



**5th INTERNATIONAL
SCIENTIFIC CONFERENCE**
for military and technical issues,
defence and security problems,
application of double-purpose
technologies

May 25–26, 2011
Minsk

PROGRAMME

**5-я МЕЖДУНАРОДНАЯ
НАУЧНАЯ КОНФЕРЕНЦИЯ**
по военно-техническим проблемам,
проблемам обороны и безопасности,
использованию технологий
двойного применения

25–26 мая 2011 г.
г. Минск

ПРОГРАММА



5TH INTERNATIONAL SCIENTIFIC CONFERENCE on Military Engineering, Defense and Security Issues and Dual-Use Technologies

May 25–26, 2011

Minsk, Republic of Belarus

PROGRAMME

ORGANIZERS

**State Military Industrial Committee of the Republic
of Belarus**

**Belarusian Institute of System Analysis and Information
Support for Scientific and Technical Sphere (SO "BellSA")**

WITH THE ASSISTANCE OF:

State Secretariat of the Security Council

Ministry of Defense

Ministry for Internal Affairs

Ministry of Industry

Ministry of Foreign Affairs

Ministry of Trade

Ministry of Education

Ministry of Emergency Situations

State Committee on Science and Technologies

National Academy of Sciences of Belarus

State Security Committee

State Customs Committee

Minsk Municipal Executive Committee

PLENARY SESSION

May 25, 2011 (9.00 – 14.00)

Victoria Hotel Complex Congress hall

Pobediteley Ave. 59, Minsk, Republic of Belarus

9.00 – 10.00	Registration
10.00	Opening of the conference
10.20 – 14.00	Plenary session
14.00 – 15.00	Dinner-time

SECTIONAL MEETINGS

Victoria Hotel Complex Congress hall

May 25 Section 1 Progress trend of the military industrial complex in the interests of providing the national security
15.00 – 18.00

Victoria Hotel Complex Congress hall

May 26 Section 2 Scientific and technical basis for new defense technologies, armament and military machinery systems
10.00 – 13.30
13.30 – 14.30 Dinner-time

Victoria Hotel Complex Congress hall (fourth floor)

May 26 Section 3 Upgrade, repair and utilization of military equipment and armaments
10.00 – 13.30

Victoria Hotel Complex Congress hall

May 26 Section 4 Information support and computer-aided systems for force and weapon control, information security systems. Means of the reconnaissance. Resistance to the high-precision weapon systems and complexes
14.30 – 17.15
13.30 – 14.30 Dinner-time

Victoria Hotel Complex Congress hall (fourth floor)

May 26 Section 5 Protection from the emergency situations in the peace and war time
14.30 – 17.15

Victoria Hotel Complex Congress hall

17.20 – 18.00 **Summing up. Closing of the conference**

PLENARY SESSION

May 25 10.00 – 14.00

Victoria Hotel Complex Congress hall

Chairmen:

Igor Bykov, Vice-Chairman of the State Military Industrial Committee of the Republic of Belarus
Peter Vitiaz, Senior Deputy of the Chairman of the National Academy of Sciences of Belarus
Valeriy Koreshkov, Chairman of the State Committee for Standardization of the Republic of Belarus
Valeriy Krationok, Head of Innovation Information Center of the Belarusian Institute of System Analysis and Information Support for Scientific and Technical Sphere (SO "BellISA")

09.00 – 10.00 Registration

10.00 – 10.10 Opening of the conference. Welcoming speech

Igor Bykov, Vice-Chairman of the State Military Industrial Committee of the Republic of Belarus

10.10 – 10.30 Current state of the economics defense sector of the Republic of Belarus. Its progress trends

Igor Bykov, Vice-Chairman of the State Military Industrial Committee of the Republic of Belarus

10.30 – 10.50 Organizational-economic mechanisms of the military-civil integration of highly technological branches of industry

Sergey Chemezov, General Director of the State corporation «Rostechology», Moscow, Doctor of Economics, Professor

Sergey Kulikov, Head of the Apparat of the State corporation "Rostechology", Moscow

Nikolay Turko, Vice-president of the Academy of Military Sciences, Moscow, Honored Research Officer of RF

Pavel Drogovoz, Associate Professor of the MSTU named after N. Bauman, Moscow, Candidate of Economic Science

10.50 – 11.10 Some aspects of the information technologies development from the standpoint of modern wars

Vladimir Buloichyk, Vladimir Hertsev, Svyatoslav Zaytsev, JSC "Belfortex", Minsk

- 11.10 – 11.30 Radio-electronic appliances operation control based on virtual elemental system concept
Eduard Lazarevich, Yuriy Semak, Research Institute of Armed Forces of the Republic of Belarus
- 11.30 – 11.50 Armament system progress trends in a changing armed struggle environment
Oleg Krivonos, General Staff of the Armed Forces
Pavel Prymak, Science and Technology Committee of the Armed Forces, Minsk
- 11.50 – 12.10 Stages of the construction of administration system by aviation safety and NATO politics for aviation safety of military aircrafts
Nikolay Zagorsky, Technical University — Sofia, branch Plovdiv
- 12.10 – 12.30 Engine resource increase when using quality management system at automobile and repair enterprises
Petr Vitiaz, Academician, D.E., Professor Presidium of the National Academy of Sciences of Belarus, Minsk;
Valeriy Koreshkov, Candidate of Technical Science, Associate Professor State Committee for Standardization of the Republic of Belarus;
Alexandr Rakomsin, Candidate of Technical Science, Associate Professor Minsk Automobile Plant, Minsk;
Mikhail Kheifetz, Doctor of Technical Sciences, Professor State Scientific and Production Union “Center” of the National Academy of Sciences of Belarus, Minsk
- 12.30 – 12.50 Scientific principles for the holding company corporate control mechanisms substantiation
Andrey Zverev, PC “Russian Electronics”, Moscow
- 12.50 – 13.10 Progress trends of the national defense order arrangement system
Galina Ovechkina, CRI “Centre”, Moscow
- 13.10 – 13.30 The role of military-technical cooperation in promotion of the national security
D. Korolkov, Moscow
- 13.30 – 14.00 Discussion, meeting summing up

SECTIONS PROGRAMME

May 25, 2011 (15.00 – 18.00)
Victoria Hotel Complex Congress hall

SECTION 1. PROGRESS TRENDS OF THE DEFENSE INDUSTRIAL COMPLEX, MILITARY AND TECHNICAL ASPECTS OF DEFENSE AND SECURITY

Chairmen:

Igor Bykov, Vice-Chairman of the State Military Industrial Committee of the Republic of Belarus, Candidate of Technical Sciences, Associate professor
Oleg Krivonos, Deputy Chief of the General Staff of Armed Forces of the Republic of Belarus, Candidate of Military Sciences

15.00 – 17.40 Impact of military expenditure on the economics development

A. Leanovich, Military Academy of the Republic of Belarus, Minsk

Military economy as the factor of social and economic development

M. Shifman, Military Academy of the Republic of Belarus, Minsk

Innovation processes mechanism improvement in military and economic sphere

V. Fedorova, G. Rusinskaya, Economic Research Institute of the Ministry of Economy of the Republic of Belarus, Minsk

Evaluation of the Republic of Belarus economic security defense component

T. Karelina, Economic Research Institute of the Ministry of Economy of the Republic of Belarus, Minsk

Current state and the prospects of the pilotless aviation complexes employment in the interests of the Armed Forces of the Republic Belarus

Y. Leonovets, Air Defense Forces, Minsk
Guidance on pilotless aircraft employment when destructing air attack facilities at depot aerodrome

A. Fiodarav, Y. Bertash, A. Yesmantovich, Military Academy of the Republic of Belarus, Minsk

Military equipment technical level determination based using qualimetry methods

A. Grinkevich, Y. Brazgin, Research Institute of Armed Forces of the Republic of Belarus, Minsk

Monitoring of and reaction on telecommunication attacks in military information networks

V. Buloychik, A. Shibykh, A. Raikin, Military Academy of the Republic of Belarus, Minsk

Domestic system of military operations modeling

V. Buloychik, A. Hertsau, Military Academy of the Republic of Belarus, Minsk

Battle simulation based on behavior principles

A. Dubrovskiy, A. Bogodel, Military Academy of the Republic of Belarus, Minsk

Strike aircraft model structure

V. Berikbaev, G. Moskvin, Military Academy of the Republic of Belarus, Minsk

The approach to the substantiation of arms system development based on the theory of fuzzy sets

S. Savenko, A. Shulyak, Research Institute of Armed Forces of the Republic of Belarus, Minsk

17.40 – 18.00 Discussion, meeting summing up

May 26, 2011 (10.00 – 13.30)
Victoria Hotel Complex Congress hall

SECTION 2. SCIENTIFIC AND TECHNICAL BASIS FOR NEW DEFENSE TECHNOLOGIES, ARMAMENT AND MILITARY MACHINERY SYSTEMS

Chairmen:

Igor Mityanov, Scientific and Technical Committee of
Armed Forces, Candidate of Technical Sciences

Mikhail Kheifetz, Deputy Chief of the Applied-physics
department of the NAS of Belarus, Doctor of Technical
Sciences, Professor

10.00 – 13.10 Low altitude objects fire defeat using
passive detectors

S. Heister, O. Vorobey, Research Institute of
Armed Forces of the Republic of Belarus, Minsk
Pilotless aviation video monitoring
complex of an area and short distance
objects

**A. Paltsev, R. Sindarov, A. Shchavlev,
Y. Yatsyna**, Physico-Technical Institute of the NAS
of Belarus, Minsk

Prospective methods for meteorological
support to artillery fire

A. Senko, A. Gusak, Military Academy of the
Republic of Belarus, Minsk

Hybrid anti-aircraft aviation missile
complex moulding

V. Kurenev, S. Shaban, A. Moroz, Military
Academy of the Republic of Belarus, Minsk

Trends in optimization of targets
distribution algorithms in radio
communication jamming systems

V. Gordey, I. Lashuk, JSC "KB Radar", Minsk
Adaptive block method for video
sequence interframe superfluity
minimizing for monitoring systems

A. Baradzina, V. Tsviatkou, A. Boriskevich,
Belarusian State University of Informatics and
Radioelectronics, Minsk

Image segmentation based on reverse clustering

T. Al-Juboori, V. Kanapelka, V. Tsviatkou,
Belarusian State University of Informatics and
Radioelectronics, Minsk

Digital stabilization of the pilotless aircraft
video image

A. Gusak, Military Academy of the Republic of
Belarus, Minsk

Evaluation of target destruction
effectiveness when interconnecting
artillery units and pilotless aircraft
complexes

A. Masilevich, R. Bykov, Military Academy of the
Republic of Belarus, Minsk

Faint optical signals rank detectors
working in real time

V. Nikitsionak, Military Faculty of Belarusian State
University, Minsk

13.10 – 13.30 Discussion, meeting summing up

May 26, 2011 (10.00 – 13.30)
Victoria Hotel Complex Congress hall (fourth floor)

SECTION 3. UPGRADE, OPERATION, REPAIR AND UTILIZATION OF MILITARY EQUIPMENT AND ARMAMENTS

Chairmen:

Sergey Savenko, Senior research officer of the Research Institute of Armed Forces of the Republic of Belarus, Doctor of Technical Sciences, Professor
Yuriy Cherhy, 1034 Centre for military research and informatization of Air Force headquarters and defense troops, Candidate of Technical Sciences

10.00 – 13.10 System of common technical requirements for armament and military equipment. Purpose, tasks, structure, results

V. Zenzin, K. Chugay, V. Koshev, Research Institute of Armed Forces of the Republic of Belarus, Minsk

Bulgarian Air Forces automated information «ICAR» system improvement

S. Asenov, N. Zagorsky, Technical University – Sofia, branch Plovdiv

Use of arc plasma laminar flow for the explosive materials destruction

I. Smyaglikov, N. Chubrik, B. Stepanov Institute of Physics of the NAS of Belarus, Minsk

V. Adulov, G. Fedoruk CC «Stroyenergo», Minsk
New tanks T-72b modernization priorities

Y. Kozhewnikov, Research Institute of Armed Forces of the Republic of Belarus, Minsk

Multiphase engines for military technique and armament energy-saving electric drive

Y. Kolchyn, A. Malashin, Military Academy of the Republic of Belarus, Minsk

Virtual component cognitive model

E. Lazarevich, U. Semak, A. Ursul, State Republic of Belarus Armed Forces Research Institute, Minsk
Modern trends in track running systems improvement and development

Ch. Zhdanovich, P. Radchenko, S. Yurko, Belarusian National Technical University, Minsk

Upgrading of radio instruments
using advanced information and
telecommunication technologies

E. Kolbasin, Belarusian State University of
Informatics and Radioelectronics, Minsk

System of common technical
specifications of armament and military
equipment simulators

A. Pilyushko, V. Piskun, Military Academy of the
Republic of Belarus, Minsk

Functional diagnostics and individual
forecasting of the aircraft electrical supply
system unit resource

A. Sheinikov, Y. Suhodolov, V. Vashkevich,
Military Academy of the Republic of Belarus, Minsk

Exploitation and control data in jet volley
fire system heavy caliber destruction

S. Stoma, I. Akulenko, Military Academy of the
Republic of Belarus, Minsk

13.10 – 13.30 Discussion, meeting summing up

May 26, 2011 (14.30 – 17.15)
Victoria Hotel Complex Congress hall

**SECTION 4. INFORMATION SUPPORT
AND COMPUTER-AIDED SYSTEMS
FOR FORCE AND WEAPON CONTROL,
INFORMATION SECURITY SYSTEMS.
MEANS OF THE RECONNAISSANCE
AND RESISTANCE TO THE HIGH-PRECISION
WEAPON SYSTEMS AND COMPLEXES**

Chairmen:

Vasily Buloichyk, Head of the department of the Military Academy of the Republic of Belarus, Doctor of Technical Sciences, Professor

Vitaly Malkin, Aviation department Deputy Chief on training and scientific work of the Military Academy of the Republic of Belarus, Doctor of Technical Sciences, Associate professor

14.30 – 17.00 Crossformat geographic information subsystem approach in military operations modeling system

V. Buloichyk, D. Skrypko, Military Academy of the Republic of Belarus, Minsk

Prospects of information and control systems based on the domestic «Fort-2» technology

S. Zaitsev, JSC «Belfortex»

V. Buloichyk, D. Skripko, Research Centre of the Military Academy of the Republic of Belarus, Minsk
Methodological aspects of the mixed high-precision arms counteraction automated control system

S. Kruglikov, Military Academy of the Republic of Belarus, Minsk

Automated decision-making and military operations planning «REDUT-S» system

V. Dragun, Military Academy of the Republic of Belarus, Minsk,

V. Kolodyazhny, A. Posudevsky,
TECHNOSOYUZPROJECT, Minsk

Automated anti-aircraft defense troops military training control system

K. Rai, O. Slipchuk, U. Alekseev, Military Academy of the Republic of Belarus, Minsk

Development and tests of the radio technical fighter defense equipment

O. Lapuka, S. Kalitin, V. Sapyanik, V. Morozov,
Military Academy of the Republic of Belarus, Minsk

Short range spy pilotless aircraft counteraction by using radio-electronic jamming means

V. Kulaga, A. Bryzinski, Military Academy of the Republic of Belarus, Minsk

Interconnection of optical and radio-technical methods with the purpose of pilotless aircraft and artificial earth satellites motion trajectory and parameters determining

V. Saechnikov, A. Spiridonov, S. Kotov,
Belarusian State University, Minsk

Information quality rating procedure

G. Horoshavina, A. Nasevich, Research Institute of the Armed Forces of the Republic of Belarus, Minsk

Genetic algorithm for automatic text information classification

D. Pekar, S. Tsikhanenka, Belarusian State University, Minsk

Simulation of computer electromagnetic radiation zone at the informatization stations

H. Kred, Belarusian State University of Informatics and Radioelectronics, Minsk

The speech segmentation module for speechlike signals synthesis systems

O. Zelmanski, A. Davydau, Belarusian State University of Informatics and Radioelectronics, Minsk

17.00 – 17.15 Discussion, meeting summing up

May 26, 2011 (14.30 – 17.15)
Victoria Hotel Complex Congress hall (fourth floor)

SECTION 5. PROTECTION FROM THE EMERGENCY SITUATIONS IN THE PEACE AND WAR TIME

Chairmen:

Aleksey Lupey, Chief of the Science and Innovation development department of the Ministry of Emergency situations

Aleksander Patskevich, Associate professor of the Criminal investigation department, Academy of the Ministry for Internal Affairs of the Republic of Belarus, Candidate of Law sciences, Associate professor

14.30 – 14.40 The concept of the nuclear power installations protection system

A. Kovalenko, A. Kuzmitsky, Military Academy of the Republic of Belarus, Minsk

Effectiveness of hand nosepieces operation when eliminating emergencies

S. Petuhovskiy, I. Karpenchuk, Research Institute of Fire Safety and Emergencies of the Ministry of Emergency Situations of the Republic of Belarus, Minsk

Evaluation of resources required in fire fighting at ammunition depot

Y. Dubina, D. Pegov, Research Institute of the Armed Forces of the Republic of Belarus, Minsk
Analysis of the man-caused risks in the bridge constructing and exploiting in the Republic of Belarus

L. Gulitskaya, N. Kustch, Belarusian National Technical University, Minsk

Evaluation of sequences of accidents (destructions) at nuclear and other harmful enterprises and of mass destruction weapon application in Armed forces of the Republic of Belarus

A. Hrebtovich, A. Kolmakov, Military Faculty of the Belarusian State University, Minsk

Effective mortise joint systems in oil-tank fire fighting

P. Mahahey, V. Yemelyanov, O. Chernevich, S. Malashenko, Research Institute of Fire Safety and Emergencies of the Ministry of Emergency Situations of the Republic of Belarus, Minsk

Fundamental directions in an ammunition storage protection

A. Busla, V. Tumar, Research Institute of the Armed Forces of the Republic of Belarus, Minsk
Practical video detection technologies application in fire safety improvement

S. Vorobyev, D. Yesipovich, Research Institute of Fire Safety and Emergencies of the Ministry for Emergency Situations of the Republic of Belarus, Minsk

L. Katkovskiy, Research Institute of Applied Physical Problems named after A. Sevchenko of the Belarusian State University, Minsk

Smoke detection based on background picture and local contrast analysis using video images

N. Brovko, R. Bogush, Polotsk State University, Novopolotsk

Possible employment of army pontoon elements in localizing and liquidating pipeline accidents consequences

A. Zaichenko, Belarusian State University of Transport, Gomel

Determination and visualization of destruction zones under strong poisonous substances emission and spill in changing meteorological environment

D. Kotov, V. Saechnikov, S. Kotov, Belarusian State University, Minsk

Fire-resisting and bio protective substance for wood and timber-based materials

A. Yatsukovich, Research Institute of Fire Safety and Emergencies of the Ministry of Emergency Situations of the Republic of Belarus, Minsk

I. Chayka, Scientific and Practical Centre of Brest regional department of the Ministry of Emergency Situations of the Republic of Belarus, Brest

17.00 – 17.15 Discussion, meeting summing up

May 26 (17.20 – 18.00)
Victoria Hotel Complex Congress hall

**SUMMING UP AND CLOSING
OF THE CONFERENCE**

Проезд: автобусами № 1, 29, 44, 69, 73, 91, 136 и маршрутными такси № 1051, 1055, 1056, 1073, 1086, 1186 до остановки «Комсомольское озеро»

Место проведения:
Конгресс-холл гостиничного комплекса «Виктория»
(пр. Победителей, 59, г.Минск, Республика Беларусь)



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