
Choporov O.N. ....	37	Mostovaya N.V. ....	97
Donskikh A.K. ....	16	Nikolaev D.A. ....	101
Dzhevaga K.A. ....	41	Preobrazhenskiy A.P. ....	37
Efremov Y.V. ....	45	Prus Yu.V. ....	27
Eskov S.S. ....	49	Putin V.S. ....	27
Filimonov P.A. ....	53	Sergeev S.M. ....	107
Firsov G.I. ....	114	Statnikov I.N. ....	114
Goryanina K.I. ....	59	Stelmashchuk I.V. ....	4
Gromey D.D. ....	63	Sumenkova V. ....	107
Ivaschenko A. ....	67	Tcarev A.A. ....	120
Izotova T.Yu. ....	41	Vernezi M.A. ....	59
Katin O.I. ....	59	Yakovlev D.A. ....	93
Konovalov A. ....	71	Vitkalov K.A. ....	126

---

Scientific publication

**MODERN INFORMATIZATION PROBLEMS  
IN ECONOMICS AND SAFETY (MIP-2019'ES)**

**Proceedings of the XXIV-th International Open Science Conference**

Issue is published in author's edition

Cover designed by Sofia A. Kravets

---

Assigned to print 11.01.2019. Format 60x84 1/16.  
CPP 8,3. Order 2019011101. Circulation 500.

---

Science Book Publishing House  
17200 153rd Ave SE, Yelm, Washington, 98597 USA  
<http://www.sbook.us/>