

**Federation of the Scientific-Technical Unions in Bulgaria (FNTS)**  
**Union of Electronics, Electrical Engineering and Telecommunications (CEEC)**  
**Ministry of Transport, Information Technology and Communications**  
**The Communications Regulation Commission**  
**Technical University of Sofia**  
**Union of Scientists in Bulgaria**  
**Telecommunications Association (ASTEL)**  
**25-th NATIONAL CONFERENCE**  
**WITH INTERNATIONAL PARTICIPATION**

# **TELECOM 2017**

**TELECOMMUNICATIONS YESTERDAY, TODAY,  
FOREVER**



## **P R O G R A M M E**

**26 - 27 October 2017**  
*National Science and Technical Centre,*  
*108 Rakovsky St. – Sofia*

**General sponsor:**



**The conference is organized  
with contribution from:  
Technical University - Sofia,  
Balkantel Ltd.,  
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## TELECOM 2017 SESSIONS TIMETABLE

<i>Date</i>	<i>Time</i>	<i>Sessions</i>
<b>Thursday 26.10.2017</b>		<b>Plenary Session 1, hall 3</b>
	<b>10.00 – 12.30</b>	<b>Conference Opening</b> Chairman: Assoc. Prof. Plamen Vachkov, PhD  <b>Greetings</b>  <b>Presentations:</b> 1.CRC, 2. MTel, 3. Antoni Slavinski 4. Balkantel
	<b>13.30 - 15.00</b>	<b>Student’s Career Forum, hall 3</b>  Chairman: Prof. Seferin Mirtchev, PhD  <b>Company Presentations:</b> Melexis, Sensata, AiG Zavariavane, Balkantel
	<b>15.30 – 17.30</b>	<b>Plenary Session 2, hall 3</b>  Chairman: Assoc. Prof. Alexander Nenkov, PhD  <b>Presentations:</b> 5. Plamen Vachov, 6. Boriss Yovchev, 7. Kamen Rangelov, 7. Kiril Konov
	<b>18.00 – 18.30</b>	<b>Section Session 3, hall 3</b> <b>“Round Table” Discussion</b>  <b>IoT – INTERNET OF THINGS</b> <b>MOBILE NETWORKS</b> <b>CLOUD COMPUTING</b>  Chairman: Assoc. Prof. Plamen Vachkov, PhD, Assoc. Prof. Kamen Rangelov, PhD  <b>Cocktail – Hall 2</b>

<i>Date</i>	<i>Time</i>	<i>Sessions</i>
<b>Friday 27.10.2017</b>	<b>08.30 – 09.30</b>	<p><b>Section Session 1, hall 3</b></p> <p><b>TELECOMMUNICATION NETWORKS AND SYSTEMS</b></p> <p>Chairman: Assoc. Prof. Seferin Mirtchev, PhD</p> <p>Papers: 1.1, 1.2, 1.3,.1.4</p>
	<b>09.45 – 10.45</b>	<p><b>Section Session 2, hall 3</b></p> <p><b>Poster Sessions</b></p> <p><b>TELECOMMUNICATION AND INFORMATION TECHNOLOGIES</b></p> <p>Chairman: Assoc. Prof. Dimitar Arnaudov, PhD</p> <p>Papers: 2.1, to 2.11</p>
	<b>11.00 – 11.30</b>	<p><b>Section Session 3, hall 3</b></p> <p><b>WIRELESS COMMUNICATIONS. NETWORKS AND COMMUNICATION CIRCUITS, SIGNALS AND SYSTEMS SHARING OF RADIO SPECTRUM.</b></p> <p>Chairman: Assoc. Prof. Kamen Rangelov, PhD</p> <p>Papers: 3.1, 3.2</p>
	<b>11.30 - 12.00</b>	<p><b>Section Session 4, hall 3</b></p> <p><b>EDUCATION IN THE FIELD OF TELECOMMUNICATION COMMUNICATION CIRCUITS, SIGNALS AND SYSTEMS TELETRAFFIC – POLITICS. PLANNING AND MANAGEMENT, CYBERSECURITY</b></p> <p>Chairman: Assoc. Prof. Krastu Mirski, PhD</p> <p>Papers: 4.1, 4.2</p>
	<b>12.00 - 12.30</b>	<p><b>Section Session 5, hall 3</b></p> <p><b>IoT – INTERNET OF THINGS AND PEOPLE</b></p> <p>Chairman: Assoc. Prof. Plamen Vachkov, PhD</p> <p>Papers: 5.1, 5.2</p>

<i>Date</i>	<i>Time</i>	<i>Sessions</i>
<b>Friday 27.10.2017</b>	<b>12.40 - 12.55</b>	<p align="center"><b>Section Session 6, hall 3</b></p> <p align="center"><b>OVERVIEW PAPERS (IN SUPPORT OF PRACTICAL APPLICATIONS)</b></p> <p align="center">Chairman: Prof. Boris Yovchev, PhD</p> <p align="center">Papers: 6.1, 6.2</p>
	<b>13.00</b>	<p align="center"><b>Closing of the Conference, hall 3</b></p> <p align="center"><b>Assoc. Prof. Plamen Vachkov, PhD</b></p>

## CONFERENCE PROGRAMME

**THURSDAY,  
26.10.2017 г.**

**NATIONAL SCIENCE AND TECHNICAL CENTRE**

09.00 – 12.00

**Registration**

**10.00 – 12.00**

**Plenary Session 1, hall 3**

**Conference Opening, Greetings**

Chairman: Assoc. Prof. Plamen Vachkov, PhD

1. ELECTRONIC COMMUNICATIONS MARKET - DEVELOPMENT AND CHALLENGES  
Detelina Krasteva - Director of Market Regulatory Directorate, CRC
2. LTE-A CARRIER AGGREGATION. 2CC  
Mihail Mihailov – Mobiltel EAD
3. THE CHALLENGE "ARTIFICIAL INTELLECT"  
Antoni Slavinski - ASTEL
4. EUROPEAN STRATEGY FOR DIGITAL DEVELOPMENT OF BULGARIA  
Nikola Dourtchev – Balkantel

12.00 – 13.30

**Lunch Break**

**13.30 – 15.00**

**Student's Career Forum, hall 3**

Chairman: Prof. Seferin Mirtchev, PhD

**Company Presentations:** Melexis, Sensata, AiG Zavariavane, Balkantel

**15.30 – 17.30**

**Plenary Session 2, hall 3**

Chairman: Assoc. Prof. Alexander Nenkov, PhD

5. SUPERCOMPUTER APPLICATIONS. SITUATION IN BULGARIA AND EUROPE  
Plamen Vachkov - FNTS
6. INDUSTRY 4.0  
Boris Yovchev - USB
7. 4. NOTES ON TELECOMMUNICATIONS – 2017  
Kamen Rangelov – CEEC
8. TRENDS FOR DEVELOPING THE DIGITAL RADIO AND TELEVISION BROADCASTING  
Kiril Konov – CEEC

**18.00 – 18.30**

**Section Session 3, hall 3**

**“Round Table” Discussion**

**IoT – INTERNET OF THINGS**

**MOBILE NETWORKS**

**CLOUD COMPUTING**

Chairman: Assoc. Prof. Plamen Vachkov, PhD, Assoc. Prof. Kamen Rangelov, PhD

**Friday,  
28.10.2017**

**NATIONAL SCIENCE AND TECHNICAL CENTRE**

**08.30 – 09.30**

**Section Session 1, hall 3**

**TELECOMMUNICATION NETWORKS AND SYSTEMS**

Chairman: Assoc. Prof. Alexander Nenkov, PhD

1.1. ON THE SPECTRA OF SCALE-FREE AND SMALL-WORLD NETWORKS

Mircho Jordanov Mirchev – Technical University of Sofia

1.2. APPROACHES FOR THE FORMATION OF SIGNALS FOR ELIMINATION THE TRANSITION PROCESS BY THE TRANSMISSION

Galina Cherneva, Hristina Spiridonova – VTU

1.3. FIFTH GENERATION (5G) - MOBILE SYSTEMS AND COMMUNICATION TECHNOLOGIES OF THE FUTURE

Rosen Pasarelski, Vasil Kadrev, Teodora Pasarelska – NBU

1.4. FEATURES IN THE DEVELOPMENT OF VOIP APPLICATIONS IN IOS PLATFORMS

Kiril Angelov - NBU

**09.45 – 10.45**

**Section Session 2, hall 3**

**Poster Sessions**

**TELECOMMUNICATION AND INFORMATION TECHNOLOGIES**

Chairman: Assoc. Prof. Dimitar Arnaudov, PhD

2.1. WEATHER STATION FOR SMART HOME APPLICATIONS

Filip Andonov, Georgi Petrov – NBU

2.2. SYNCHRONIZATION OF EMBEDDED SYSTEMS BY OPTIMIZING THE COMMUNICATION PROCESS WITH A COMMON CLOUD-BASED ENVIRONMENT

Neven Nikolov – Technical University of Sofia

2.3. WIRELESS FIREWORK SYSTEM

Yovko Rakanov, Ognyan Kunev, Svetlozar Nedev – NBU

2.4. COMMUNICATIONS TO LTE USER GROUPS RELATED TO PUBLIC SAFETY

Georgi Dimitrov – Nikola Vaptsarov Naval Academy

2.5. NEW MATHEMATICAL MODEL FOR ANALYSIS OF SKIN EFFECT AND PROXIMITY EFFECT

Ivan Stefanov Bozev, Radoslav Borislavov Borisov – Technical University-Sofia

2.6. THE EHEALTH EDUCATION AT NBU - PROSPECTS, INNOVATIONS AND EXPECTATIONS

Polina Mihova, Georgi Petrov – NBU



- 2.7. USING GNS 3 FOR E – LEARNING ON IP – BASED TELECOMMUNICATION NETWORKS  
Ivan Nedyalkov and Georgi Georgiev – UTP
- 2.8. AUTOMATIC SYSTEM FOR CREATING REPORTS WITH INTEGRATED TABLES AND GRAPHICS  
Velizar SIMEONOV – NBU
- 2.9. MEASURING THE SIGNAL LEVEL IN THE 4G LTE NETWORK IN SOFIA  
Philip Atanasov, Zhivko Kiss’ovski – Sofia University
- 2.10. OPEN INITIATIVE FOR PROVIDING FREE INTERNET ACCESS IN BULGARIA MOUNTAIN CHALETS  
Boyan Presolski , Georgi Petrov, Filip Andonov, Raliza Berberova – NBU
- 2.11. AN IDEA FOR A FIFTH-GENERATION MOBILE COMMUNICATIONS ANTENNA  
Peter Apostolov, Alexey Stefanov – SWU

**11.00 – 11.30**                    **Section Session 3, hall 3**  
**WIRELESS COMMUNICATIONS. NETWORKS AND COMMUNICATION CIRCUITS, SIGNALS AND SYSTEMS SHARING OF RADIO SPECTRUM**  
Chairman: Assoc. Prof. Kamen Rangelov, PhD

- 3.1. COOPERATIVE SPECTRUM SENSING – OVERVIEW  
Zdravka Tchobanova, Technical University-Sofia
- 3.2. SCP-RPSC TECHNOLOGY IN THE MILLIMETER WAVE COHERENT TRANSPONDING SYSTEMS FOR IOT COMMUNICATIONS  
Veselin Demirev – Technical University of Sofia

**11.30 – 12.00**                    **Section Session 4, hall 3**  
**EDUCATION IN THE FIELD OF TELECOMMUNICATION COMMUNICATION CIRCUITS, SIGNALS AND SYSTEMS TELETRAFFIC – POLITICS. PLANNING AND MANAGEMENT, CYBERSECURITY**  
Chairman: Assoc. Prof. Krastu Mirski, PhD

- 4.1. GDPR ENTRAPMENTS. PROACTIVE AND REACTIVE (RE)DESIGN THINKING  
Willian Dimitrov – UNIBIT
- 4.2. INTELLIGENT METHODS AND CYBERSECURITY  
Rumen Trifonov , Ognian Nakov, Plamen Vachkov, Slavcho Manolov, Radoslav Yoshinov, Georgi Popov, Georgi Tsochev, Galia Pavlova – Technical University of Sofia

**12.00 – 12.30**                    **Section Session 5, hall 3**  
**IoT – INTERNET OF THINGS AND PEOPLE**  
Chairman: Assoc. Prof. Plamen Vachkov, PhD

- 5.1. INNOVATION THROUGH DESIGN THINKING, USER EXPERIENCE AND AGILE: TOWARDS COOPERATION FRAMEWORK  
Galia Novakova Nedeltcheva – Sofia University, Elena Shoikova – UNIBIT
- 5.2. BEST PRACTICES FOR DESIGNING USER EXPERIENCE FOR INTERNET OF THINGS AND VIRTUAL REALITY  
Elena Shoikova, Anatoly Peshev – UNIBIT

**12.40 – 12.55**

**Section Session 6, hall 3**

**OVERVIEW PAPERS (IN SUPPORT OF PRACTICAL APPLICATIONS)**

Chairman: Prof. Boris Yovchev, PhD

6.1. ONE POSSIBILITY APPROACH FOR THE DEVELOPMENTS OF ELECTRONICS IN BULGARIA

Bozhidar Simeonov

6.2. 50 YEARS FIRST GRADUATE ELECTRONICS 1967 MEI SOFIA

Bozhidar Simeonov

**13.00**

**CLOSING OF THE CONFERENCE, hall 3.**

# Information

## for the participants and guests of Telecom 2017

Until 27 October 2017 detailed information on issues of the Conference can be obtained at the National House of Science and Technology in Sofia, 108 Rakovski St., V Floor, Room 506 or by phone: 02 987-97-67 and 0887508262.

Email of the conference: [telecom.ceec@gmail.com](mailto:telecom.ceec@gmail.com)

Website of the conference: <http://ceec.fnts.bg/telecom>

Registration fee: Participants with/without a paper - Euro 50, Students - Euro 25. The fee should be preferably paid before October 14, 2013 through a bank transfer on the account of:

UniCredit Bulbank AD, Pl. Sveta Nedelya № 7, 1000

IBAN: BG75 UNCR 9660 1018 8624 01

BIC: UNCRBGSF

CEEC, TELECOM 2017, participant's name

Participants are kindly requested to send a Payment Order copy with details of payment to the Organizing Committee, or present it upon registration.

The Registration Fee can be paid in cash at the Office of CEEC: 108, Rakovsky Str., Sofia 1000.

By way of exception the Registration Fee may be paid upon arrival at the Conference site in cash (Euro 55).

The Registration Fee includes admission to all Conference events, a set of Conference materials (program, abstracts, CD with papers etc.) and cocktail.

The Organizing Committee will award a young author (up to 35 years old) for the best individually presented paper with substantial scientific research contribution.

