



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
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 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
 University of Architecture, Civil Engineering and Geodesy, Sofia
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 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, Ukraine
 Union of Mechanical Engineers, Ukraine
 Scientific-Technical Association, China

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Prof. Lappalainen Kauko	University of Oulo	FI
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Prof. Majid Zamani	Technical University of Munich	DE
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NATIONAL ORGANIZING COMMITTEE

Chairman: Prof. Dr. Ivan Kralov	Vice chair: Dr. Rajcho Georgiev
Members:	
Prof. Dimitar Damjanov	Prof. Emil Trifonov
Prof. Dimitar Karaivanov	Prof. Georgi Pandev
Prof. Ljubomir Dimitrov	Prof. Hristo Karamishev
Prof. Nikolay Tonchev	Prof. Pepo Yordanov
Prof. Marija Evtimova	Prof. Tzanka Dikova

INVITATION

Dear colleagues,

Humanity is facing before the biggest challenge you of its existence. It proposed a strategy "**INDUSTRY 4.0**", in which the physical world merges with the virtual. Information technology, telecommunications and manufacturing are united when the means of production are becoming more independent. It is still impossible to say how it will look smart factories in the future. The scientists from around the world, from all scientific fields are called to seek an answer to the many challenges of "**INDUSTRY 4.0**".

The first International Conference in Bulgaria "**INDUSTRY 4.0**" will be held from 12 to 15 December 2016 in the resort "Borovets".

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 "**INDUSTRY 4.0**" 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. Georgi Popov, DHC
President of Bulgarian Scientific-Technical Union of Mechanical Engineering,
Co-Chairman of the International Program Committee

THEMATIC FIELDS

TECHNOLOGICAL PILLARS OF „INDUSTRY 4.0”

Big Data and Analytics
Autonomous Robots
Simulation, Modeling and Virtualization
Horizontal and Vertical System Integration
Industrial Internet of Things (Cyber Physical Systems)
Cybersecurity
Clouds, Cloud Computing
Additive Manufacturing/ 3D Printing
Augmented Reality/ Advanced Human-machine Interfaces

DOMINANT TECHNOLOGIES OF “INDUSTRY 4.0”

Industrial Internet
Network Communications
Intelligent Data Acquisition, Storage and Distribution
Semantic Technologies

Computer Aided Design
Product Development & Engineering
Machine & Material Development
IIoT Platforms - (PLM) Systems, Manufacturing Execution Systems (MES)
Mobile Devices and Mobile Computing
Smart Sensors, Machines and Factories
Embedded Systems
Autonomous Devices and Systems
Digital Manufacturing & Design
Predictive and Intelligent Maintenance Systems
Location Detection
Remote Diagnostic, Control and Maintenance
Artificial Intelligence & Intelligent Systems
Learning Machines/Machine-machine Communication
Open Standards and Systems

BUSINESS & "INDUSTRY 4.0"

Digital Business Models, Product and Service Portfolio
Vertical Value-chain Integration
Horizontal Value-chain Integration
Interoperability
Real Time Enterprises
Customer Access, Sales Channels & Marketing
Multilevel customer Interaction and Customer Profiling
Authentication & Fraud Detection
Virtual Marketing
Reference Architectures and Models
Service Oriented Architectures
New Employments Form

SOCIETY & "INDUSTRY 4.0"

Data Protection, Privacy and Security
Copyright, Competition Regulations and Intellectual Property Rights
Issues of Data Ownership, Data Exploitation and the Free Flow of Data
Liability and Safety Aspects of IoT and autonomous Objects
Social Innovations
Personnel Training and Career Advancement
Health care
Smart Cities
Smart Homes
Smart Grids
Smart Infrastructures
Education and Skills Development

The official language of the International Scientific Conference "INDUSTRY 4.0" is English.

CALL FOR PAPERS

Scientists from all over the world are kindly invited to present the results of their researches in the Plenary, Conference 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 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 **30.09.2016**.

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 "ht16". For example: **131_Spenser_ht16.doc**.

Authors of the approved papers will be informed about the Program Committee's decision not later than **05.10.2016**.

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 **15.11.2016** 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 "**ind4-16**". For example: "**131_Spenser_ind4-16.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 International scientific journal "**INDUSTRY 4.0**" (ISSN 2534-8582). The poster papers have to be formatted according to the poster [graphical](#) and [text](#) instructions. They should be sent by e-mail until **01.12.2016** 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.industry-4.eu>. An example of the title page can be downloaded there, so the authors could write easily the whole paper according to the requirements.

PUBLICATIONS

All papers included in the Conference scientific program will be published in International Scientific Journal "**Industry 4.0**" (ISSN 2534-8582). The Editorial board of the journal is formed by Members of the International Programme Committee. Issues of the journal will be deposited in the National Library "St. Cyril and St. Methodius" and the Central Scientific and Technical Library.

FEES AND PAYMENTS

TYPE OF FEE	Euro	
	Up to 15.11.2016	After 15.11.2016
1. Conference fees:		
1.1. Participation Fee for participation in The International Scientific Conference " INDUSTRY 4.0 " Includes: Published in the issue of International Scientific Journal " Industry 4.0 ", ISSN 2534-8582, Welcome cocktail, Conference materials, coffee breaks, CD with all congress contributions.	200 / 150*	250 / 200*
1.2. Fee for second and third paper - only publication fee	90	130
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 Scientific Journal " Industry 4.0 ", ISSN 2534-8582, 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).	20	20
4.2. For receiving the printed issue of the journal by post (volume with the papers).	30	30

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

OVERNIGHT STAYS

Hotel "ELA"* - BOROVELTS**

Price per night: single room 25 Euro, double room - 30 Euro

Hotel "RILA"*- SOFIA**

Price per night: single room 30 Euro, double room - 35 Euro

PAYMENTS

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

IBAN: BG20PRCB92301407790813, BIC: PRCBBGSF

Beneficiary: NTS Mashinostroene.

Please write in the payment document "ind4-16" and your registration number which you may find here: <http://www.industry-4.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 beginning 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 Yastrebits 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 (~ 2.5 €).

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 (~ 0.65 €). First bus departs for Borovets resort at 7.00 and the last one at 19.00. Taxi fare from Samokov coach station to Hotel Ela: 10-12 leva (~ 5-6 €).

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

Hotel Rila – City of Sofia

The 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

12.12.2016 (Monday) Registration of the participants.

13.12.2016 (Tuesday) Opening ceremony 10:00. Plenary session. Conference sessions. Poster session. Welcome party.

14.12.2016 (Wednesday) 09:00 Conference sessions. Closing of the Conference.

15.12.2016 (Thursday) Departure of the participants.

REGISTRATION

In the lobby of the Hotel ELA - Borovets

12.12.2016 from **16.00** to **20.00** and

13.12.2016 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 12-15 December, 2015 – minus 2,5 °C.

Snow cover out on the slopes in Borovets during the period 12-15 December, 2015 – 120 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	30.09.2016
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Confirmation of the abstract approval	05.10.2016
The Full text of the paper(s) and Participation Form "B" or online registration should be sent up to	15.11.2016
Payment of the Conference fees	15.11.2016
Announcement of the Conference program on the web page: http://www.industry-4.eu/	01.12.2016
The Organizing Committee will receive posters up to	01.12.2016
Registration of the participants	12.12.2016
Opening of the Conference - 10:00	13.12.2016
Departure of the participants	15.12.2016

CONFERENCE SECRETARIATE

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