

**22nd International Conference on Speech and Computer
5th International Conference on Interactive Collaborative Robotics**

SPECOM & ICR 2020

www.specom.nw.ru/2020

Joint Conference Program

7-9 October 2020

St. Petersburg, Russia => Online



SPECOM 2020

ICR 2020

Organizers



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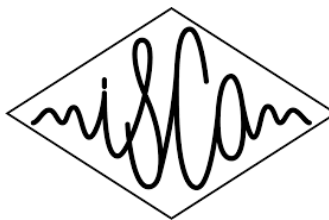


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SPECOM and ICR History

- 22nd SPECOM-2020 and 5th ICR-2020, Online conferences
- 21st SPECOM-2019 and 4th ICR-2019, Istanbul, Turkey
- 20th SPECOM-2018 and 3rd ICR-2018, Leipzig, Germany
- 19th SPECOM-2017 and 2nd ICR-2017, Hatfield, United Kingdom
- 18th SPECOM-2016 and 1st ICR-2016, Budapest, Hungary
- 17th SPECOM-2015, Athens, Greece
- 16th SPECOM-2014, Novi Sad, Serbia
- 15th SPECOM-2013, Pilsen, Czech Republic
- 14th SPECOM-2011, Kazan, Russia
- 13th SPECOM-2009, St. Petersburg, Russia
- 12th SPECOM-2007, Moscow, Russia
- 11th SPECOM-2006, St. Petersburg
- 10th SPECOM-2005, Patras, Greece
- 9th SPECOM-2004, St. Petersburg
- 8th SPECOM-2003, Moscow
- 7th SPECOM-2002, St. Petersburg
- 6th SPECOM-2001, Moscow
- 5th SPECOM-2000, St. Petersburg
- 4th SPECOM-1999, Moscow
- 3rd SPECOM-1998, St. Petersburg
- 2nd SPECOM-1997, Cluj-Napoca
- 1st SPECOM-1996, St. Petersburg

Organizers

The SPECOM and ICR conferences are organized by

- St. Petersburg Institute for Informatics and Automation of the Russian Academy of Sciences (SPIIRAS), St. Petersburg Federal Research Center of the Russian Academy of Sciences (SPC RAS), St. Petersburg, Russia

in cooperation with

- Moscow State Linguistic University (MSLU, Moscow, Russia)
- Technical University of Munich (TUM, Munich, Germany)

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Invited Speaker

Prof. Isabel Trancoso

University of Lisbon and INESC-ID, Lisbon, Portugal



Isabel Trancoso is a full professor at IST (Univ. Lisbon), and the President of the Scientific Council of INESC-ID. She received the Licenciado, Mestre, Doutor and Agregado degrees in Electrical and Computer Engineering from IST in 1979, 1984, 1987 and 2002, respectively. Her research covers many different topics in spoken language processing. She was the Chair of the ECE Department of IST. She was elected Editor in Chief of the IEEE Transactions on Speech and Audio Processing, Member-at-Large of the IEEE Signal Processing Society Board of Governors, and President of ISCA (International Speech Communication Association). She chaired the INTERSPEECH 2005 conference. She was a member of the IEEE Fellows Committee, and Vice-President of the ELRA Board. She chaired the IEEE James Flanagan Award Committee, the ISCA Distinguished Lecturer Selection Committee, and the Fellow Evaluation Committee of the Signal Processing Society of IEEE. She currently integrates the Editorial Board of the Proceedings of IEEE, and the ISCA Advisory Council, and chairs the ISCA Fellow Selection Committee. She received the 2009 IEEE Signal Processing Society Meritorious Service Award. She was elevated to IEEE Fellow in 2011, and to ISCA Fellow in 2014.

Keynote Lecture

Profiling Speech for Clinical Applications

Ubiquitous speech processing was a vision at the beginning of our century, but it is a reality now. The massive increase in the use of speech as an input and output modality comes together with a massive increase in the use of speech analytics for many different applications, all fueled by the recent progress in machine learning. Health is a major application area for speech analytics. Profiling humans from their voices for clinical applications has enormous potential, going much beyond the typical speech and language disorders, namely in what concerns diseases affecting respiratory organs, mood disorders, and neurodegenerative diseases. Most of the research in this area involves relatively small datasets collected in very controlled conditions, raising questions of robustness, in terms of scaling to in-the-wild data, and dealing with data imbalance. This talk will not only address these questions but also the privacy concerns posed by the possibility of mining speech signals for health related cues, in a world where speech data and the info that may be extracted from it may be legally regarded as Personable Identifiable Information.

Invited Speaker

Dr. Ilshat Mamaev

Karlsruhe Institute of Technology, Karlsruhe, Germany



Ilshat Mamaev studied Computer Science and Mathematics at Ufa State Aviation Technical University (Russia), was awarded an international scholarship by DAAD and went to Karlsruhe Institute of Technology (Germany) in 2007. He has completed his Ph.D. in 2010 with a thesis “Robot Control and Image Processing for Bin-Picking Problem using PMD-Camera”. His research topics include on-line trajectory generation, hybrid control, safe human-robot interaction, and robotic perception. Dr. Mamaev has contributed to the development of a 3-finger industrial gripper in cooperation with SCHUNK GmbH. In the EU AAL project EXO-LEGS, he was leading the development of a dynamic control system for exoskeletons. In an ongoing project, QBIIK autonomous mobile robot with proximity perception, a custom gripper system, and an uncoupled human-robot interface is being developed. In 2019, Dr. Mamaev held a keynote speech at the World IoT Expo 2019 - China-Europe IoT Summit.

Keynote Lecture

A Concept for a Human-Robot Collaboration Workspace using Proximity Sensors

Human-Robot Collaboration (HRC) poses new challenges for robotic perception systems. We propose a concept for Human-Robot Collaboration workspace augmented with capacitive proximity sensors and present methods for camera-less multi-human/multi-object detection, localization, and tracking based on proximity feedback. A gamified Human-Robot Collaboration experiment realizing shell-game is designed for evaluation purposes. Experimental results performed in the presented Human-Robot Collaboration setup verify that the proposed methods are able to detect, localize, and track objects using only the Capacitive Proximity Sensors feedback.

Keynote Lecture by General Sponsor



Huawei's Speech Enhancement, Processing and Synthesis Pipeline on Devices

Speakers

D.Sc. Alexey Petrovsky

Huawei, Russian Research Center, Moscow Media Algorithm Laboratory, Russia

Dr. Sergey Bankevich

Huawei, Russian Research Center, St. Petersburg CBG AI Laboratory, Russia

Dr. Evgeniy Shuranov

Huawei, Russian Research Center, St. Petersburg CBG AI Laboratory, Russia

Program at a Glance

Day 0: 6 October 2020, Tuesday		
13:00-18:00	Zoom setup and test connections	
Day 1: 7 October 2020, Wednesday		
09:30-10:00	Zoom connection	
10:00-10:20	Opening ceremony (Room 1)	
10:20-11:20	Keynote lecture by Prof. ISABEL TRANCOSO "Profiling Speech for Clinical Applications" (Room 1)	
11:20-12:20	Keynote lecture by HUAWEI (Russian Research Center) "Huawei's Speech Enhancement, Processing and Synthesis Pipeline on Devices" (Room 1)	
12:20-12:40	Short break	
12:40-13:40	Keynote lecture by Dr. ILSHAT MAMAEV "A Concept for a Human-Robot Collaboration Workspace using Proximity Sensors" (Room 1)	
13:40-14:00	Group photo in Zoom (Room 1)	
14:00-15:00	Lunch break & Video Entertainment - The State enfilade of the Winter Palace. Excursion (Room 1)	
15:00-17:00	Automatic Speech Recognition (Room 1) SPECOM Session 1 (6 full presentations, 20 min)	Robot Vision (Room 2) ICR Session 1 (6 full presentations, 20 min)
17:00-17:20	Short break	
17:20-18:20	Voice Biometrics (Room 1) SPECOM Session 2 (6 short presentations, 10 min)	Cooperative Robots (Room 2) ICR Session 2 (3 full presentations, 20 min)
Day 2: 8 October 2020, Thursday		
09:30-10:00	Zoom connection	
10:00-12:00	Computational Paralinguistics (Room 1) SPECOM Session 3 (6 full presentations, 20 min)	Collaborative Robots (Room 2) ICR Session 3 (6 full presentations, 20 min)
12:00-12:20	Short break	
12:20-13:50	Spoken Language Processing (Room 1) SPECOM Session 4 (9 short presentations, 10 min)	Robot Control Systems (Room 2) ICR Session 4 (9 short presentations, 10 min)
13:50-15:00	Lunch break & Video Entertainment - Giselle ballet. Mariinsky theatre	
15:00-17:00	Spoken Language Processing (Room 1) SPECOM Session 5 (6 full presentations, 20 min)	Robot Navigation (Room 2) ICR Session 5 (6 full presentations, 20 min)
17:00-17:20	Short break	
17:20-18:40	Speech and Audio Signal Processing (Room 1) SPECOM Session 6 (4 full presentations, 20 min)	
Day 3: 9 October 2020, Friday		
09:30-10:00	Zoom connection	
10:00-12:00	Speech and Language Resources (Room 1) SPECOM Session 7 (6 full presentations, 20 min)	
12:00-12:20	Short break	
12:20-13:50	Speech and Language Resources (Room 1) SPECOM Session 8 (9 short presentations, 10 min)	
13:50-15:00	Lunch break & Video entertainment - The Sleeping Beauty ballet. Mariinsky theatre (Room 1)	
15:00-17:00	Natural Language Processing (Room 1) SPECOM Session 9 (6 full presentations, 20 min)	
17:00-17:20	Short break	
17:20-18:30	Natural Language Processing (Room 1) SPECOM Session X (7 short presentations, 10 min)	
18:30-18:40	Closing ceremony	

Detailed Scientific Program

Day 0: 6 October 2020, Tuesday		
13:00-18:00	Zoom setup and test connections	
Day 1: 7 October 2020, Wednesday		
09:30-10:00	Zoom connection	
10:00-10:20	Opening ceremony (Room 1)	
10:20-11:20	“Profiling Speech for Clinical Applications” Keynote lecture by Prof. ISABEL TRANCOSO Chair: Alexey Karpov (Room 1)	
11:20-12:20	“Huawei's Speech Enhancement, Processing and Synthesis Pipeline on Devices” Keynote lecture by HUAWEI (Russian Research Center) Chair: Alexey Karpov (Room 1)	
12:20-12:40	Short break	
12:40-13:40	“A Concept for a Human-Robot Collaboration Workspace using Proximity Sensors” Keynote lecture by Dr. ILSHAT MAMAEV Chair: Anton Saveliev (Room 1)	
13:40-14:00	Group photo in Zoom (Room 1)	
14:00-15:00	Lunch break & Video Entertainment - The State enfilade of the Winter Palace. Excursion (Room 1)	
15:00-17:00	Automatic Speech Recognition (Room 1) SPECOM Session 1 (6 full presentations, 20 min) Chair: Oliver Jokisch	Robot Vision (Room 2) ICR Session 1 (6 full presentations, 20 min) Chair: Ilshat Mamaev
15:00-15:20	CTC-Segmentation of Large Corpora for German End-to-End Speech Recognition (Ludwig Kürzinger, Dominik Winkelbauer, Lujun Li, Tobias Watzel, Gerhard Rigoll)	Person-Following Algorithm Based on Laser Range Finder and Monocular Camera Data Fusion for a Wheeled Autonomous Mobile Robot (Elvira Chebotareva, Ramil Safin, Kuo-Hsien Hsia, Alexander Carballo, Evgeni Magid)
15:20-15:40	Synchronized Forward-Backward Transformer for End-to-End Speech Recognition (Tobias Watzel, Ludwig Kürzinger, Lujun Li, Gerhard Rigoll)	Spatial Resolution-Independent CNN-based Person Detection in Agricultural Image Data (Alexander Leipnitz, Tilo Strutz, Oliver Jokisch)
15:40-16:00	Experimenting with Attention Mechanisms in Joint CTC-Attention Models for Russian Speech Recognition (Irina Kipyatkova, Nikita Markovnikov)	Evaluation of Image Synthesis for Automotive Purposes (Vaclav Divis, Marek Hruz)
16:00-16:20	Exploration of End-to-End ASR for OpenSTT – Russian Open Speech-to-Text Dataset (Andrei Andrusenko, Aleksandr Laptev, Ivan Medennikov)	A Modular Deep Learning Architecture for Anomaly Detection in HRI (Gergely Söti, Ilshat Mamaev, Björn Hein)
16:20-16:40	Increasing the Accuracy of the ASR System by Prolonging Voiceless Phonemes in the Speech of Patients using the Electrolarynx (Petr Stanislav, Josef V. Psutka, Josef Psutka)	Indoor vs. Outdoor Scene Classification for Mobile Robots (Petr Neduchal, Ivan Gruber, Miloš Železný)
16:40-17:00	Recognition Performance of Selected Speech Recognition APIs – A Longitudinal Study (Ingo Siegert, Yamini Sinha, Oliver Jokisch, Andreas Wendemuth)	Accurate Autonomous UAV Landing Using Vision-based Detection of ArUco-Marker (Igor Lebedev, Aleksei Erashov, Aleksandra Shabanova)
17:00-17:20	Short break	

17:20-18:20	Voice Biometrics (Room 1) SPECOM Session 2 (6 short presentations, 10 min) Chair: Yuri Matveev	Cooperative Robots (Room 2) ICR Session 2 (3 full presentations, 20 min) Chair: Evgeni Magid
17:20-17:30	Diarization based on Identification with x-vectors (Zbynek Zajic, Josef V. Psutka, Ludek Muller) – VIDEO	Humanoid Robot Soccer Player for RoboCup Junior League Competitions (Evgeny Shandarov, Ilya Shabalin, Irina Prokazina, Vladimir Zhelonkin, Egor Polyntsev, Alina Sogomonyants)
17:30-17:40	Score Normalization of x-vector Speaker Verification System for Short-duration Speaker Verification Challenge (Ivan Rakhmanenko, Evgeny Kostyuchenko, Evgeny Choynzonov, Lidiya Balatskaya, Alexander Shelupanov)	
17:40-17:50	Transfer Learning in Speaker’s Age and Gender Recognition (Maxim Markitantov)	Planning to Score a Goal in Robotic Football with Heuristic Search (Ivan Khokhlov, Vladimir Litvinenko, Ilya Ryakin and Konstantin Yakovlev)
17:50-18:00	Comparison of Deep Learning Methods for Spoken Language Identification (Can Korkut, Ali Haznedaroglu, Levent Arslan) – VIDEO	
18:00-18:10	Evaluation of Voice Mimicking using i-vector Framework (Rajeev Rajan, Abhijith Girish, Adharsh Sabu, Akshay Prasannan Latha) – VIDEO	Cooperative Guidance for Waypoint Following of Distributed Multi-UAV System (Tagir Muslimov, Rustem Munasypov)
18:10-18:20	Preliminary Investigation of Potential Steganographic Container Localization (Rodmonga Potapova, Andrey Dzhunkovskiy)	
Day 2: 8 October 2020, Thursday		
09:30-10:00	Zoom connection	
10:00-12:00	Computational Paralinguistics (Room 1) SPECOM Session 3 (6 full presentations, 20 min) Chair: Heysem Kaya	Collaborative Robots (Room 2) ICR Session 3 (6 full presentations, 20 min) Chair: Sergey Jatsun
10:00-10:20	Multi-corpus Experiment on Continuous Speech Emotion Recognition: Convolution or Recurrence? (Manon Macary, Martin Lebourdais, Marie Tahon, Yannick Estève, Anthony Rousseau)	Collision Detection in the Work of Collaborative Robots using an Intelligent System (Dmitriy Dobrynin)
10:20-10:40	Learning an Unsupervised and Interpretable Representation of Emotion from Speech (Siwei Wang, Catherine Soladié, Renaud Séguier)	Modeling of Human-Machine Interaction in an Industrial Exoskeleton Control System (Sergey Jatsun, Andrei Malchikov, Oksana Loktionova, Andrey Yatsun)
10:40-11:00	Speech Emotion Recognition using Spectrogram Patterns as Features (Umut Avci) – VIDEO	Method of Formation of Reference Movement Speed of Working Tool of Multilink Manipulator (Vladimir Filaretov, Anton Gubankov, Igor Gornostaev) – VIDEO
11:00-11:20	Predicting a Cold from Speech using Fisher Vectors; SVM and XGBoost as Classifiers (José Vicente Egas-López, Gábor Gosztolya) – VIDEO	Distributing Tasks in Multi-Agent Robotic System for Human-Robot Interaction Applications (Rinat Galin, Roman Meshcheryakov, Saniya Kamesheva)
11:20-11:40	Hate Speech Detection Using Transformer Ensembles on the HASOC Dataset (Pedro Alonso, Rajkumar Saini, György Kovács)	Fast Face Features Extraction Based on Deep Neural Networks for Mobile Robotic Platforms (Maksim Letenkov, Dmitriy Levonevskiy)
11:40-12:00	Automated Destructive Behavior State Detection on the 1D CNN-based Voice Analysis (Anastasia Iskhakova, Daniyar Wolf, Roman Meshcheryakov)	Gesture-Based Intelligent User Interface for Control of an Assistive Mobile Information Robot (Ildar Kagiroy, Dmitry Ryumin, Miloš Železný)
12:00-12:20	Short break	

12:20-13:50	Spoken Language Processing (Room 1) SPECOM Session 4 (9 short presentations, 10 min) Chair: Irina Kipyatkova	Robot Control Systems (Room 2) ICR Session 4 (9 short presentations, 10 min) Chair: Ilya Lebedev
12:20-12:30	Mixing Synthetic and Recorded Signals for Audio-book Generation (Meysam Shamsi, Nelly Barbot, Damien Lolive, Jonathas Chevelu)	Data Exchange Method for Wireless UAV-aided Communication in Sensor Systems and Robotic Devices (Alexander Denisov, Aleksandra Shabanova, Oleg Sivchenko)
12:30-12:40	Uncertainty of Phone Voicing and its Impact on Speech Synthesis (Daniel Tihelka, Zdenek Hanzlicek, Markéta Jůzová) – VIDEO	Approach to Obstacle Localization for Robot Navigation in Agricultural Territories (Egor Aksamentov, Marina Astapova, Elizaveta Usina)
12:40-12:50	Synthetic Speech Evaluation by Differential Maps in Pleasure-Arousal Space (Jiří Přibil, Anna Přibilová, Jindřich Matoušek) – VIDEO	Q-learning of Spatial Actions for Hierarchical Planner of Cognitive Agents (Gleb Kiselev, Aleksandr Panov)
12:50-13:00	Audio Adversarial Examples for Robust Hybrid CTC/Attention Speech Recognition (Ludwig Kürzinger, Edgar Ricardo Chavez Rosas, Lujun Li, Tobias Watzel, Gerhard Rigoll)	An Estimation of Distributed Algorithms of the Fault-Tolerant Management in the Robot Groups (Eduard Melnik, Anna Klimenko, Irina Safronenkova)
13:00-13:10	MP3 Compression to Diminish Adversarial Noise in End-to-End Speech Recognition (Iustina Andronic, Ludwig Kürzinger, Edgar Ricardo Chavez Rosas, Gerhard Rigoll, Bernhard U. Seeber)	Distributed Methods for Autonomous Robot Groups Fault-Tolerant Management (Igor Kalyaev, Eduard Melnik, Anna Klimenko)
13:10-13:20	Lipreading with LipsID (Miroslav Hlaváč, Ivan Gruber, Miloš Železný, Alexey Karpov)	Approach to the State Analysis of Industry 4.0 Nodes based on Behavioral Patterns (Viktor Semenov, Mikhail Sukhoparov, Ilya Lebedev) – VIDEO
13:20-13:30	Can We Detect Irony in Speech Using Phonetic Characteristics Only? - Looking for a Methodology of Analysis (Pavel Skrelin, Uliana Kochetkova, Vera Evdokimova, Daria Novoselova)	Algorithms of Posteriori Multi-Objective Optimization for Robotic Gripper Design (Quyen Vu, Andrey Ronzhin)
13:30-13:40	Automatic Prediction of Word form Reduction in Russian Spontaneous Speech (Maria Dayter, Elena Riekhakaynen)	Mathematical Modelling of Control and Simultaneous Stabilization of 3-DOF Aerial Manipulation System (Vinh Nguyen, Anton Saveliev, Andrey Ronzhin)
13:40-13:50	Genuine Spontaneous vs Fake Spontaneous Speech: in Search of Distinction (Ekaterina Razubaeva, Anton Stepikhov)	Modeling of Increased Rigidity of Industrial Manipulator (Eugene Larkin, Alexey Bogomolov, Maxim Antonov)
13:50-15:00	Lunch break & Video Entertainment - Giselle ballet. Mariinsky theatre	
15:00-17:00	Spoken Language Processing (Room 1) SPECOM Session 5 (6 full presentations, 20 min) Chair: Daniil Kocharov	Robot Navigation (Room 2) ICR Session 5 (6 full presentations, 20 min) Chair: Konstantin Yakovlev
15:00-15:20	Does A Priori Phonological Knowledge Improve Cross-Lingual Robustness of Phonemic Contrasts? (Lucy Skidmore, Alexander Gutkin)	On the Problems of SLAM Simulation for Mobile Robots in the Arctic Conditions (Elvira Chebotareva, Tatyana Tsoy, Bulat Abbyasov, Jamila Mustafina, Edgar A. Martinez-Garcia, Mikhail Svinin, Yang Bai)
15:20-15:40	Interactivity-based Quality Prediction of Conversations with Transmission Delay (Thilo Michael, Sebastian Möller)	A Combination of Theta*, ORCA and Push and Rotate for Multi-agent Navigation (Stepan Dergachev, Konstantin Yakovlev, Ryhor Prakapovich)
15:40-16:00	Leverage Unlabeled Data for Abstractive Speech Summarization with Self-Supervised Learning and Back-Summarization (Paul Tardy, Louis de Seynes, François Hernandez, Vincent Nguyen, David Janiszek, Yannick Estève)	A*-based Path Planning Algorithm for Swarm Robotics (Valeriia Izhboldina, Elizaveta Usina, Irina Vatamaniuk)

16:00-16:20	Digital Rhetoric 2.0: How to Train Charismatic Speaking with Speech-melody Visualization Software (<i>Oliver Niebuhr, Jana Neitsch</i>)	Comparison of ROS-based Monocular Visual SLAM Methods: DSO, LDSO, ORB-SLAM2 & DynaSLAM (<i>Eldar Mingachev, Roman Lavrenov, Tatyana Tsoy, Fumitoshi Matsuno, Mikhail Svinin, Jackrit Suthakorn, Evgeni Magid</i>)
16:20-16:40	Dealing with Newly Emerging OOVs in Broadcast Programs by Daily Updates of the Lexicon and Language Model (<i>Petr Cerva, Veronika Volna, Lenka Weingartova</i>) – VIDEO	Energy-efficient Path Planning Algorithm on Three-dimensional Large-scale Terrain Maps for Mobile Robots (<i>Konstantin Zakharov, Anton Saveliev, Oleg Sivchenko</i>)
16:40-17:00	Automatic Detection of Backchannels in Russian Dialogue Speech (<i>Pavel Kholiavin, Anna Mamushina, Daniil Kocharov, Tatiana Kachkovskaia</i>)	Comparative Analysis of Approaches to Depth Map Generation for Robot Navigation (<i>Julia Rubtsova, Roman Iakovlev</i>)
17:00-17:20	Short break	
17:20-18:40	Speech and Audio Signal Processing (Room 1) SPECOM Session 6 (4 full presentations, 20 min) Chair: Alexey Petrovsky	
17:20-17:40	Data Augmentation and Loss Normalization for Deep Noise Suppression (<i>Sebastian Braun and Ivan Tashev</i>)	
17:40-18:00	Robust Noisy Speech Parameterization Using Convolutional Neural Networks (<i>Ryhor Vashkevich, Elias Azarov</i>)	
18:00-18:20	Directional Clustering with Polyharmonic Phase Estimation for Enhanced Speaker Localization (<i>Sergei Astapov, Dmitriy Popov, Vladimir Kabarov</i>)	
18:20-18:40	Lightweight CNN for Robust Voice Activity Detection (<i>Tanvirul Alam, Akib Khan</i>) – VIDEO	
Day 3: 9 October 2020, Friday		
09:30-10:00	Zoom connection	
10:00-12:00	Speech and Language Resources (Room 1) SPECOM Session 7 (6 full presentations, 20 min) Chair: Elena Lyakso	
10:00-10:20	Automated Compilation of a Corpus-based Dictionary and Computing Concreteness Ratings of Russian (<i>Valery Solovyev, Vladimir Ivanov</i>)	
10:20-10:40	Grappling with Web Technologies: the Problems of Remote Speech Recording (<i>Daniel Tihelka, Markéta Jůzová, Jakub Vít</i>) – VIDEO	
10:40-11:00	Generating a Concept Relation Network for Turkish Based on ConceptNet Using Translational Methods (<i>Arif Sırrı Özçelik, Tunga Güngör</i>)	
11:00-11:20	Speech Features of 13-15 Year-old Children with Autism Spectrum Disorders (<i>Elena Lyakso, Olga Frolova, Aleksey Grigorev, Viktor Gorodnyi, Aleksander Nikolaev, Anna Kurazhova</i>)	
11:20-11:40	Toward Explainable Automatic Classification of Children’s Speech Disorders (<i>Dima Shulga, Vered Silber-Varod, Diamanta Benson Karai, Ofer Levi, Elad Vashdi, Anat Lerner</i>)	
11:40-12:00	More than Words: Cross-Linguistic Exploration of Parkinson's Disease Identification from Speech (<i>Vass Verkhodanova, Dominika Trckova, Matt Coler, Wander Lowie</i>)	
12:00-12:20	Short break	
12:20-13:50	Speech and Language Resources (Room 1) SPECOM Session 8 (9 short presentations, 10 min) Chair: Milos Zelezny	
12:20-12:30	Bulgarian Associative Dictionaries in the LABLASS Web-based System (<i>Dimitar Popov, Velka Popova, Krasimir Kordov, Stanimir Zhelezov</i>)	
12:30-12:40	Phonological Length of L2 Czech Speakers’ Vowels in Ambiguous Contexts as Perceived by L1 Listeners (<i>Jitka Veronkova, Tomáš Bořil</i>) – VIDEO	
12:40-12:50	Cognitively Challenging: Language Shift and Speech Rate of Academic Bilinguals (<i>Tatiana Shevchenko, Tatiana Sokoreva</i>)	

12:50-13:00	Temporal Concord in Speech Interaction: Overlaps and Interruptions in Spoken American English (<i>Tatiana Shevchenko, Anastasia Gorbyleva</i>)
13:00-13:10	Formant Frequency Analysis of MSA Vowels in Six Algerian Regions (<i>Ghania Droua-Hamdani</i>) – VIDEO
13:10-13:20	Rhythmic Structures of Russian Prose and Occasional Iambs (a Diachronic Case Study) (<i>Evgeny Kazartsev, Arina Davydova, Tatiana Sherstinova</i>)
13:20-13:30	Pragmatic Markers in Dialogue and Monologue: Difficulties of Identification and Typical Formation Models (<i>Natalia Bogdanova-Beglarian, Olga Blinova, Tatiana Sherstinova, Daria Gorbunova, Kristina Zaides, Tatiana Popova</i>) – VIDEO
13:30-13:40	Some Comparative Cognitive and Neurophysiological Reactions to Code-modified Internet Information (<i>Rodmonga Potapova, Vsevolod Potapov</i>)
13:40-13:50	The Influence of Multimodal Polycode Internet Content on Human Brain Activity (<i>Rodmonga Potapova, Vsevolod Potapov, Nataliya Lebedeva, Ekaterina Karimova, Nikolay Bobrov</i>)
13:50-15:00	Lunch break & Video entertainment - The Sleeping Beauty ballet. Mariinsky theatre (<i>Room 1</i>)
15:00-17:00	Natural Language Processing (<i>Room 1</i>) SPECOM Session 9 (6 full presentations, 20 min) Chair: Iosif Mporas
15:00-15:20	Toxicity in Texts and Images on the Internet (<i>Denis Gordeev, Vsevolod Potapov</i>)
15:20-15:40	Detection of Toxic Language in Short Text Messages (<i>Olesia Makhnytkina, Anton Matveev, Darya Bogoradnikova, Inna Lizunova, Anna Maltseva, Natalia Shilkina</i>)
15:40-16:00	Investigating the Effect of Emoji in Opinion Classification of Uzbek Movie Review Comments (<i>Ilyos Rabbimov, Iosif Mporas, Vasiliki Simaki, Sami Kobilov</i>)
16:00-16:20	KazNLP: a Pipeline for Automated Processing of Texts Written in Kazakh Language (<i>Zhandos Yessenbayev, Zhanibek Kozhirbayev, Aibek Makazhanov</i>)
16:20-16:40	Conceptual Operations with Semantics for a Companion Robot (<i>Artemiy Kotov, Liudmila Zaidelman, Anna Zinina, Nikita Arinkin, Alexander Filatov, Kirill Kivva</i>)
16:40-17:00	An Automated Pipeline for Robust Image Processing and Optical Character Recognition of Historical Documents (<i>Ivan Gruber, Pavel Ircing, Petr Neduchal, Marek Hruz, Miroslav Hlaváč, Zbyněk Zajíc, Jan Svec, Martin Bulín</i>)
17:00-17:20	Short break
17:20-18:30	Natural Language Processing (<i>Room 1</i>) SPECOM Session 10 (7 short presentations, 10 min) Chair: Rodmonga Potapova
17:20-17:30	Automatic Information Extraction from Scanned Documents (<i>Lukáš Bureš, Petr Neduchal, Luděk Müller</i>) – VIDEO
17:30-17:40	Legal Tech: Documents' Validation Method Based on the Associative-Ontological Approach (<i>Sergey Kuleshov, Alexandra Zaytseva, Konstantin Nenausnikov</i>)
17:40-17:50	Different Approaches in Cross-Language Similar Documents Retrieval in the Legal Domain (<i>Vladimir Zhebel, Denis Zubarev, Ilya Sochenkov</i>)
17:50-18:00	Stylometrics Features under Domain Shift: Do they Really “Context-independent”? (<i>Tatiana Litvinova</i>) – VIDEO
18:00-18:10	Graphic Markers of Irony and Sarcasm in Written Texts (<i>Polina Mikhailova</i>) – VIDEO
18:10-18:20	A Rumor Detection in Russian Tweets (<i>Aleksandr Chernyaev, Alexey Spryiskov, Aleksandr Ivashko, Yuliya Bidulya</i>)
18:20-18:30	Emotion Recognition and Sentiment Analysis of Extemporaneous Speech Transcriptions in Russian (<i>Anastasia Dvoynikova, Oxana Verkholyak, Alexey Karpov</i>)
18:30-18:40	Closing ceremony (<i>Room 1</i>)

Zoom online connection

Room 1: SPECOM Sessions and Keynote lectures

<https://us02web.zoom.us/j/82048393661?pwd=TEJkMVdsZEw4c3NQb2djTC9raWxYdz09>

ID: 82048393661

Password: 084583

Room 2: ICR Sessions

<https://us02web.zoom.us/j/88541702290?pwd=VDNYc3ZFNmZtSExpYWlJK0RNYWMYQT09>

ID: 88541702290

Password: 654762

YouTube broadcast

Day 1: 7 October 2020, Wednesday

Keynote lectures: <https://youtu.be/bObGeBamVgw>

SPECOM Sessions: <https://youtu.be/bObGeBamVgw>

ICR Sessions: <https://youtu.be/vNcDqNfl6Q>

Day 2: 8 October 2020, Thursday

SPECOM Sessions: https://youtu.be/xBOjzEu_nB0

ICR Sessions: <https://youtu.be/fPMO5BViRM4>

Day 3: 9 October 2020, Friday

SPECOM Sessions: <https://youtu.be/UnHFzHIFmBU>

Proceedings

Free access to the electronic proceedings is available during October 2020 via the conference web page: <http://specom.nw.ru/2020/program/>

- 22nd International Conference SPECOM 2020 (**Springer LNCS/LNAI, vol. 12335**)
- 5th International Conference ICR 2020 (**Springer LNCS/LNAI, vol. 12336**)