

## Contents

Issue 5, 2017

### A SCIENTIST'S VIEWPOINT

Anastas Gerdzhikov: Academic Speech

### SCIENTIFIC RESEARCH

[Georgi Petrunov: Trafficking in Persons – a Contemporary Form of Slavery](#)

Veliana Hristova: Nanosized tungsten containing zeolites with unique characteristics and properties

### SCIENCE IN FAVOR OF SOCIETY

[Andon Kossev: 50 Years since the Establishment of the Institute of Biophysics and Biomedical Engineering at BAS](#)

### PROBLEMS OF ECOLOGY

[Valko Biserkov: New Technological Possibilities for Ecosystem Analyses in Bulgaria](#)

[Margarita Topashka-Ancheva: Exogenous Factors and Carcinogenesis](#)

### SCIENTIFIC CONFERENCES AT USB – VELIKO TARNOVO

Valentina Stoyanova: Creative events at the Home of Scientists in Veliko Tarnovo

[Petko St. Petkov: Was the Russian-Turkish War \(1877–1878\) a Liberating one?](#)

[Ivan Nurkov: The Weapons of Hristo Botev's Detachment in 1876](#)

[Dobrinka Zlateva: Economics and the Human Being in it in the 21<sup>st</sup> Century](#)

### PROBLEMS OF EDUCATION

[Assen Kyuldjiev: Has Bulgarian Education Entered the 21st Century?](#)

### HEALTH AND MEDICINE

[Boris Matev, Vihar Kovachev: Carpal Tunnel Syndrome – a Third Age Illness?](#)

### PERSONALITIES

[Mariya Popova, Svetlana Pitkevich: Eminent Representatives of Bulgarian Linguistic Studies \(First Half of the 20<sup>th</sup> Century\)](#)

Tsvetanka Lozanova: 95th Anniversary of the Birth of Prof. Vitali Tadjer, D. Sc.

[Veneta Kotseva: 230th Anniversary of the Birth of Guillaume-Henri Wilhelm Henrich Dufour](#)

### THE FLOOR TO THE YOUNG PEOPLE

[Desislava Yanganova: Development of Cloud Technologies and their Implementation in Business in Bulgaria](#)

Maria Garalova: The Walls and Bridges in Science

### STATEMENT

[Hristo Beloev et al.: A Programm for Adapting the Educational System to the Digital Generation](#)

Lazarin Lazarov: The Bulgarian Scientific Liberalism

### SCIENTIFIC EVENTS AT USB

Meeting of the Governing Board of USB with the Varna Universities Leadership  
Ivan Pachev, Atanas Kirilov, Dimitar Dimitrov: A Scientific Forum with International  
Participation in Pleven

BOOK REVIEW

**Contents**  
Issue 5, 2017

**SCIENTIFIC RESEARCH**

Georgi Petrunov: Trafficking in Persons – a Contemporary Form of Slavery

Trafficking in human beings – contemporary form of slavery

Georgi Petrunov

Abstract

This paper explores the crime „trafficking in human beings“ which has millions of victims all over the world. Eastern Europe, in particular Bulgaria, are especially affected by the problem. In the text a comparison of the main characteristics of modern and old slavery are presented. In regard to increased migration flows in Europe and in the world the differences and similarities between human trafficking and human smuggling are discussed. The main models for counteraction of trafficking of human beings are presented. It is stressed the need for more scientific studies which to build the basis for development of knowledge-based policies.

## SCIENCE IN FAVOR OF SOCIETY

Andon Kossev: 50 Years since the Establishment of the Institute of Biophysics and Biomedical Engineering at BAS

50 Years since the Establishment of  
the Institute of Biophysics and Biomedical Engineering at BAS

Andon Kossev

Abstract

The Central Laboratory of Biophysics was established in 1967, and in 1994 it was transformed into the Institute of Biophysics. In 2010, the Institute of Biophysics merged with the Central Laboratory of Biomedical Engineering, established in 1994, thus forming the Institute of Biophysics and Biomedical Engineering.

For its 50<sup>th</sup> anniversary and its contributions to the development of biophysics and biomedical engineering in Bulgaria and worldwide, the Institute was awarded by the Executive Council of the Bulgarian Academy of Sciences with an honorary plaque „Marin Drinov“.

The article presents the main directions of research at the Institute as well as its most important achievements in the fields of fundamental research and applied research.

## PROBLEMS OF ECOLOGY

Valko Biserkov: New Technological Possibilities for Ecosystem Analyses in Bulgaria

New Technological Capabilities for Ecosystem Analyses in Bulgaria

Valko Biserkov

Abstract

The main prerequisites for a new level in ecosystem analyses are already available today:

1) Free to use, up-to-date multispectral satellite data 2) purposefully gathered multispectral data from quadcopters with on-board sensors, 3) software for processing and analyses and 4) affordable computing power. This combination enables informed management decisions.

The challenge facing our scientific community is to lay the foundations for a comprehensive remote monitoring of target ecosystems, natural habitats, important species and key abiotic environmental parameters.

The use of some these new capabilities is demonstrated with examples from the work performed by „Conservation Biology“, research group IBER-BAS.

The Exogenous Factors and Carcinogenesis

Margarita Topashka-Ancheva

Abstract

Evaluation and control of the factors of the living environment with potentially harmful effects on human health, accompanied prevention of the „Eco-diseases“. People are exposed to various environmental factors that can come into contact with the human body through air, water and food. So every year the environment and health science have increasingly intersections.

The aim of this paper is to present the role of the some exogenous factors in the tumorigenic processes.

The different rates of incidence of malignant tumors in populations from different parts of the world suggests that environmental factors and lifestyle not less than internal factors of the organism determined the risk of tumorigenic processes.

An important part of the exogenous factors of carcinogenesis has anthropogenic origin and their share is increasing. One of the most worrying problems for example is the widespread use of pesticides in agriculture and forestry. Environmental pollution by them attains global significance. Many of these substances have a direct carcinogenic effect or convert into nitroso compounds.

The majority of such factors identified as human carcinogens, have appeared in the environment in the past 100 years. The statistical data showing that cancer incidence in the human populations is higher in cities compared to smaller towns and villages are explained with the role of anthropogenic pollution of the living environment. This accounts the fact that some tribes living in the high plateaus of the Himalayas, as close as possible to natural conditions, not know cancer. Very important are living and food habits of the population, leading to the emergence of one or other malignant neoplasms.

**Key words:** human health, carcinogenesis.

## SCIENTIFIC CONFERENCES AT USB – VELIKO TARNOVO

Petko St. Petkov: Was the Russian-Turkish War (1877–1878) a Liberating one?

Was the Russian-Turkish War (1877–1878) a Liberating one?

Petko St. Petkov

Abstract

Based on a brief but meaningful historical account of the course and outcomes of the Russian-Turkish war of 1877-1878, the article discusses the question of whether it can be characterized as liberating. The author gives a positive answer only as far as the result is the restoration of the Bulgarian state in the two formations with autonomy – the Principality of Bulgaria and East Rumelia. From the point of view of not collective but of personal development and change as a result of the war, the definition of „liberating“ must be considered and judged individually. The creation of a nation state is important, but not the only condition, that one wants to be free and personally free.

## Ivan Nurkov: The Weapons of Hristo Botev's Detachment in 1876

### The Weapons of Hristo Botev's Detachment in 1876

Ivan Nurkov

#### Abstract

The detachment of Hristo Botev or 1876 is significant glaring act of the Bulgarian national revolution 1862–1878. It is leaded from a great Bulgarian poet and revolutionary. The detachment covers the distance from the Danube to the Vratsa Balkan in continuous fighting which wined. One factor for this is weapon that participants are armed – Belgian capsule guns Chassepot model 1866, cartridge gun Winchester model 1866, revolvers Gasser model 1870, 1874 and Lefauchaux.

**Keywords:** Bulgarian national revolution 1862–1878, detachment of leader Hristo Botev, genius poet and revolutionary, firearms of rebels – models, supplying and use.

Economics and the Human Being in it in the 21<sup>st</sup> Century

Dobrinka Zlateva

Abstract

The article uses the epistemological approach to substantiate the view that the science of Economics (perceived as General Economic Theory) is a science. The topic of study is Economics and reality and Economics and truth. The article shares the view that Economics as an object of study is a reflection of reality. The concept is upheld that the boundary between truth and untruth in economic research is not a criterion for its scientific nature. There is no objective truth in Economics; and truth, perceived in the same way as in natural sciences, cannot be determined. Economics cannot be assessed absolutely and objectively.

Keywords: science, economics, epistemology, reality, scientific truth.

## PROBLEMS OF EDUCATION

Assen Kyuldjiev: Has Bulgarian Education Entered the 21st Century?

Has Bulgarian Education Entered the 21st Century?

Assen Kyuldjiev

Abstract

The analysis of the recent *PISA* assessment of science performance reveals that Bulgarian secondary education is focused on imparting content knowledge and fails in developing the skills expected. The scores obtained for the competency '*evaluate and design scientific enquiry*' are lagging far behind those for the rest and, even more alarmingly, Bulgaria is at the bottom of the '*problem solving*' abilities ranking. A deep reform of the system is urgently needed, as well as efforts to bridge the gap between the local educational mindsets and those behind *PISA* surveys. Unfortunately, it seems that the capacity and determination to conduct these are lacking at the moment. Brief suggestions about what could be done in the meantime are provided at the end of the article.

## HEALTH AND MEDICINE

Boris Matev, Vihar Kovachev: Carpal Tunnel Syndrome – a Third Age Illness?

Carpal Tunnel Syndrome – third Age Illness?

Boris Matev, Vihar Kovachev

Abstract

Carpal tunnel syndrome is a very common illness that provokes us to write this message. This suffering is a domain of neurology and orthopedics. It is a compression of the median nerve (nervus medianus) in the area of the wrist and palm. Here the median nerve passes through the so-called carpal channel and is injured as a result of compression for one reason or another.

The purpose of this report is to review age of the people suffered of carpal tunnel syndrome. Why the so called third age illness is getting younger. What's the reason younger women to suffered.

**Key words:** carpal tunnel syndrome, Third age illness, modern lifestyle

## PERSONALITIES

### Mariya Popova, Svetlana Pitkevich: Eminent Representatives of Bulgarian Linguistic Studies (First Half of the 20<sup>th</sup> Century)

Eminent Representatives of Bulgarian Linguistic Studies (First Half of 20<sup>th</sup> Century)

Mariya Popova, Svetlana Pitkevich

#### Abstract

The goal of this article is to present the intellectual inheritance of some of the most eminent Bulgarian linguists (born before 1930), i.e. Acad. St. Mladenov, Corr. Member K. Mirchev, Acad. V. Georgiev, Corr. Member L. Andreychin. They are all representatives of the historical-comparative period in the development of Bulgarian, Slavic and Indo-European studies and have created both the image of contemporary Bulgarian linguistics and the Institute of Bulgarian Language.

Veneta Kotseva: 230th Anniversary of the Birth of Guillaume-Henri Wilhelm Henrich Dufour

230th Anniversary of the Birth of Guillaume-Henri Wilhelm Henrich Dufour

Veneta Kotseva

Abstract

Guillaume-Henri Dufour (15.09.1787 – 14.07.1875) was an officer from Swiss Army, military engineer; topographer, bridge constructor. He starts army service for Napoleon I. He established Swiss Federal Topographic Administration and was its first president from 1838 to 1865. The highest point of Switzerland was named peak Dufour in its honor. He was a member of Swiss charity organization „Genève Union for Support of the Public Welfare“. On February 1863 Dufour was included in the membership of „International Committee for Relief of Casualties“ constituted from 5 members. This organization is known later on as International Committee of the Red Cross.

## THE FLOOR TO THE YOUNG PEOPLE

Desislava Yanganova: Development of Cloud Technologies and their Implementation in Business in Bulgaria

Development of Cloud Technologies in Bulgaria

Desislava Yanganova

Abstract

In this study are considered cloud services and technologies, their main features and options that provide both the consumer and network operators who provide them. Cloud services and technologies seamlessly with rapidly enter everyday life. They are an inevitable part of life people and from this perspective the purpose of the study is to investigate and analyze developments Cloud services in Bulgaria for the period 2014 – 2016 year.

**Key words:** Cloud services, cloud systems, information services, information platforms.

## STATEMENT

Hristo Beloev et al.: A Programm for Adapting the Educational System to the Digital Generation

A Programm for Adapting the Educational System to the Digital Generation

Hristo Beloev, Angel Smrikarov, Tzvetomir Vassilev, Stoyanka Smrikarova, Anelia Ivanova, Galina Ivanova, Vanya Stoikova

### Abstract

The generation of the seven screens: television, desktop computer, laptop, tablet, phablet, smartphone and smart watch, cannot and should not be taught in the same way as their parents. This generation is used to receiving multimedia information from the Internet via the above listed devices, most of which are interactive.

This paper presents a concept, developed at the University of Ruse, Bulgaria, whose main objective is to adapt the educational system to the digital generation through the introduction and effective utilization of innovative educational technologies and didactic models in the teachers' activities. This will allow EVERYONE to study at ANYTIME and ANYWHERE with the help of ANY teacher on ANY device.

The proposed concept is compared to the digital education strategy of the University of Oxford.