



# SPECOM 2016

18<sup>th</sup> International Conference on  
Speech and Computer

# ICR 2016

1<sup>st</sup> International Conference on  
Interactive Collaborative Robotics

## PROGRAM

August 23-27, 2016

Aquincum Hotel Budapest, Hungary

<http://www.specom2016.hte.hu>

# ORGANIZERS

---



Budapest University of Technology and Economics



## IN COOPERATION WITH



International Speech Communication Association (ISCA)



ITMO UNIVERSITY



Moscow State Linguistic University (MSLU)



St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS)

## SPONSORS

---



SpeechTex  
The Speech Technology Expert



ASM Solutions

# PROGRAM COMMITTEE

---

*General Conference Co-Chair*

**Rodmonga Potapova**, *Moscow State Linguistic University, Russia*

*General Conference Co-Chair*

**Andrey Ronzhin**, *SPIIRAS, Saint-Petersburg, Russia*

**Elias Azarov**, *Belarus*

**Andrey Barabanov**, *Russian Federation*

**Vlado Delic**, *Serbia*

**Olivier Deroo**, *Belgium*

**Vera Evdokimova**, *Russian Federation*

**Nikos Fakotakis**, *Greece*

**Mais Farkhadov**, *Russian Federation*

**Peter French**, *United Kingdom*

**Todor Ganchev**, *Bulgaria*

**Rüdiger Hoffmann**, *Germany*

**Oliver Jokisch**, *Germany*

**Slobodan Jovicic**, *Serbia*

**Alexey Karpov**, *Russian Federation*

**Heysem Kaya**, *Turkey*

**Irina Kipyatkova**, *Russian Federation*

**Daniil Kocharov**, *Russian Federation*

**Benjamin Lecouteux**, *France*

**Boris Lobanov**, *Belarus*

**Elena Lyakso**, *Russian Federation*

**Konstantin Markov**, *Japan*

**Yuri Matveev**, *Russian Federation*

**Péter Mihajlik**, *Hungary*

**Wolfgang Minker**, *Germany*

**Roman Meshcheryakov**, *Russian Federation*

**Konstantinos Moustakas**, *Greece*

**Iosif Mporas**, *United Kingdom*

**Géza Németh**, *Hungary*

**Alexander Petrovsky**, *Belarus*

**Alexey Petrovsky**, *Russian Federation*

**Dimitar Popov**, *Italy*

**Rodmonga Potapova**, *Russian Federation*

**Vsevolod Potapov**, *Russian Federation*

**Andrey Ronzhin**, *Russian Federation*

**Jesus Savage**, *Mexico*

**Milan Secujski**, *Serbia*

**Pavel Skrelin**, *Russian Federation*

**Mikhail Stolbov**, *Russian Federation*

**György Szaszák**, *Hungary*

**László Tóth**, *Hungary*

**Klára Vicsi**, *Hungary*

**Andreas Wendemuth**, *Germany*

**Csaba Zainkó**, *Hungary*

**Miloš Železný**, *Czech Republic*

## ORGANIZING COMMITTEE

---

*Organising Committee Chair*

**Géza Németh**, *Budapest University of Technology and Economics, Hungary*

**Mátyás Bartalis**, *Hungary*

**Polina Emeleva**, *Russian Federation*

**Alexey Karpov**, *Russian Federation*

**Liliya Komalova**, *Russian Federation*

**Yuri Matveev**, *Russian Federation*

**Ekaterina Miroshnikova**, *Russian Federation*

**Péter Nagy**, *Hungary*

**Rodmonga Potapova**, *Russian Federation*

**Alexander Ronzhin**, *Russian Federation*

**Andrey Ronzhin**, *Russian Federation*

**Anton Saveliev**, *Russian Federation*

**Mária Tézsla**, *Hungary*

**László Tóth**, *Hungary*

# CONFERENCE PROGRAM

## TUESDAY, AUGUST 23

16:00-18:00 Registration

18:30-20:00 Welcome Reception

## WEDNESDAY, AUGUST 24

08:00-08:30 Registration

08:30-09:00 **Opening ceremony**

09:00-10:00 **Keynote lecture of Ralf Schlueter**

10:00-10:30 *Coffee break*

10:30-12:30 **Speech recognition and understanding**

12:30-14:00 *Lunch*

14:00-16:00 **SPECOM Poster session I**

16:00-16:30 *Coffee break*

16:30-18:30 **Speech synthesis**

## THURSDAY, AUGUST 25

09:00-10:00 **Keynote lecture of Attila Vékony**

10:00-10:30 *Coffee break*

10:30-12:30 **Multimodal human-machine interaction**

12:30-14:00 *Lunch*

14:00-16:00 **ICR Poster session**

16:00-16:30 *Coffee break*

16:30-18:30 **Interactive collaborative robotics**

16:30-18:30 **Speech signal processing**

19:30-21:30 **Gala dinner on the Danube**

## FRIDAY, AUGUST 26

09:00-10:00 **Keynote lecture of Nick Campbell**

10:00-10:30 *Coffee break*

10:30-12:30 **Natural language processing**

12:30-14:00 *Lunch*

14:00-16:00 **SPECOM Poster session II**

16:00-16:30 *Coffee break*

16:30-18:30 **Speaker and language recognition**

## SATURDAY, AUGUST 27

09:00-15:00 **Budapest tour**

## PROGRAM

---

### 23 08 2016 | TUESDAY

---

- 16:00-18:00 Registration  
 18:30-20:00 **Welcome Reception**

### 24 08 2016 | WEDNESDAY

---

- 08:00-08:30 Registration

#### 08:30-09:00 HADRIANUS B **OPENING CEREMONY**

- 9:00-10:00 *Keynote speech:*  
HADRIANUS B **Automatic Speech Recognition based on Neural Networks**  
**Ralf Schlueter**, *RWTH Aachen University, Germany*  
*Chair: Géza Németh, Budapest University of Technology and Economics, Hungary*

- 10:00-10:30 *Coffee break*

#### 10:30-12:30 HADRIANUS B **SPEECH RECOGNITION AND UNDERSTANDING**

*Chair: Alexey Karpov, SPIIRAS, Russia*

- 10:30-10:50 **Adaptation of DNN Acoustic Models using KL-divergence Regularization and Multi-Task Training**  
**Lászlo Tóth** and **Gábor Gosztolya**
- 10:50-11:10 **Improving Automatic Speech Recognition Containing Additive Noise Using Deep Denoising Autoencoders of LSTM Networks**  
**Marvin Coto**, **John Goddard** and **Fabiola Martinez**
- 11:10-11:30 **Knowledge Transfer for Utterance Classification in Low-Resource Languages**  
**Andrei Smirnov** and **Valentin Mendelev**

- 11:30-11:50 **Designing Syllable Models for an HMM based Speech Recognition System**  
Kseniya Proenca, Kris Demuynck and Dirk Van Compernelle
- 11:50-12:10 **In-document Adaptation for a Human Guided Automatic Transcription Service**  
André Mansikkaniemi, Mikko Kurimo and Krister Lindén
- 12:10-12:30 **Automatic Summarization of Highly Spontaneous Speech**  
András Beke and György Szaszák
- 12:30-14:00 *Lunch* APICIUS RESTAURANT

14:00-16:00 **SPECOM POSTER SESSION I**

*Chair: Ralf Schlueter, RWTH Aachen University, Germany*

**P1: Exploring GMM-derived Features for Unsupervised Adaptation of Deep Neural Network Acoustic Models**

Natalia Tomashenko, Yuri Khokhlov, Anthony Larcher and Yannick Estève

**P2: DNN-based Acoustic Modeling for Russian Speech Recognition Using Kaldi**

Irina Kipyatkova and Alexey Karpov

**P3: Improving the Quality of Automatic Speech Recognition in Trucks**

Maxim Korenevsky, Ivan Medennikov and Vadim Shchemelinin

**P4: Feature Space VTS with Phase Term Modeling**

Maxim Korenevsky and Aleksei Romanenko

**P5: LSTM-based Language Models for Spontaneous Speech Recognition**

Ivan Medennikov and Anna Bulusheva

**P6: Speaker-dependent bottleneck features for Egyptian Arabic speech recognition**

Aleksei Romanenko and Valentin Mendelev

**P7: Advances in STC Russian**

**Spontaneous Speech Recognition System**

Ivan Medennikov and Alexey Prudnikov

**P8: Combining Atom Decomposition of the F0 Track and HMM-based Phonological Phrase Modelling for Robust Stress Detection in Speech**  
György Szaszák, Máté Ákos Tündik, Branislav Gerazov and Aleksandar Gjoreski

**P9: Improving Recognition of Dysarthric Speech Using Severity Based Tempo Adaptation**  
Chitralekha Bhat, Bhavik Vachhani and Sunil Kumar Kopparapu

**P10: Comparison of Retrieval Approaches and Blind Relevance Feedback Methods within the Czech Speech Information Retrieval**  
Lucie Skorkovska

**P11: A Phonetic Segmentation Procedure Based on Hidden Markov Models**  
Edvin Pakoci, Branislav Popović, Nikša Jakovljević, Darko Pekar and Fathy Yassa

**P12: Stress, arousal, and stress detector trained on acted speech database**  
Róbert Sabo, Milan Rusko, Andrej Ridzik and Jakub Rajčani

**P13: Improvements to Prosodic Variation in Long Short-Term Memory based Intonation Models Using Random Forest**  
Bálint Pál Tóth, Balázs Szórádi and Géza Németh

**P14: Fusing various audio feature sets for detection of Parkinson's disease from sustained voice and speech recordings**

Evaldas Vaiciukynas, Antanas Verikas, Adas Gelzinis, Marija Bacauskiene, Kestutis Vaskevicius, Virgilijus Uloza, Evaldas Padervinskis and Jolita Ciceliene

**P15: Investigation of Speech Signal Parameters Reflecting the Truth of Transmitted Information**  
Victor Budkov, Irina Vatamaniuk, Vladimir Basov and Daniyar Volf

**P16: Trade-off between speed and accuracy for Noise Variance Minimization (NVM) pitch estimation algorithm**

Andrey Barabanov and Aleksandr Melnikov

**P17: Study on the improvement of intelligibility for elderly speech using formant frequency shift method**

Yuto Tanaka, Mitsunori Mizumachi and Yoshihisa Nakatoh

**P18: Quality Assessment of two Fullband Audio Codecs Supporting Real-Time Communication**

Michael Maruschke, Oliver Jokisch, Martin Meszaros, Franziska Trojahn and Mario Hoffmann

**P19: A Deep Neural Networks (DNN) Based models for a Computer Aided Pronunciation Learning System (in absentia)**

Mohamed Elaraby, Mustafa Abdallah, Sherif Abdou and Mohsen Rashwan

**P20: Evaluation of Response Times on a Touch Screen using Stereo Panned Speech Command Auditory Feedback**

Hunor Nagy and György Wersényi

**P21: Speech Enhancement with Microphone Array Using a Multi Beam Adaptive Noise Suppressor**

Mikhail Stolbov and Alexander Lavrentyev

**P22: Microphone Array Directivity Improvement in Low-Frequency Domain for Speech Processing**

Sergei Aleinik and Mikhail Stolbov

**P23: Optimization of Zelinski post-filtering calculation**

Sergei Aleinik

**P24: Assessment of the relation between low-frequency features and velum opening by using real articulatory data**

Alexander Sepulveda-Sepulveda and German Castellanos-Dominguez

**P25: Evaluation of the speech quality during rehabilitation after surgical treatment of the cancer of oral cavity and oropharynx based on a comparison of the Fourier spectra**

**Evgeny Kostyuchenko, Roman Mescheryakov, Dariya Ignatieva, Alexander Pyatkov, Evgeny Choyznzonov and Lidiya Batatskaya**

16:00-16:30 *Coffee break*

16:30-18:30 **SPEECH SYNTHESIS**

HADRIANUS B *Chair: Géza Németh, Budapest University of Technology and Economics, Hungary*

16:30-16:50 **Ensemble Deep Neural Network based Waveform-Driven Stress Model for Speech Synthesis**

**Bálint Pál Tóth, Kornél István Kiss, György Szaszák and Géza Németh**

16:50-17:10 **DNN-Based Duration Modeling for Synthesizing Short Sentences**

**Péter Nagy and Géza Németh**

17:10-17:30 **Experiments with One-Class Classifier as a Predictor of Spectral Discontinuities in Unit Concatenation**

**Daniel Tihelka, Martin Grüber and Markéta Jůzová**

17:30-17:50 **Phonetic Aspects of High Level of Naturalness in Speech Synthesis**

**Vera Evdokimova, Pavel Skrelin, Andrey Barabanov and Karina Evgrafova**

17:50-18:10 **An agonist-antagonist pitch production model**

**Branislav Gerazov and Philip N. Garner**

18:10-18:30 **An UMP (Universal Melodic Portraits) Model of Pitch Contours Stylization for Analysis and Synthesis of Intonation**

**Boris Lobanov**

## 25 08 2016 | THURSDAY

9:00-10:00 *Keynote speech:*

HADRIANUS B

**Speech Recognition Challenges in the Car Navigation Industry****Attila Vékony**, *NNG Software Developing and Commercial Llc. Hungary**Chair: Andrey Ronzhin, SPIIRAS, Russia*10:00-10:30 *Coffee break*

10:30-12:30

HADRIANUS B

**MULTIMODAL HUMAN-MACHINE INTERACTION***Chair: Milos Zelezny, University of West Bohemia, Czech Republic*

10:30-10:50

**Toward Sign Language Motion Capture Dataset Building****Zdeněk Krňoul, Pavel Jedlička, Jakub Kanis and Milos Zelezny**

10:50-11:10

**Selecting Keypoint Detector and Descriptor Combination for Augmented Reality Application****Lukáš Bureš and Luděk Müller**

11:10-11:30

**Human-Robot Interaction using Brain-Computer Interface****Lev Stankevich and Konstantin Sonkin**

11:30-11:50

**Attention Training Game with Aldebaran Robotics NAO and Brain-Computer Interface****Evgeny Shandarov, Stepan Gomilko and Alina Zimina**

11:50-12:10

**HAVRUS Corpus: High-speed Recordings of Audio-Visual Russian Speech****Vasilisa Verkhodanova, Alexander Ronzhin, Irina Kipyatkova, Denis Ivanko, Alexey Karpov and Milos Zelezny**

12:10-12:30

**Speech Recognition combining MFCCs and Image Features (Skype)****Stamatis Karlos, Nikos Fazakis, Katerina Karanikola, Sotiris Kotsiantis and Kyriakos Sgarbas**

12:30-14:00

*Lunch*

APICIUS RESTAURANT

14:00-16:00

## ICR POSTER SESSION

Chair: *Eugene Larkin, Tula State University, Russia*

### **P1: Decentralized Approach to Control of Robot Groups During Execution of the Task Flow**

Igor Kalyaev, Anatoly Kalyaev and Iakov Korovin

### **P2: A Recovery Method for the Robotic Decentralized Control System with Performance Redundancy**

Iakov Korovin, Eduard Melnik and Anna Klimenko

### **P3: Control Algorithms for Heterogeneous Vehicle Groups Control in Obstructed 2-D Environments**

Viacheslav Pshikhopov, Mikhail Medvedev, Anatoly Gaiduk and Aleksandr Kolesnikov

### **P4: Method of Spheres for Solving 3D Formation Task in a Group of Quadrotors**

Donat Ivanov, Sergey Kapustyan and Igor Kalyaev

### **P5: Multi-Robot Exploration and Mapping Based on the Subdefinite Models**

Valery Karpov, Alexander Migalev, Anton Moscovsky, Maxim Rovbo and Vitaly Vorobiev

### **P6: Simulation of Commands Execution by Mobile Robot**

Eugene Larkin, Alexey Ivutin, Vladislav Kotov and Alexander Privalov

### **P7: The Effectiveness of Rescuing Casualties when Using Robotic Systems**

Anna Motienko, Igor Dorozhko, Anatoly Tarasov and Oleg Basov

### **P8: Distributed Information System for Collaborative Robots and IoT Devices**

Siarhei Herasiuta, Uladzislau Sychou and Ryhor Prakapovich

**P9: Positioning Method Basing on External Reference Points for Surgical Robots**

Ekaterina Sinyavskaya, Elena Shestova, Mikhail Medvedev and Evgenij Kosenko

**P10: Hardware-Software Solution for Three-Dimensional Model Control in Volumetric Display Testing Unit for Visualization and Dispatching Applications**

Alexander Bolshakov, Arthur Sgibnev, Tatiana Chistyakova, Viktor Glazkov and Dmitry Lachugin

**P11: Educational Marine Robotics in SMTU**

Mikhail Chemodanov, Ryzhov Vladimir, Nickolay Semenov, Kirill Rozhdestvensky and Igor Kozhemyakin

**P12: Designing Simulation Model of Humanoid Robot to Study Servo Control System**

Alexander Denisov, Viktor Budkov and Daniil Mikhalchenko

**P13: Speech Dialog as a Part of Interactive “Human-Machine” Systems**  
Rodmonga Potapova

**P14: Human-Machine Speech-Based Interfaces with Augmented Reality and Interactive Systems for Controlling Mobile Cranes**

Maciej J. Majewski and Wojciech Kacalak

**P15: Preprocessing Data for Facial Gestures Classifier on the Basis of the Neural Network Analysis of Biopotentials Muscle Signals**

Raisa Budko and Irina Starchenko

**P16: Mimic Recognition and Reproduction in Bilateral Human-Robot Speech Communication**

Arkady S. Yuschenko, Sergey Vorotnikov, Dmitry Konyshev and Andrey Zhonin

**P17: Interactive Collaborative Robotics and Natural Language Interface Based on Multi-Agent Recursive Cognitive Architectures**  
Murat Anchokov, Zalimkhan Nagoev, Vladimir Denisenko, Boris Tazhev and Zaurbek Sundukov

**P18: An Analysis of Visual Faces Datasets**

Ivan Gruber, Miroslav Hlaváč, Marek Hruží, Miloš Železný and Alexey Karpov

**P19: Voice Dialogue with a Collaborative Robot Driven by Multimodal Semantics**

Alexander Kharlamov and Konstantin Ermishin

**P20: Human-Smartphone Interaction for Dangerous Situation Detection & Recommendation Generation while Driving**

Alexander Smirnov, Alexey Kashevnik and Igor Lashkov

**P21: Conceptual Model of Cyberphysical Environment Based on Collaborative Work of Distributed Means and Mobile Robots**

Anton Saveliev, Oleg Basov and Andrey Ronzhin

**P22: The Humanoid Robot Assistant for a Preschool Children**

Evgeny Shandarov, Alina Zimina, Dmitry Rimer, Evgenia Sokolova and Olga Shandarova

16:00-16:30 *Coffee break*

16:30-18:30

MARCUS

**INTERACTIVE COLLABORATIVE  
ROBOTICS***Chair: Roman Meshcheryakov, TUSUR, Russia*

16:30-16:50

**Development of Wireless Charging Robot for Indoor Environment based on Probabilistic Roadmap**  
 Yi-Shiun Wu, Chi-Wei Chen and Hooman Samani

16:50-17:10

**Mechanical Leg Design of the Anthropomorphic Robot Antares**  
 Nikita Pavluk, Victor Budkov, Andrey Kodyakov and Andrey Ronzhin

17:10-17:30

**YuMi, come and play with me! A Collaborative Robot for piecing together a Tangram Puzzle**  
 David Kirschner, Rosemarie Velik, Saeed Yahyanejad, Mathias Brandstötter and Michael Hofbaur

17:30-17:50

**A Control Strategy for a Lower Limb Exoskeleton with a Toe Joint**  
 Sergei Savin, Sergey Jatsun and Andrey Yatsun

17:50-18:10

**Robot Soccer Team for RoboCup Humanoid KidSize League**  
 Evgeny Shandarov, Stepan Gomilko, Darya Zhulaeva, Dmitry Rimer, Dmitry Yakushin and Roman Meshcheryakov

18:10-18:30

**Smart M3-Based Robot Interaction Scenario for Coalition Work**  
 Alexander Smirnov, Alexey Kashevnik, Sergey Mikhailov, Mikhail Mironov and Mikhail Petrov

16:30-18:30 **SPEECH SIGNAL PROCESSING**HADRIANUS B *Chair: László Tóth, University of Szeged*

- 16:30-16:50 **Robust Speech Analysis Based on Source-Filter Model Using Multivariate Empirical Mode Decomposition in Noisy Environments**  
Surasak Boonkla, Masashi Unoki and Stanislav S. Makhanov
- 16:50-17:10 **An Algorithm for Phase Manipulation in a Speech Signal**  
Darko Pekar, Siniša Suzić, Robert Mak, Meir Friedlander and Milan Sečujski
- 17:10-17:30 **Detecting Laughter and Filler Events by Time Series Smoothing with Genetic Algorithms**  
Gábor Gosztolya
- 17:30-17:50 **Bio-Inspired Sparse Representation of Speech and Audio Using Psychoacoustic Adaptive Matching Pursuit**  
Alexey Petrovsky, Vadzim Herasimovich and Alexander Petrovsky
- 17:50-18:10 **Statistical analysis of acoustical parameters in the voice of children with juvenile dysphonia**  
Miklós Gábor Tulics, Ferenc Kazinczi and Klára Vicsi
- 18:10-18:30 **Precise estimation of harmonic parameter trend and modification of a speech signal**  
Andrey Barabanov, Evgenij Vikulov and Valentin Magerkin

19:30-21:30 **GALA DINNER ON THE DANUBE**

## 26 08 2016 | FRIDAY

9:00-10:00 *Keynote speech:*

HADRIANUS B

**Machine Processing of Dialogue States; Speculations on Conversational Entropy****Nick Campbell**, *Trinity College Dublin, Ireland*  
*Chair: Rodmonga Potapova, MSLU, Russia*10:00-10:30 *Coffee break*

10:30-12:30

**NATURAL LANGUAGE PROCESSING**

HADRIANUS B

*Chair: Rodmonga Potapova, MSLU, Russia*

10:30-10:50

**Text Classification in the Domain of Applied Linguistics as Part of a Pre-editing Module for Machine Translation Systems****Ksenia Oskina**

10:50-11:10

**Backchanneling via Twitter Data for Conversational Dialogue Systems****Michimasa Inaba** and **Kenichi Takahasi**

11:10-11:30

**Measuring prosodic entrainment in Italian collaborative game-based dialogues****Michelina Savino**, **Loredana Lapertosa**, **Alessandro Caffò** and **Mario Refice**

11:30-11:50

**A Preliminary Exploration of Group Social Engagement Level Recognition in Multiparty Casual Conversation****Yuyun Huang**, **Emer Gilmartin**, **Benjamin R. Cowan** and **Nick Campbell**

11:50-12:10

**Interaction Quality as a Human-Human Task-Oriented Conversation Performance****Anastasiia Spirina**, **Olesia Vaskovskaia**, **Maxim Sidorov** and **Alexander Schmitt**

12:10-12:30

**A comparison of acoustic features of speech of typically developing children and children with autism spectrum disorders****Elena Lyakso**, **Olga Frolova** and **Aleksey Grigorev**

12:30-14:00

*Lunch*

APICIUS RESTAURANT

14:00-16:00

## SPECOM POSTER SESSION II

*Chair: Nick Campbell, Trinity College Dublin, Ireland*

### **P1: Polybasic Attribution of Social Network Discourse**

Rodmonga Potapova and Vsevolod Potapov

### **P2: Detecting Filled Pauses and Lengthenings in Russian Spontaneous Speech using SVM**

Vasilisa Verkhodanova and Vladimir Shapranov

### **P3: Multimodal Perception of Aggressive Behavior**

Rodmonga Potapova and Liliya Komalova

### **P4: Designing High-Coverage Multi-Level Text Corpus for Non-Professional-Voice Conservation**

Markéta Jůzová, Daniel Tihelka and Jindřich Matoušek

### **P5: A Linguistic Interpretation of the Atom Decomposition of Fundamental Frequency Contour for American English**

Tijana Delić, Branislav Gerazov, Branislav Popović and Milan Sečujski

### **P6: Emotional speech of 3-years old children: norm-risk-deprivation**

Olga Frolova and Elena Lyakso

### **P7: Profiling a Set of Personality Traits of a Text's Author: a Corpus-Based Approach**

Tatiana Litvinova, Olga Zagorovskaya, Olga Litvinova and Pavel Seredin

### **P8: Unsupervised trained functional discourse parser for e-learning materials scaffolding**

Varvara Krayvanova and Svetlana Duka

### **P9: Low Inter-Annotator Agreement in Sentence Boundary Detection and Personality**

Anton Stepikhov and Anastassia Loukina

**P10: Modeling Imperative Utterances in Russian Spoken Dialogue: Verb-Central Quantitative Approach**  
Olga Blinova

**P11: An Exploratory Study on Sociolinguistic Variation of Spoken Russian**

Natalia Bogdanova-Beglarian, Tatiana Sherstinova, Olga Blinova and Gregory Martynenko

**P12: Speech Acts Annotation of Everyday Conversations in the ORD corpus of Spoken Russian**

Tatiana Sherstinova

**P13: Design of a Speech Corpus for Research on Cross-Lingual Prosody Transfer**

Milan Sečujski, Branislav Gerazov, Tamás Gábor Csapó, Vlado Delić, Philip Garner, Aleksandar Gjoreski, David Guennec, Zoran Ivanovski, Aleksandar Melov, Géza Németh, Ana Stojković and György Szaszák

**P14: Sociolinguistic Extension of the ORD Corpus of Russian Everyday Speech**

Natalia Bogdanova-Beglarian, Tatiana Sherstinova, Olga Blinova, Olga Ermolova, Ekaterina Baeva, Gregory Martynenko and Anastasia Ryko

**P15: Detecting state of aggression in sentences using CNN**

Denis Gordeev

**P16: Tonal Specification of Perceptually Prominent Non-Nuclear Pitch Accents in Russian**

Nina Volskaya and Tatiana Kachkovskaia

**P17: Lexical Stress in Punjabi and its Representation in PLS**

Swaran Lata, Swati Arora and Simerjeet Kaur

**P18: Comparative analysis of classifiers for automatic language recognition in spontaneous speech**

Konstantin Simonchik, Sergey Novoselov and Galina Lavrentyeva

**P19: Semi-automatic Speaker Verification System Based on Analysis of Formant, Durational and Pitch Characteristics**

Elena Bulgakova and Aleksei Sholohov

**P20: Scores Calibration in Speaker Recognition Systems**

Andrey Shulipa, Sergey Novoselov and Yuri Matveev

**P21: Speech Features Evaluation for Small Set Automatic Speaker Verification Using GMM-UBM System**

Ivan Rakhmanenko and Roman Meshcheryakov

**P22: Approaches for Out-of-Domain Adaptation to Improve Speaker Recognition Performance**

Andrey Shulipa, Sergey Novoselov and Aleksandr Melnikov

**P23: Prosody Analysis of Malay Language Storytelling Corpus**

Izzad Ramli, Noraini Seman, Norizah Ardi and Nursuriati Jamil

**P24: Finding speaker position under difficult acoustic conditions**

Evgeniy Shuranov, Alexander Lavrentyev, Alexey Kozlyayev and Valeriya Volkovaya

**P25: Scenarios of Multimodal Information Navigation Services for Users in Cyberphysical Environment**

Irina Vatamaniuk, Dmitriy Levonevskiy, Anton Saveliev and Alexander Denisov

16:00-16:30 *Coffee break*

16:30-18:30

**SPEAKER AND LANGUAGE  
RECOGNITION**

HADRIANUS B

*Chair: Iosif Mporas, University of Hertfordshire, UK*

16:30-16:50

**Investigation of Segmentation in  
i-Vector based Speaker Diarization of  
Telephone Speech****Zbynek Zajic, Marie Kunesova and  
Vlasta Radova**

16:50-17:10

**Improving Robustness of Speaker  
Verification by Fusion of Prompted  
Text-Dependent & Text-Independent  
Operation Modalities****Iosif Mporas, Saeid Safavi and  
Reza Sotudeh**

17:10-17:30

**Convolutional Neural Network in the  
Task of Speaker Change Detection****Marek Hruz and Marie Kunesova**

17:30-17:50

**Online Biometric Identification With  
Face Analysis in Web Applications****Gerasimos Arvanitis,  
Konstantinos Moustakas and  
Nikos Fakotakis**

17:50-18:10

**Language Identification using Time  
Delay Neural Network D-Vector on  
Short Utterances****Maxim Tkachenko, Alexander Yamshinin,  
Nikolay Luibimov, Mikhail Kotov and  
Marina Nastasenko**

18:10-18:30

**On Individual Polyinformativity of  
Speech and Voice Regarding Speaker's  
Auditive Attribution (Forensic  
Phonetic Aspect)****Rodmonga Potapova and  
Vsevolod Potapov**

18:30-18:40

**CLOSING CEREMONY****27 08 2016** | SATURDAY

09:00-15:00

**BUDAPEST TOUR**

## VENUE

---

The conference will be organized in the Aquincum Hotel Budapest. This Hotel is located in a prime area alongside the river Danube, on the Buda side of this magnificent city and across the river from the serene Margaret Island, with its famous thermal waters. The Hotel is surrounded by medieval streets, wine bars, restaurants and its own green park. The main feature of this business and leisure property is its well renowned natural spa, which derives its therapeutic water directly from Margaret Island. With its panoramic views of the Buda Hills, 310 guestrooms, restaurant and bars, 14 versatile meeting rooms and 1,660 square metre Spa, the hotel provides a relaxed atmosphere for leisure visitors and a comfortable business environment for corporate guests.

### AQUINCUM HOTEL BUDAPEST

H-1036 Budapest, Árpád fejedelem útja 94. Hungary

Phone: 36 1 436 4100

<http://www.aquincumhotel.com>

GPS coordinates: 47.53805,19.046586

## SOCIAL EVENTS

---

### WELCOME RECEPTION

**Monday, August 23, 2016**

Registered participants of the conference are welcome to take part at the Welcome Reception that will be held at the conference venue. The reception is included in the registration fee, extra ticket for non registered participants can be purchased on-site.

*Price is 30 EUR/person.*

## **GALA DINNER**

**Thursday, August 25, 2016**

Registered participants of the conference are welcome to take part at the Gala Dinner that will be held on boat „Ludwig” with a 2-hour boat trip on the river Danube. A dinner will be served for you on board. More information regarding meeting point and time will be available later at the registration desk of SPECOM 2016.

The Gala Dinner is included in the registration fee for one person. Extra ticket for non registered participants can be ordered at the registration desk.

*Price is 90 EUR/person.*

## **HALF DAY GRAND CITY TOUR**

**Saturday, August 27, 2016** | 10.00-14.00

All participants are invited to take part at Half Day Grand City Tour in Budapest by bus. The tour is not included in the registration fee. Ticket for the tour can be ordered at the registration desk till August 25, 12.00 a.m. The tour will be held in case of minimum 10 people.

### **TOUR DESCRIPTION**

Meeting point is in front of The Aquincum Hotel (venue of SPECOM 2016) at 9.45. The bus leaves at 10.00. First, you take the Margaret Bridge and drive over to Buda. You stop in the Castle District and during a short walk you can see the main attractions of the area. You walk to the Matthias Church and the Fishermen’s Bastion (from where you can enjoy the beautiful panorama). Next, you drive to the Gellért Hill (Citadel) and show you the most spectacular view of Budapest. Then the bus takes you across the Elisabeth Bridge to Pest and show you the famous Central Market Hall, followed by the largest Synagogue of Europe and the City Park. You pass by Europe’s largest thermal spa and the Budapest Zoo, after which you stop at the Heroes’ Square (with statues of the most famous Hungarian kings and dukes). Next you take the Andrásy Avenue to downtown Pest passing by the Opera House and St Stephen’s Basilica. Then you get off the bus again and take an interior visit of the impressive neo-gothic

House of Parliament (guided tour incl.). The tour ends in the city centre about at 14.00.

## **IMPORTANT INFORMATION**

Due to the different admission fees for EU and Non EU citizens at the Parliament there are different prices for EU and Non EU citizens.

*Price for EU citizens is 32 EUR/person,  
for Non EU citizens is 42 EUR/person.*

Please make sure to choose the right price in the registration system. Interior visit of the parliament is possible only with passport or ID card.

*Cancellation for Parliament visit: 10 EUR/person*

## **ABOUT HUNGARY**

Situated at the crossroad of East and West Europe, sustaining original traditions and culture in the course of a unique history of glories and tragedies Hungary offers special regions and monuments on the UNESCO World Heritage worth to be visited.

## **ABOUT BUDAPEST**

There are those who fall in love with the city at first sight and those who only warm up after a longer relationship, still everyone agrees that it is one of the most beautifully situated cities in the world. The great river Danube cuts it in two, and separates the hills and valleys of the western, Buda side from the flat, Pest side in the east. The settlement of Buda is as old as the Conquest itself (896), but it only started to develop in the 13<sup>th</sup> century when King Béla IV built a castle on the hill for protection against the Mongol attacks. The court moved to Buda in 1347, and the castle was enlarged into a palace in the Gothic style of the time. During the reign of King Matthias it became a dazzling Renaissance royal residence. Partially based upon its ruins the palace was enlarged in its present baroque style. The city Budapest was born in 1873 with the unification of Buda, Óbuda and Pest, for which a new, representative royal palace was built. Out of the seven road bridges four are part of the World Heritage.

# USEFUL INFORMATION ABOUT HUNGARY

---

## LOCAL TRANSPORTATION

To discover Budapest you can use different means of transport such as metro, bus, tram, trolley bus and HÉV (suburban train).

The city centre is linked to the City Park by the 100-year-old underground railway, the first on continental Europe. The funicular railway takes you up to the Buda Castle, and the chairlift and the cogwheel railway to the Buda Hills.

Tickets must be bought in advance from ticket offices, tobacconists', news agents' or automatic machines.

Tickets must be validated on the vehicle or at the entrance to metro stations. Daily, weekly and monthly season tickets are available or you can use the Budapest Card as a ticket.

## TRANSPORT TO THE AIRPORT

The service provides the transfer with a boarding capacity of 8 to 10, and 30 to 50 passengers. The Airport Shuttle-Minibus Desks are to be found at every terminal and welcome the arriving guests to Hungary at the „Gates of the Country”. All Minibuses arrive to and depart from the Terminals' Main Entrance. Reservations can be made in person at the Airport Shuttle-Minibus Desks or 24 hours before your flight departure.

## LANGUAGE

Official language of the country is Hungarian, but English and German are widely spoken.

## CLIMATE

The climate is continental. The weather in August is usually warm, the average daytime temperature is 25° C.

## ELECTRICITY

Connector Two-pin electric outlets (230 V, 50 Hz) are provided, type C.

## CURRENCY

Currency / EUR = 310 HUF. Though Hungary is not a member of the Euro Zone, you may use EUR cash for payment in hotels and some shops, supermarkets and petrol stations. Please see special signs indicating this possibility.

## BANKING

In Hungary banks are usually open between 8.00 - 16.00 on weekdays, although some close an hour earlier on Fridays. With the exception of some shopping mall bank branches, Hungarian banks are not open on Saturdays. ATM machines and currency exchange machines are available throughout the country. Credit cards – Diners Club, Euro/MasterCard and VISA – can be used to withdraw cash from banks and ATM machines and to pay bills in hotels, restaurants and shops.

## TIME ZONE

Clocks are on CEST (Central European Summer Time) UTC/GMT +2 hours.

## BUDAPEST CARD

With the Budapest Card you can use the Airport Minibus with a discount and you can travel free on public transport in the capital. It ensures free or reduced priced entrance to museums, the Zoo, the Fun Fair and the Buda caves. Sightseeing tours and numerous cultural events are also cheaper with it and certain restaurants, cafés and shops give reductions to card holders. The Budapest Card is available from Tour inform offices, bus and metro ticket offices and many travel agencies, hotels and museums.

## TAXIS

Taxis have the word „Taxi” written on them and have yellow registration number plates. Be careful to choose a well marked car with logos and not just a ‚Taxi’ sign on the top! By far the most common complaint of tourists in Budapest is being „taken for a ride” in a taxi

and charged exorbitant fees.

It is compulsory for taxis to use a faremeter that can give a receipt. The price charged is calculated according to the distance travelled and will also include a fixed booking fee and (if appropriate) a waiting fee.

It is customary to give a tip of ten percent, depending on the level of satisfaction.

Taxis are often cheaper if you call ahead than hailing one on the street.

## **SPECOM HISTORY**

---

### **SPECOM-2016, Budapest, Hungary**

SPECOM-2015, Athens, Greece

SPECOM-2014, Novi Sad, Serbia

SPECOM-2013, Pilsen, Czech Republic

SPECOM-2011, Kazan

SPECOM-2009, St. Petersburg

SPECOM-2007, Moscow

SPECOM-2006, St. Petersburg

SPECOM-2005, Patras, Greece

SPECOM-2004, St. Petersburg

SPECOM-2003, Moscow

SPECOM-2002, St. Petersburg

SPECOM-2001, Moscow

SPECOM-2000, St. Petersburg

SPECOM-1999, Moscow

SPECOM-1998, St. Petersburg

SPECOM-1997, Romania

SPECOM-1996, St. Petersburg











Registration Secretariat

## **HTEnet Innovációs Nonprofit Kft.**

Address: H-1051 Bajcsy-Zsilinszky út 12.

Budapest, Hungary

Phone: +36 1 353 1027

E-mail: [info@hte.hu](mailto:info@hte.hu)

---

<http://www.specom2016.hte.hu>