

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 THE TECHNOLOGICAL AND
TELECOMMUNICATION SYSTEMS
ANALYSIS AND SYNTHESIS

Proceedings of the XXIII-th
International Open Science Conference
(Yelm, WA, USA, January 2018)



Science Book Publishing House

Yelm, WA, USA - 2018

Modern informatization problems in the technological and telecommunication systems analysis and synthesis: Proceedings of the XXIII-th International Open Science Conference (Yelm, WA, USA, January 2018)/ Editor in Chief Dr. Sci., Prof. O.Ja. Kravets. - Yelm, WA, USA: Science Book Publishing House, 2018. – 100 p. (201-300)

ISBN 978-1-62174-109-1

Proceedings summarizing the results of the XXIII-th International Open Science Conference "Modern informatization problems in the technological and telecommunication systems analysis and synthesis", held in November 2017 - January 2018. It contains information within the following areas: **simulation of complex systems and engineering procedures, telecommunication systems and applications.**

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.Ya. 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**, Prof. (Vologda State University, Russian Federation)

ISBN 978-1-62174-109-1

Ó

Authors, 2018

Preface

Dear Colleagues!

Present proceedings were published to summarize the results of the XXIII International Open Conference "Modern informatization problems in the technological and telecommunication systems analysis and synthesis". 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 2017 – January 2018.

Proceedings contain information within the following areas: simulation of complex systems and engineering procedures, telecommunication systems and applications.

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

Author's index

Altunin I.L.	263
Andreev A.N.	204
Andreev I.L.	245
Baranov I.Y.	208
Burlutskaya M.V.	212
Choporov O.N.	272
Firsov G.I.	286
Girya N.V.	291
Karamihova O.V.	227
Kolesnichenko D.A.	204
Kolesnichenko N.M.	204
Kravets O.Ja.	249
Kustov A.I.	232
Kutsakin M.A.	263
Lopatin D.S.	291
Mashkin A.V.	239
Miheecheva V.E.	227
Nevrov A.A.	245
Poimanov A.A.	249
Preobrazhensky A.P.	272
Ryabokon' V.V.	263
Safonova Yu.A.	267
Scherbatyh S.S.	272
Shmyrin A.M.	277
Statnikov I.N.	286
Sukachev A.I.	291
Trufanova Yu.N.	267
Yartsev A.G.	277
Zaytsev A.A.	239
Zvyagincev N.B.	208

Contents

Preface	247
Andreev A.N., Kolesnichenko D.A., Kolesnichenko N.M. Algorithm for estimation energy efficiency of metallurgical production cyclic operation mechanisms with asynchronous electric drive	204
Baranov I.Y., Zvyagincev N.B. Layout development of the automated administration subsystem of the connectable USB-drives in the corporate information network	208
Burlutskaya M.V. Creation and research of mathematical and software for processing of streaming data in distributed systems based on the correlation decomposition of the flow	212
Karamihova O.V., Mihecheva V.E. Diversities of retrieval systems in Internet	227
Kustov A.I. Criteria of use of informational and measuring control methods of parameters of nanostructures in the ion-covalent crystals on the basis of the correlative and regression analysis	232
Mashkin A.V., Zaytsev A.A. Comparative analysis energy efficiency of frequency converters using spectral models	239
Nevrov A.A., Andreev I.L. Automation control of use attached media devices on computers with Astra Linux SE operation system	245
Poimanov A.A., Kravets O.Ja. Algorithms for finding top-k similar pairs of objects, described by terms from ontologies	249
Ryabokon' V.V., Kutsakin M.A., Altunin I.L. To the question of implementation and testing network services on the basis of Linux operating system	263
Safonova Yu.A., Trufanova Yu.N. The solution of the problem of quality control multi-stage processes of different types on the basis of the probabilistic approach	267
Scherbatyh S.S., Choporov O.N., Preobrazhensky A.P. The development of radiation models for wireless communication networks	272
Shmyrin A.M., Yartsev A.G. Algorithms of identification of neighborhood systems by the example of simulation of an installation for maintaining the optimum temperature of the polyol	277
Statnikov I.N., Firsov G.I. Use of information technologies for identification of the mathematical model of industrial robot with electrohydraulic actuator	286
Sukachev A.I., Lopatin D.S., Girya N.V. Analysis of hardware and software systems for video and audio fixation with long-term storage of data	291
Author's index	296

Scientific publication

**MODERN INFORMATIZATION PROBLEMS
IN THE TECHNOLOGICAL AND TELECOMMUNICATION SYSTEMS
ANALYSIS AND SYNTHESIS**

Proceedings of the XXIII-th International Open Science Conference

Issue is published in author's edition

Cover designed by Sofia A. Kravets

Assigned to print 11.01.2018. Format 60x84 1/16.
CPP 6,3. Order 2018011103. Circulation 500.

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