

09:00 – 10:00	Registration
10:00 – 10:15	Opening ceremony: Acad. Vassil Sgurev
10:15 – 11:00	Invited Lecture: Prof. Panagiotis Chountas, Westminster University <i>Big Data and Change Analytics</i>
11:00 – 12:40	<b>Session 1: Knowledge and data management   Chair: Prof. Panagiotis Chountas</b> Boriana Vatchova, Alexander Gegov, David Sanders and <u>Mo Adda</u> <i>Knowledge based modelling of complex interconnected systems</i> <u>Gernot Steindl</u> and Wolfgang Kastner <i>Query performance evaluation of sensor data integration methods for knowledge graphs</i> Stanislav Slavov, <u>Andrey Tagarev</u> , Nikola Tulechki and Svetla Boytcheva <i>Company industry classification with neural and attention-based learning models</i> <u>Gian Paolo Jesi</u> , Elisabetta Gori, Stefano Micocci and Gianluca Mazzini <i>Building Lepida ScpA BigData Infrastructure</i> Stanimir Stoyanov and <u>Daniel Rusev</u> <i>Integration of virtual and physical worlds in ViPS</i>
12:40 – 14:00	Lunch
14:00 – 14:45	Invited Lecture: Prof. Martin Mintchev, Calgary University <i>From idea to market: Development of intellectual property in the area of information and communication technologies</i>
14:45 – 15:45	<b>Session 2: Intelligent Control Systems   Chair: Prof. Lyubka Doukovska</b> Kelly Ursenbach and <u>Martin Mintchev</u> <i>Effect of in-drilling alignment with general dynamic error model on azimuth estimation</i> <u>Svetozar Ilchev</u> and Zlatoliliya Ilcheva <i>Thermoelectric cooling driver for laser projection systems</i> <u>Peter Olumuyiwa James</u> and Mohammed Olanrewaju Ibrahim <i>Application of variational iteration method in solving typhoid fever model</i> Margarita Terziyska, <u>Zhelyazko Terziyski</u> , Stanka Hadzhikoleva and Emil Hadzhikolev <i>Multi-input multi-output neo-fuzzy neural network for PM<sub>10</sub> and PM<sub>2.5</sub> daily concentrations forecasting</i>
15:45 – 16:15	Coffee break
16:15 – 18:00	<b>Session 3: System analysis, decision analysis and support   Chair: Prof. Mo Adda</b> <u>Panagiota Giannakopoulou</u> and Panagiotis Chountas <i>Forecasting the spot price of P1A shipping route</i> <u>Noman Shabbir</u> , Lauri Kutt, Muhammad Jawad, Roya Ahmadiyahangar, Muhammad Naveed Iqbal and Argo Rosin <i>Wind energy forecasting using recurrent neural networks</i> <u>Lyubka Pashova</u> , Bozhidar Srebrov and Ognyan Kounchev <i>Investigation of strong geomagnetic storms using multidisciplinary Big Data sets</i> <u>Zeinab Nazemi Absardi</u> and <u>Reza Javidan</u> <i>A fast reference free genome compression using deep neural networks</i> Diana Tsankova and <u>Svetla Lekova</u> <i>UV-Vis spectroscopy and chemometrics analysis in distinguishing different types of Bulgarian honey</i>
19:00 –	Gala dinner at "The Blue Lion" Restaurant

Big data ▶ Big knowledge ▶▶ Big ideas ▶▶▶

22 November ▶ Friday

Floor 1 ▶ Room 105A

10:00 – 10:15 Registration

10:15 – 11:00 Invited Lecture: Prof. Guy de Tré, Ghent University

*Using computational intelligence techniques for handling veracity in Big Data*

11:00 – 12:40 Session 4: Big Data approaches | Chair: Assoc. Prof. Vassia Atanassova

Mikhail Chernoskutov

*Graph processing with different data structures*

Agil Yolchuyev

*A novel approach for optimal data uploading to the distributed cloud storage systems*

Vassil Sgurev, Lyubka Doukovska and Stanislav Drangajov

*Optimal data traffic and computer processing by a generalized network flow model with gains and losses*

Ogechukwu Okonor and Mo Adda

*Power optimisation model for leveraging cloud system*

Stoyan Poryazov, Velin Andonov, Emiliya Saranova

*Different traffic quality aggregations for a service composition*

12:40 – 14:00 Lunch

14:00 – 16:00 Session 5: Big Data applications | Chair: Prof. Guy De Tré

Ivan Popchev, Daniela Orozova and Stanimir Stoyanov

*IoT and Big Data analytics in e-learning*

Valentina Terzieva, Elena Paunova-Hubenova, Katia Todorova and

Petia Kademova-Katzarova

*Learning analytics – need of centralized portal for access to e-learning resources*

Ivan Gaydarski and Pavlin Kutinchev

*Using Big Data for data leak prevention*

William Dimitrov and Svetlana Syarova

*Analysis of the functionalities of a shared ICS security operations center*

Veronika Ivanova, Ani Boneva, Yordan Doshev, Stoyan Ivanov and Plamen Vasilev

*Multifunctional operating station based on Tcl/Tk and its applications*

Evdokia Sotirova, Valentin Vasilev, Greta Bozova, Hristo Bozov and Sotir Sotirov

*Application of the InterCriteria Analysis Method to a data of malignant neoplasms of the digestive organs for the Burgas region for 2014-2018*

16:00 – 16:20 Coffee break

16:20 – 18:00 Session 6: Big Data systems, tools and applications | Chair: Prof. Rumen Andreev

Renato Cintra, Thiago Valentin de Oliveira and Martin Mintchev

*Wireless network for real-time detection of pipeline leakages*

Arsenii Bakanov, Tatiana Atanasova and Nina Bakanova

*Cognitive approach to modelling human-computer interaction with a distributed intellectual information environment*

Krassimir Atanassov, Olympia Roeva, Veselina Bureva, Pavel Cheshmedjiev,

Peter Vassilev and Vassia Atanassova

*Operators over 3-dimensional index matrices*

Yuri Pavlov

*Estimation of subjective probabilities through the prism of Karni-Jaffray theorem and stochastic approximations*

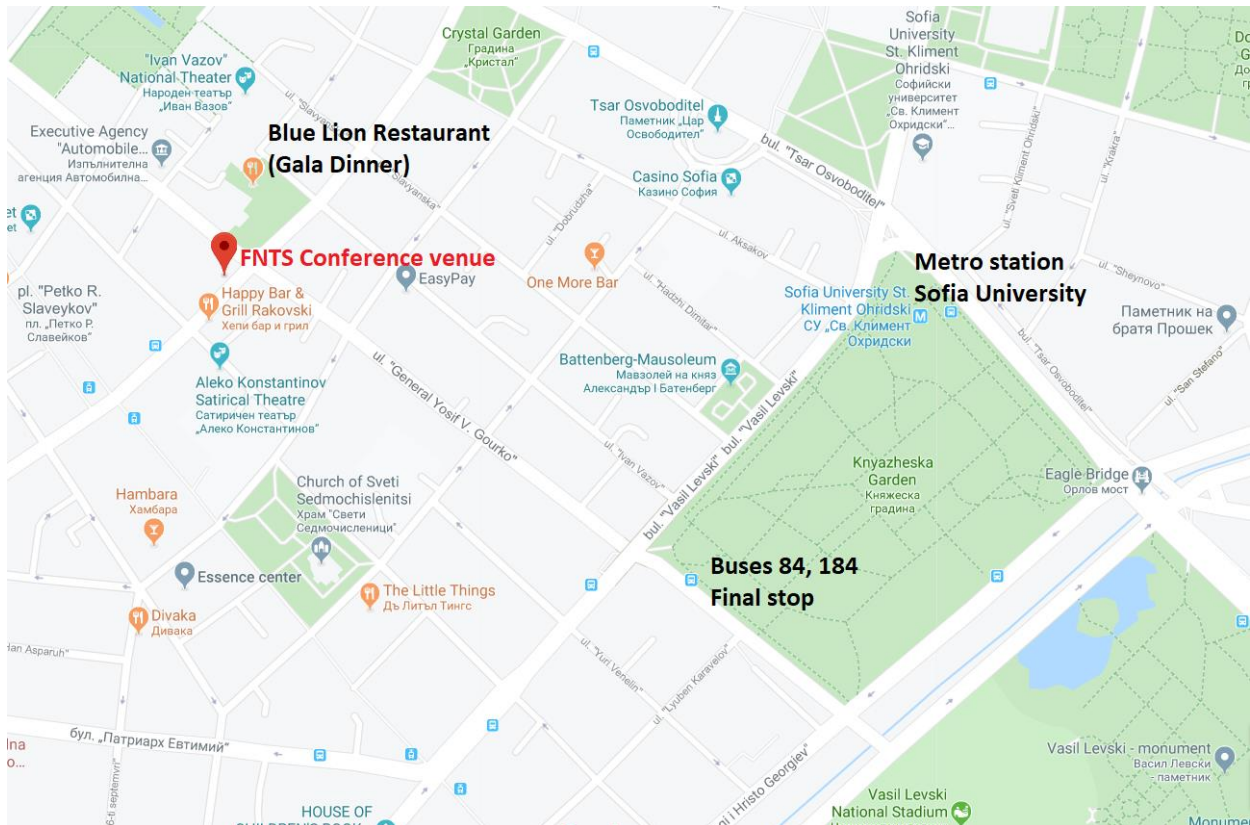
Nina Dobrinkova, Stefan Stefanov and Emila Tosheva

*Interactive training for volunteers based on open source applications*

18:00 – 18:15 Closing ceremony

Federation of Scientific and Technical Unions  
(Day 1: Fl. 2, Room 2; Day 2: Fl. 1, Room 105A)  
108 Rakovski Street, Sofia 1000

“Blue Lion” Restaurant  
(21 November 2019, 19:00)  
6 Ivan Vazov Street, Sofia 1000



## OTHER USEFUL TIPS

### LOCAL CURRENCY

The local currency in Bulgaria is Bulgarian Lev (BGN). For the last 20 years, the Lev maintains the fixed exchange rate of 1.95583 Leva for 1 Euro. Change bureaus and banks in the city offer exchange rates within reasonably small variation from the official course.

- There are two ATM machines at Terminal 2 (DSK Bank and United Bulgarian Bank).
- There are two ATM machines at Terminal 1 (DSK Bank and UniCredit Bulbank).
- If you need to exchange money at the airport change bureau, we advise you to exchange only a small amount that would cover only basic expenditures like transportation costs (see below), as the exchange rate there is substantially higher than in the city.
- Downtown, next to the conference venue, there are two bank offices (PostBank, Raiffeisenbank) and ATM machines of these and two more banks (UniCredit Bulbank, DSK bank).

## TRANSPORTATION FROM SOFIA AIRPORT TO THE CONFERENCE VENUE

The best options to reach FNTS from Sofia Airport are either by metro, bus or by taxi.

- **By Metro:** The Metro station at Sofia airport is the first stop of the Blue Line (M2). From the Arrivals zone, go to the left and enter the station. Leave the metro at the 11<sup>th</sup> stop, station “Sofia University”. The ticket costs 1.60 BGN, and bigger luggage usually has to be paid additionally with one more ticket. The trip with metro will take about 30 minutes. The frequency of the trains is about 12-15 minutes from 5:30 to 24:00. **On the way back**, if you opt for the metro, make sure to **take the train to Sofia Airport as final destination**, as Line M1 forks at Station “Mladost 1”, and every second train goes to the *alternative final destination* (“Business Park”). The final destination is indicated on the train platform, the train’s name plate and regularly announced during the trip.
- **By Bus:** You can take either **Bus 84**, or **Bus 184**, and leave it at the final stop (“General Gurko” Street). The ticket costs 1.60 BGN, and bigger luggage usually has to be paid additionally with one more ticket. Bus drivers usually sell tickets, but only in Bulgarian leva.
- **By Taxi:** There is only one licensed taxi operator **starting from the taxi piazza** of Sofia Airport, OK SuperTrans (+ 359 2 973 21 21). The ride to the hotel can take from 15-25 minutes, depending on the traffic, and it costs about 12-15 BGN from the Airport to the conference venue, both for the day and the night tariff. It is advisable to ask in advance for the price, having in mind the reference price. There is no Uber in Bulgaria, but you can also use alternatively the mobile apps **TaxiMe** or **TaxiStars**.

Metro M2 – Route and timeline



Bus 84 – Route and timeline

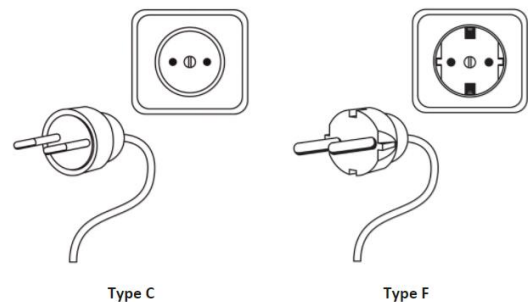


Bus 184 – Route and timeline



## ELECTRICITY SOCKETS

For Bulgaria there are two associated plug types, types C and F. Bulgaria operates on a 230V supply voltage and 50Hz.



## ROAMING

**Note to the EU Citizens:** As of June 15, 2017, there are no roaming charges for people from the European Union, including Bulgaria. You will be able to use your mobile devices in Bulgaria, while paying the same prices as at home.