



IV INTERNATIONAL SCIENTIFIC CONFERENCE
“HIGH TECHNOLOGIES . BUSINESS . SOCIETY 2019”
11-14.03.2019, winter resort „BOROVETS”, BULGARIA

ORGANIZER

SCIENTIFIC-TECHNICAL UNION OF MECHANICAL ENGINEERING BULGARIA
“INDUSTRY-4.0”

CO-ORGANIZERS

Federation of the Scientific-Technical Unions in Bulgaria
Bulgarian Academy of Sciences
Technical University Sofia
Sofia University St. Kliment Ohridski
University of National and World Economy Sofia
Technical University Varna
Technical University Gabrovo
Ruse University „Angel Kanchev”
Todor Kableshkov University of Transport Sofia
University of Chemical Technology and Metallurgy Sofia
University of Mining and Geology "St. Ivan Rilski" Sofia
Plovdiv University “Paisii Hilendarski”
St Cyril and St Methodius University of Veliko Turnovo
D. A. Tsenov Academy of Economics - Svishtov
Knowledge Society Bulgaria
Society of Polish Mechanical Engineers and Technicians (SIMP)
Association of Mechanical Engineers - Slovakia
Association of Mechanical Engineers - Czech Republic
Union of Metallurgists – Macedonia
Higher Education Academy of Sciences of Ukraine
Union of Mechanical Engineers - Ukraine
Scientific – Technical Association - China

HONORARY COMMITTEE

Acad. Yulian Revalski – President of the Bulgarian Academy of Sciences
Prof. D.Sc. Ivan Yachev – President of the Federation of Scientific Technical Unions in Bulgaria
Prof. D.Sc. Georgi Mihov – Rector of the Technical University Sofia
Prof.D.Sc. Anastas Gerdjikov - Rector of Sofia University St. Kliment Ohridski
Prof.D.Sc. Stati Statev - Rector of University of National and World Economy Sofia
Prof. Dr. Eng. Rosen Vasilev – Rector of the Technical University Varna
Prof. D.Sc. Hristo Beloev – Rector of the University “Angel Kanchev” Ruse
Prof. Dr. Raycho Ilarionov – Rector of the Technical University Gabrovo
Prof. Dr. Daniela Todorova – Rector of the “Todor Kableshkov” University of Transport Sofia
Prof. Dr. Zapryan Kozludzov - Rector of the Plovdiv University “Paisii Hilendarski”
Prof.Dr. Hristo Bondzholov - Rector of the St Cyril and St Methodius University of Veliko Turnovo
Prof. Dr. Ivan Marchevski - Rector of the D. A. Tsenov Academy of Economics - Svishtov
Prof. Dr. Lyuben Totev - Rector of the University of Mining and Geology "St. Ivan Rilski" Sofia
Prof. Dr. Mitko Georgiev – Rector of the University of Chemical Technology and Metallurgy Sofia
Prof. D.Sc. Marian Tolnay - President of the Association of Mechanical Engineers Slovakia
Prof. D.Sc. Sveto Cvetkovski - President of the Union of Metallurgists of Macedonia
Dr. Eng. Piotr Janicki – President of the Association of Polish Mechanical Engineers and Technicians
Mr. Wei Yu – Vice Chair of the Wuxi Association for Science & Technology China

INTERNATIONAL PROGRAM COMMITTEE

Chairman: Prof. DHC Georgi Popov

Members:

Acad. Ivan Vedyakov	RU
Acad. Mincho Hadzhiiski	BG
Acad. Jemal Katzitadze	GE
Acad. Yuriy Kuznetsov	UA
Prof. Aleksander Mihaylov	UA
Prof. Aleksander Subic	AU
Prof. Anatoliy Kostin	RU
Prof. Adel Mahmud	IQ
Prof. Alimazighi Zaia	DZ
Prof. Andrzej Golabczak	PL
Prof. Gennady Bagluk	UA
Prof. Detlef Redlich	DE
Prof. Dilbar Aslanova	UZ
Prof. Dimitar Yonchev	BG
Prof. Dipten Misra	IN
Prof. Dmitry Kaputkin	RU
Prof. Eugene Eremin	RU
Prof. Ernest Nazarian	AM
Prof. Esam Husein	KW
Prof. Franz Wotava	AT
Prof. Ivan Novy	CZ
Prof. Ivo Malakov	BG
Prof. Idilia Bachkova	BG
Prof. Krasimir Marchev	USA
Prof. Khalil Khalili	IR
Prof. Leon Kukielka	PL
Prof. Lyudmila Ryabicheva	UA
Prof. Marat Ibatov	KZ
Prof. Milan Vukcevic	ME
Prof. Mitko Dimitrov	BG

Vice Chairman: Prof. D.Sc. Dimitar Stavrev

Members:

Acad. Kavidolla Sarekenov	KZ
Acad. Vasil Sgurev	BG
Cor.member Svetozar Margenov	BG
Prof. Miho Mihov	BG
Prof. Mladen Velev	BG
Prof. Mohamed El Mansori	FR
Prof. Movlazade Vagif Zahid	AZ
Prof. Oana Dodun	RO
Prof. Ognyan Andreev	BG
Prof. Peeter Burk	EE
Prof. Peter Markovic	SK
Prof. Remigijus Venckus	LT
Prof. Renato Goulart	BR
Prof. Sasho Guergov	BG
Prof. Scepan Miljanic	RS
Prof. Seiji Katayama	JP
Prof. Sergej Dobatkin	RU
Prof. Sergej Nikulin	RU
Prof. Shaban Buza	KO
Prof. Stefan Dimov	UK
Prof. Svetlana Gubenko	UA
Prof. Svetan Ratchev	UK
Prof. Tale Geramitchioski	MK
Prof. Teimuraz Kochadze	GE
Prof. Vadim Kovtun	BY
Prof. Viktor Vaganov	RU
Prof. Vjeran Stahonja	HR
Prof. Volodimir Ilchenko	UA
Prof. William Singhose	USA
Prof. Yasar Pancar	TR

NATIONAL ORGANIZING COMMITTEE

Chairman:

Prof. D.Sc. Kiril Angelov

Members:

Prof. Galina Nikolcheva
Prof. Lyubomir Dimitrov
Prof. Nikolai Diulgerov
Prof. Todor Todorov
Prof. Valyo Nikolov
Assoc. Prof. Galina Zamfirova
Assoc. Prof. Dimitar Karaivanov
Assoc. Prof. Emil Trifonov

Vice Chairmen:

Prof. Dr. Eng. Ivan Kralov
Dr. Eng. Raycho Georgiev

Members:

Assoc. Prof. Georgi Pandev
Assoc. Prof. Hristo Karamishev
Assoc. Prof. Miroslav Denchev
Assoc. Prof. Pepo Yordanov
Assoc. Prof. Tsanka Dikova
Eng. Valkan Diyanov
Eng. Radoslav Daskalov
Eng. Oleg Mihaylov

INVITATION

Dear colleagues,

The International Scientific Conference “**HIGH TECHNOLOGIES. BUSINESS. SOCIETY 2019**” will take place from 11 to 14 March, 2019 at the Borovets winter resort, Bulgaria, as a broad-spectrum scientific and technical event, including three major thematic fields. These fields are affiliated with each other and disclose the essence of the high technologies’ coming and development, and the creation of a new society as well.

We invite the scientists and the researchers to present the results of their research works before the academic society and the industry representatives and to publish them in the international scientific magazines, issued by the Scientific-Technical Union of Mechanical Engineering.

We invite the companies to introduce their high-tech products and services, offered on the market, by presentations at the conference sessions and advertisements in the conference documents. We do believe, that the International Scientific Conference “**HIGH TECHNOLOGIES. BUSINESS. SOCIETY 2019**” will become a place for meetings and discussions of scientists of all scientific fields, who are overcome by the challenge of transforming the innovation ideas into products and services, which create development and jobs, and establish a fair, ecological and high-tech society.

The conference program will give you the chance to find new friends and ideas, to relax, to amuse, and to feel the charm of the splendid winter in the mountains.

Prof. D.Sc. DHC Georgi Popov,
President of Bulgarian Scientific-Technical Union of Mechanical Engineering,
Chairman of the International Program Committee

THEMATIC FIELDS

1. HIGH TECHNOLOGIES

Intellectual industrial technologies. Advanced machine-building technologies. Laser, plasma, ultrasonic, radiation and optic technologies. Additive technologies and additive production. Digital production of optimal products of metal, polymers, composites and ceramics.

Virtual engineering technologies and simulations. Information and computer technologies. Robotics, artificial intelligence, radio-electronics, instrument engineering. Communication and navigation engineering technologies. Mathematical modelling and supercomputer engineering.

Materials, structures, systems - SMART technologies. Powder and plasma metallurgy, rigid-body physics, rigid-body mechanics and rigid-body chemistry. Composition materials and coatings, strengthening technologies. Nanotechnologies, nanoelectronics, nanometrology, nano-equipment and nanoindustry.

Ecologically clean technologies. Waste treatment. Solar and hydrogen power engineering. Energy recuperation.

Research, design, use and maintenance of agricultural machinery. Sustainable development and environmental aspects of agricultural production. Mechanisation and Electrification of Agriculture.

Geology and geophysics. Mining and processing of mineral raw materials. Mechanization, electrification and automation in mines.

Research and improving the operational performance of vehicles. Efficiency, safety and sustainable transport. Electric vehicles and eco mobility. Diagnostics and repair of transport vehicles.

Creation of new and advanced design and process management in the oil refining and petrochemical, chemical, metallurgical, plastic and rubber, paper, textile, leather, pharmaceutical and others industries. Creation of new highly effective materials for the technique and household by using organic and inorganic technologies.

Education - the role of technological thinking to the development of humanity. Language Technology.

2. BUSINESS

Business strategies and management strategies. Industrial management. Engineering and reengineering. Project management and risk management. Technology entrepreneurship and business intelligence. Organizational behavior and leadership.

Market, competitiveness, finances. System principles of competitiveness management in the high-tech branch.

Innovation activity and innovation development. Innovation management functions. Methods and forms. Planning and forecasting. Innovation management theory and practice. Conflict management in innovation processes.

Innovation entrepreneurship. Innovation projects. Investment management in innovation processes. Market realization of innovation products. Intellectual property. Education. Innovation games. Upskilling models. The role of human factor in innovation activities.

Nonlinear processes, system analysis and applied synergetics. Synergetic, geopolitical and geo-economic analysis of the problems of targeted development of competitiveness and finances.

3. SOCIETY

Economic freedom. Civil society and democracy. Information society. Philosophy of information. Infrastructure of the knowledge economy. Effective government authorities, high-quality education, effective fundamental science, high-quality people capital, production of knowledge and high technologies.

Financial, political, legislative, social and international aspects of development of higher and secondary, general and technical education, fundamental and applied researches, high technologies and high-tech industry.

Innovation, credit and tax policy of the government as a determining factor for development of economy, finances and industry. The role of the legislative, the executive and the legal power, the public and the private sector of industry, business, banks and stock exchanges in the development and protection of the results of fundamental and applied researches, high technologies and high-tech industry.

Education, fundamental and applied researches, high technologies and high-tech industry as factors for national security, people's quality of life and protection of their rights. Public security, corporate and individual security. Security systems.

Ergonomics and design. Parenting of aesthetics and culture.

The official language of the International Scientific Conference “HIGH TECHNOLOGIES. BUSINESS. SOCIETY 2019” is English.

CALL FOR PAPERS

Scientists from all over the world are kindly invited to present the results of their researches in the plenary, section and poster sessions.

Companies, offering machines, materials, technologies and services on the market, are also invited to present practical results in accordance with the Conference topics in the form of company presentations and advertisement at the Conference halls and in the Conference printed issues.

Paper's abstract up to 200-350 words, **written in English**, in .doc or .docx format, with up to 10 keywords, authors' names and titles, occupation and e-mail address, together with the Author's Response (**Form A**) or the **online registration** has to be sent to the Organizing Committee not later than **15.12.2018**.

The Author's response Form A will be registered in the section **“Received Abstracts and Papers”** of the Conference web-site and a registration number will be given the paper. The Organizing Committee recommended the authors use this registration number in the further correspondence and if the files sent also begin with this number and the phrase **“ht19”**. For example: **131_Spenser_ht19.doc**.

Authors of the approved papers will be informed about the Program Committee's decision not later than **20.12.2018**.

Only papers formatted in accordance with the **graphical** and **text** instructions, accepted peer-reviewed and presented at the oral and poster Conference sections will be published.

The full text papers up to 4 pages, written in English, must be sent not later than **31.01.2019** by email, together with the Application form for participation (**Form B**) or **online registration**. The name of the paper's file has to consist of the registration number, author's name and the phrase **“ht19”**. For example: **“131_Spenser_ht19.doc”**

If the authors cannot participate personally in the Conference, they can participate in the poster session. In that case the author should pay only the publication fee and the paper will be published in the Conference journals. The poster papers have to be formatted according to the poster **graphical** and **text** instructions. They should be sent by e-mail until **01.03.2019** so the papers could be presented at the Conference. The Organizing Committee takes the obligation to print the poster and to include it in the poster session.

All instructions can be found on the Conference website: <http://www.hightechsociety.eu/> An example of the title page can be downloaded there, so the authors could write easy the whole paper according to the requirements.

PUBLICATIONS

All papers included in the congress scientific program will be published as follows:

- All reports submitted on the Bulgarian, Russian, English or German: in a separate volume of „International Scientific Conference High Technologies. Business. Society - ISSN 2535-0005 (Print), ISSN 2535-0013 (Online)“ for each thematic session;
- CD containing all the papers;
- Papers written in English: in the separate issue of the International scientific journals according to the themes of the reports (www.stumejournals.com):
- "[Machines. Technologies. Materials](#)" (Print ISSN 1313-0226, Web ISSN 1314-507X)
- "[Innovations](#)" (Print ISSN 1314-8907, Web ISSN 2534-8469)
- "[Materials Science. Non-Equilibrium Phase Transformations](#)" (Print ISSN 2367-749X, Web ISSN 2534-8477)
- "[Science.Business.Society](#)" (Print ISSN 1313-0226, Web ISSN 2534-8485)
- "[Industry - 4.0](#)" (Print ISSN 2534-8582, Web ISSN 2534-8582)

FEES AND PAYMENTS

TYPE OF FEE	EURO	
	Up to 31.01.2019	After 31.01.2019
1. Conference fees: 1.1. Participation Fee only for participation in The International Scientific Conference " HIGH TECHNOLOGIES. BUSINESS. SOCIETY 2019 " Includes: Publishing in the issue of international periodical magazine „International Scientific Conference High Technologies. Business. Society - ISSN 2535-0005 (Print), ISSN 2535-0013 (Online)“ and in international scientific journals according to the themes of the reports, Welcome cocktail, Conference materials, coffee breaks, CD with all conference contributions. 1.2. Participation Fee for persons participating in the winter session of the Congress " MTM 2019 " Includes: Publishing in the issue of international periodical magazine „International Scientific Conference High Technologies. Business. Society - ISSN 2535-0005 (Print), ISSN 2535-0013 (Online)“ and in international scientific journals according to the themes of the reports, Welcome cocktail, Conference materials, coffee breaks, CD with all conference contributions. 1.3. Fee for second and third paper - only publication fee	150 / 100*	200 / 150*
2. Accompanying person (including co-authors) Includes: Welcome cocktail, Conference materials, coffee breaks	100	150
3. Publication fee (For authors who cannot participate personally in the Conference) Includes: Published in the issue of International periodical magazine „International Scientific Conference High Technologies. Business. Society“ - ISSN 2535-0005 (Print), ISSN 2535-0013 (Online)“ and in International scientific journals according to the themes of the reports, CD with all papers and printing of the poster paper in A1 format.	90	130
4. Additional payments: 4.1. For receiving the printed issue of the journal at the Conference (volume with the papers). 4.2. For receiving the printed issue of the journal by post (volume with the papers).	20 30	20 30

* **Reduced fee for Young scientists in 35 years.**

OVERNIGHT STAYS

Hotel "ELA"*** - BOROVELTS

Price per night: single room 35 Euro, double room - 40 Euro

Hotel "RILA"*** - SOFIA

Price per night: single room 40 Euro, double room - 50 Euro

PAYMENTS

Bank transfer to the account of the Scientific and Technical Union of Mechanical Engineering at ProCredit Bank:

IBAN: BG53PRCB 9230 1449 8985 01, BIC: PRCBBSF

Beneficiary: NTS mashinostroene Industry-4.0.

Please write in the payment document "HT'18" and your registration number which you may find here: <http://www.hightechsociety.eu> in the section "[Received abstracts and papers](#)"

In cash at the office of the Scientific and Technical Union of Mechanical Engineering: 1000 Sofia, 108 "G. S. Rakovski" str. Office №411.

All bank charges related to the transfer are borne by the participant.

GENERAL INFORMATION

THE VENUE

Hotel Ela

Registration, opening, plenary and sectional sessions: **Hotel Ela (Fir-tree)****

Address: Samokov, Borovets resort, Hotel Ela

ACCOMMODATION

Hotel Ela (Fir-tree) at the Borovets winter resort**

The Borovets winter resort is located at 1350 m above the sea level on the northern slopes of the Rila mountain, 70 km southeasterly from Sofia and 10 km from the town of Samokov. The climate of the resort is temperate, the winter is mild with loads of snow. The average temperature in January – the coldest month is minus 4,8 C°. Usually the ski season starts in the middle of December and closes in April.

Hotel Ela is located in the ideal centre of the Borovets winter resort. The hotel is situated close to the gondola lift station for Yastrebets and the Musala peak (2925 m) and 300 m from the drag lifts.

Visual information about the resort "Borovets" can be found at:

<https://www.youtube.com/watch?v=WUMNYPQ5W1Y>

<https://www.youtube.com/watch?v=GjRGTnSNEA0>

Address: Samokov, Borovets resort, Hotel Ela

In case you travel by car, you can use the GPS coordinates of Hotel Ela:

GPS - 42.26757 , 23.60381

City Transport to Hotel Ela

From Sofia Airport by underground to Joliot-Curie station. The South coach station is located 50 m in the south of the underground station, under the bridge of Dragan Tsankov boulevard. The buses for Samokov depart every 30 minutes.

The travel duration is 1 hour approximately. Ticket price - 5.00 leva.

Minibuses depart every 30 minutes to the Borovets resort at the Samokov coach station, sector No.2. The travel duration is 10-12 minutes approximately. Ticket price - 1,30 leva. First bus departs for Borovets resort at 7.00 a.m., and the last one at 7.00 p.m. Taxi fare from Samokov coach station to Hotel Ela: 10-12 leva.

Hotel Ela is located 20 m from the last station, in reverse direction of arrival.

Hotel Rila – City of Sofia

A lodging for the night in Hotel Rila, Sofia is reserved for conference participants, who would like to sightsee Sofia, or the transport connections do not allow an immediate departure to the Borovets resort. The Hotel Rila is located at the exact centre of Sofia, very close to the Serdika underground station.

From Sofia Airport by underground to Serdika station. At 150 meters southeast is located Hotel Rila.

Address: Sofia, 6, Tsar Kaloyan St., Hotel Rila.

TIME TABLE

11.03.2019 (Monday) Registration of the participants.

12.03.2019 (Tuesday) Opening ceremony 10:00. Plenary session. Conference sessions. Poster session. Welcome party.

13.03.2019 (Wednesday) 09:00 Conference sessions. Closing of the Conference.

14.03.2019 (Thursday) Departure of the participants.

REGISTRATION

In the lobby of the Hotel ELA - Borovets
11.03.2019 from **16:00** to **20:00** and
12.03.2019 from **08:00** to **10:00**.

ENTRY TO BULGARIA

Visitors from the European Union coming to Bulgaria need an identity document.

Visitors from other countries require an entry visa.

Visitors are recommended to contact the Bulgarian Embassy (you can find them on: <http://www.mfa.bg/>) or Consulate in their own country for information on visa requirements. If an official letter of invitation is requested, please contact the Congress Secretariat in due time (before the registration deadline).

TIME

Bulgaria is in the Eastern European Time Zone (GMT+2)

WEATHER

Average air temperature in Borovets in the period 11 - 14 March, 2018 – minus 3,4 °C.

Snow cover out on the slopes in Borovets during the period: on 11 and 14.03.2018 - 180 cm

Check the weather in real time here: <http://weather.bg/indexen.php>

CURRENCY

The official currency is the lev (plural: leva).

1 euro = 1.95583 lev

All major credit cards (e.g. VISA, MasterCard, Eurocard) are usually accepted in Bulgaria

EMERGENCY SERVICES

Uniform European telephone number for emergency situations: **112**

DEADLINES

The Abstract of the paper and Author's Response Form "A" or online registration should be sent up to	15.12.2018
Confirmation of the abstract approval	20.12.2018
The Full text of the paper(s) and Participation Form "B" or online registration should be sent up to	31.01.2019
Payment of the Conference fees	31.01.2019
Announcement of the Conference program on the web page: http://www.hightechsociety.eu/	01.03.2019
The Organizing Committee will receive posters up to	01.03.2019
Registration of the participants 16:00 - 20:00	11.03.2019
08:00 - 10:00	12.03.2019
Opening of the Conference - 10:00	12.03.2019
Departure of the participants	14.03.2019

CONFERENCE SECRETARIATE

Scientific-Technical Union of Mechanical Engineering

108 Rakovski str., 1000 Sofia

tel./fax (+359 2) 986 22 40, tel. (+359 2) 987 72 90

Mobile: +359 888003582

office@hightechsociety.eu , <http://www.hightechsociety.eu/>