

# “SpeD 2017” PROGRAM

July 6, 2017

University “Politehnica” of Bucharest

“CAMPUS” Building, 1<sup>st</sup> floor

9:00 – 9:30

Welcome from the Organizing Committee and Foreword, *Corneliu Burileanu*, University “Politehnica” of Bucharest, *Horia-Nicolai Teodorescu*, c.m. of the Romanian Academy, Technical University of Iași, *Corneliu Rusu*, Technical University of Cluj-Napoca.

## Automatic Speech Recognition and Speech Databases

Chairs: **Horia-Nicolai Teodorescu, Mircea Giurgiu**

9:30 – 10:10

- *Invited presentation*: Application of Deep Convolutional Neural Networks to Speech Recognition, **Laszlo Toth**,  
*MTA-SZTE Research Group on Artificial Intelligence, Hungarian Academy of Sciences and University of Szeged, Hungary.*

10:10 – 10:30

- The SWARA Speech Corpus: A Large Parallel Romanian Read Speech Dataset, **Adriana Stan<sup>1</sup>, Florina Dinescu<sup>2</sup>, Cristina Țiple<sup>2</sup>, Șerban Meza<sup>1</sup>, Bogdan Orza<sup>1</sup>, Magdalena Chirilă<sup>2</sup>, Mircea Giurgiu<sup>1</sup>**,  
<sup>1</sup>*Communications Department, Technical University of Cluj-Napoca, Romania,*  
<sup>2</sup>*Department of Otorhinolaryngology, Iuliu Hațieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania.*

10:30 – 10:50

- Multi-Resolution Spectral Input for Convolutional Neural Network-Based Speech Recognition, **Laszlo Toth**,  
*MTA-SZTE Research Group on Artificial Intelligence, Hungarian Academy of Sciences and University of Szeged, Hungary.*

10:50 – 11:10

- Speech recognition in education. Voice Geometry Painter Application, **Lucian-Petru Țucă, Adrian Iftene**,  
*Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iași, Romania.*

**11:10 – 11:30 Break**

11:30 – 11:50

- Towards a Continuous Speech Corpus for Banking Domain Automatic Speech Recognition, **George Suci<sup>1</sup>, Ștefan-Adrian Toma<sup>2</sup>, Romulus Cheveresan<sup>1</sup>**,  
<sup>1</sup>*Beia Consult International, Bucharest, Romania,*  
<sup>2</sup>*Computer Science Department, Military Technical Academy, Bucharest, Romania.*

11:50 – 12:10

- Speech Recognition Results for Voice-controlled Assistive Applications, **Alexandru Caranica<sup>1</sup>, Horia Cucu<sup>1</sup>, Corneliu Burileanu<sup>1</sup>, François Portet<sup>2</sup>, Michel Vacher<sup>2</sup>**,  
<sup>1</sup>*Speech and Dialogue Research Laboratory “SpeeD”, Faculty of Electronics, Telecommunications and Information Technology, University “Politehnica” of Bucharest, Romania,*  
<sup>2</sup>*Laboratoire d’Informatique de Grenoble, GETALP Team, Grenoble, France.*

#### 12:10 – 12:30

- Speed's DNN Approach to Romanian Speech Recognition,  
*Alexandru-Lucian Georgescu, Horia Cucu, Corneliu Burileanu,*  
*Speech and Dialogue Research Laboratory "Speed", Faculty of Electronics,*  
*Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.*

#### 12:30 – 12:50

- Building a Representative Audio Base of Syllables for Romanian Language,  
*Ștefan-Stelian Diaconescu<sup>1</sup>, Monica-Mihaela Rizea<sup>1</sup>, Mihaela Ionescu<sup>1</sup>, Andrei Mincă<sup>1</sup>,*  
*Liviu Dorobanțu<sup>1</sup>, Ștefan Fulea<sup>1</sup>, Monica Rădulescu<sup>1</sup>, Horia Cucu<sup>2</sup>, Dragoș Burileanu<sup>2</sup>,*  
*<sup>1</sup>Research & Development Department SOFTWIN, Bucharest, Romania,*  
*<sup>2</sup>Speech and Dialogue Research Laboratory "Speed", Faculty of Electronics,*  
*Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.*

#### 12:50 – 14:30 Lunch

#### 13:50 Automatic Infant Crying Recognition System "SPLANN" Project Presentation

#### Audio Signal Processing

Chairs: **Corneliu Rusu, Dragoș Burileanu**

#### 14:30 – 15:10

- *Invited presentation:* Physics-Based Sound Field Reproduction,  
*Rudolf Rabenstein,*  
*Friedrich-Alexander - University of Erlangen-Nuremberg, Germany.*

#### 15:10 – 15:30

- Audio Signals Classification using Linear Predictive Coding and Random Forests,  
*Lăcrimioara Grama, Corneliu Rusu,*  
*Signal Processing Group, Bases of Electronics Department, Faculty of Electronics,*  
*Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania.*

#### 15:30 – 16:00 Break

#### 16:00 – 16:20

- Several Classifiers for Intruder Detection Applications,  
*Elena Roxana Buhuș, Lăcrimioara Grama, Corneliu Rusu,*  
*Signal Processing Group, Bases of Electronics Department, Faculty of Electronics,*  
*Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania.*

#### 16:20 – 16:40

- Investigation on the Performances of APA in Forensic Noise Reduction,  
*Robert Alexandru Dobre, Constantin Paleologu, Silviu Ciochină, Cristian Negrescu,*  
*Dumitru Stanomir,*  
*Telecommunications Department, Faculty of Electronics, Telecommunications and*  
*Information Technology, University "Politehnica" of Bucharest, Romania.*

#### 16:40 – 17:00

- Fast Method for ENF Database Build and Search,  
*Gheorghe Pop, Dragoș Drăghicescu, Dragoș Burileanu, Horia Cucu, Corneliu*  
*Burileanu,*  
*Speech and Dialogue Research Laboratory "Speed", Faculty of Electronics,*  
*Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.*

#### 19:00 Gala Dinner

**July 7, 2017**  
**University “Politehnica” of Bucharest**  
**“CAMPUS” Building, 1<sup>st</sup> floor**

**Natural Language Processing**

Chairs: **Dan Tufiş, Dan Cristea**

**9:00 – 9:40**

- *Invited presentation*: An Insight into CoRoLa: The Reference Corpus of Written and Spoken Contemporary Romanian,  
**Dan Tufiş<sup>1</sup>, Dan Cristea<sup>2</sup>**,  
<sup>1</sup>*Research Institute for Artificial Intelligence “Mihai Drăgănescu”, Romanian Academy, Bucharest, Romania,*  
<sup>2</sup>*Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iaşi, Romania.*

**9:40 – 10:20**

- *Invited presentation*: Using Text Processing in a Multimedia Environment,  
**Adrian Iftene**,  
*Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iaşi, Romania.*

**10:20 – 10:40**

- A “Small-Data”-Driven Approach to Dialogue Systems for Natural Language Human Computer Interaction,  
**Tiberiu Boroş, Ştefan Daniel Dumitrescu**,  
*Research Institute for Artificial Intelligence, Romanian Academy, Bucharest, Romania.*

**10:40 – 11:00**

- Old Geographical Corpora: A Methodology for Interpretative Transcription,  
**Mihaela Onofrei<sup>1</sup>, Daniela Gîfu<sup>1</sup>, Cecilia Bolea<sup>2</sup>**,  
<sup>1</sup>*Institute for Computer Science of the Romanian Academy, Faculty of Computer Science, “Alexandru Ioan Cuza” University of Iaşi, Romania,*  
<sup>2</sup>*Institute for Computer Science of the Romanian Academy, Iaşi, Romania.*

**11:00 – 11:30 Break and Poster session**

**11:30 – 11:50**

- An Analysis of Tweets Related to Earthquakes for the Romanian Language,  
**Speranţa Cecilia Bolea**,  
*Institute for Computer Science of the Romanian Academy Iaşi, Romania.*

**11:50 – 12:10**

- Natural Language Processing Model - Compiling Natural Language into Byte Code,  
**Alexandru Trifan<sup>1</sup>, Marilena Angheluş<sup>2</sup>, Rodica Constantinescu<sup>3</sup>**,  
<sup>1</sup>*Informatics Engineering and Computer Science Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University “Politehnica” of Bucharest, Romania,*  
<sup>2</sup>*Advanced Integrated Circuits Technology in Automotive Engineering Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University “Politehnica” of Bucharest, Romania,*  
<sup>3</sup>*Department of Applied Electronics, Faculty of Electronics, Telecommunications and Information Technology, University “Politehnica” of Bucharest, Romania.*

**12:10 – 12:30**

- MaRePhoR – An Open Access Machine-Readable Phonetic Dictionary for Romanian,

*Ștefan-Adrian Toma<sup>1</sup>, Adriana Stan<sup>2</sup>, Mihai-Lică Pura<sup>1</sup>, Traian Bârsan<sup>1</sup>,*  
*<sup>1</sup>Computer Science Department, Military Technical Academy, Bucharest, Romania,*  
*<sup>2</sup>Communications Department, Technical University of Cluj-Napoca, Romania.*

**12:30 – 12:50**

- Word Associations in Media Posts Related to Disasters - A Statistical Analysis,  
**Mironela Pirnau,**  
*Faculty of Informatics, Titu Maiorescu University, Bucharest, Romania.*

**12:50 – 13:10**

- A Rule-based Approach to Generating Large Phonetic Databases for Romanian,  
**Ștefan-Stelian Diaconescu, Monica-Mihaela Rizea, Mihaela Ionescu, Andrei Mincă,**  
**Monica Rădulescu,**  
*Research & Development Department SOFTWIN, Bucharest, Romania.*

**13:10 – 15:00 Lunch**

**14:15 Romanian Language Phonetic Analysis: Study and applications “AFLR”  
Project Presentation**

**Speech analysis and applications**

Chairs: **Constantin Paleologu, Horia Cucu**

**15:00 – 15:40**

- *Invited paper:* Automatic Speaker Analysis 2.0: Hearing the Bigger Picture,  
**Björn W. Schuller,**  
*Complex and Intelligent Systems, University of Passau, Passau, Germany and Department  
of Computing, Imperial College London, United Kingdom.*

**15:40 – 16:00**

- Voice-related Symptom and Knowledge-Bases using Internet Mining,  
**Horia-Nicolai Teodorescu<sup>1,2</sup>, Dan Gogalniceanu<sup>3</sup>,**  
*<sup>1</sup>“Gheorghe Asachi” Technical University of Iași, Romania,*  
*<sup>2</sup>Institute of Computer Science of the Romanian Academy, Iași Branch, Romania,*  
*<sup>3</sup>Academy of Romanian Scientists, Iași Branch, Romania.*

**16:00 – 16:20**

- Semantics Driven Intelligent Front-End,  
**Tamás Gergely<sup>1</sup>, Edit Halmay<sup>1</sup>, Miklós Szóts<sup>1</sup>, George Suci<sup>2</sup>, Romulus Cheveresan<sup>2</sup>,**  
*<sup>1</sup>Applied Logic Laboratory, Budapest, Hungary,*  
*<sup>2</sup>Beia Consult International, Bucharest, Romania.*

**16:20 – 16:40 Break**

**16:40 – 17:00**

- Prosodic Phrases and Contrast Units in Intonation,  
**Doina Jitcă,**  
*Institute of Computer Science of Romanian Academy, Iași Branch, Romania.*

**17:00 – 17:20**

- Cassandra Smart-Home System Description,  
**Ștefan Daniel Dumitrescu,**  
*Research Institute for Artificial Intelligence “Mihai Drăgănescu”, Romanian Academy,  
Bucharest, Romania.*

**17:20 – 17:40**

- Influences of Age in Emotional Recognition of Spontaneous Speech,

***Nursuriati Jamil, Fariyah Apandi, Raseeda Hamzah,***  
*Faculty of Computer and Mathematical Sciences, University Teknologi MARA, Shah Alam,*  
*Selangor.*

Concluding remarks, ***Corneliu Burileanu,*** *University “Politehnica” of Bucharest.*

## POSTER SESSION

### University “Politehnica” of Bucharest

#### “CAMPUS” Building, 1<sup>st</sup> floor

Organizer: **Diana Şandru**

- Romanian Language Phonetic Transcription WEB Service,  
**József Domokos, Zsolt Attila Szakács,**  
*Department of Electrical Engineering, Sapientia University, Tîrgu Mureş, Romania.*
- Intelligent Human Computer Interaction Applications using NAO Robots,  
**Georgian Nicolae,**  
*Speech and Dialogue Research Laboratory “Speed”, Faculty of Electronics,  
Telecommunications and Information Technology, University “Politehnica” of Bucharest,  
Romania.*
- Baby Cry Classification Experiments in SPLANN Project,  
**Horia Cucu, Ileana Tuduce, Andi Buzo,**  
*Speech and Dialogue Research Laboratory “Speed”, Faculty of Electronics,  
Telecommunications and Information Technology, University “Politehnica” of Bucharest,  
Romania.*
- Voice-based Authentication Web Application,  
**Alexandru-Lucian Georgescu,**  
*Speech and Dialogue Research Laboratory “Speed”, Faculty of Electronics,  
Telecommunications and Information Technology, University “Politehnica” of Bucharest,  
Romania.*