"SpeD 2015" PROGRAM

October 14, 2015

University "Politehnica" of Bucharest

Library Building, 4th 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 Iaşi, *Corneliu Rusu*, Technical University of Cluj-Napoca.

Speech Analysis, Representation and Modeling.
Spoken Language Recognition and Understanding

Chairs: **Jean-Paul Haton**, **Corneliu Rusu**

9:30 – 11:10

- *Invited presentation*: Neural Networks in Automatic Speech Recognition: a Long Story,
  Jean-Paul Haton,
  Institut Universitaire de France, LORIA - Université de Lorraine, Nancy.
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- Phonetic Segmentation of Speech using STEP and t-SNE,
  Adriana Stan[1], Cassia Valentini-Botinhao[2], Mircea Giurgiu[1], Simon King[2],
  [1]Communications Department, Technical University of Cluj-Napoca, Romania,
  [2]Centre for Speech Technology Research, University of Edinburgh, United Kingdom.
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- Exploring Multi-Language Resources for Unsupervised Spoken Term Discovery,
  Bogdan Ludusan[1], Alexandru Caranica[2], Horia Cucu[2], Andi Buzo[2], Corneliu Burileanu[2], Emmanuel Dupoux[1],
  [1]Laboratoire de Sciences Cognitives et Psycholinguistique EHESS/ENS/CNRS, Paris, France,
  [2]Speech and Dialogue (SpeeD) Research Laboratory, University "Politehnica" of Bucharest, Romania.
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- Palestinian Arabic Regional Accent Recognition,
  Abualsoud Hanani[1], Hanna Basha[1], Yasmeen Sharaf[1], Stephen Taylor[2],
  [1]Electrical and Computer Engineering, Birzeit University, Ramallah, Palestine,
  [2]Computer Science, Fitchburg State University, Fitchburg, USA.
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11:10 – 11:30 Break and Poster session

11:30 – 12:30

- Informational Synergy Features in Live Broadcasting,
  Valentin Eugen Ghişa, Sorin-Aurel Moraru, Dominic Mircea Kristaly,
  Department of Automatics and Information Technology, Transilvania University of Brasov, Romania.
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- Deep Learning in Acoustic Modeling for Automatic Speech Recognition and Understanding - An Overview,
  Inge Gavat, Diana Militaru,
  Faculty of Electronics, Telecommunications and Information Technology
  University "Politehnica" of Bucharest, Romania,
  View this presentation

- Sound Event Recognition in Smart Environments,
  Gheorghe Pop, Alexandru Caranica, Horia Cucu, Dragoş Burileanu,
  Speech and Dialogue (SpeeD) Research Laboratory, University "Politehnica" of Bucharest, Romania.
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12:30 – 14:00 Lunch

Speech and Text Analysis for Prevention and Mitigation of Emergencies and Acute Situations

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

14:00 – 16:00

- *Invited paper*: An Internet Slang Annotated Dictionary and Its Use in Assessing Message Attitude and Sentiments,
  Horia-Nicolai Teodorescu[1,2], Navanath Saharia[3]
  [1]"Gheorghe Asachi" Technical University of Iasi, Romania,
  [2] Romanian Academy, Iasi, Romania,
  [3]Cotton College State University Panbazar, Guwahati, Assam, India.
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- Vocabulary, Synonyms and Sentiments of Hazard-related Posts on Social Networks,
  Speranţa Cecilia Bolea,
  Institute of Computer Science Romanian Academy – Iasi Branch, Iasi, Romania.
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- Detection Dangerous Events in Environmental Sounds – A Preliminary Evaluation,
  Vasile Apopei,
  Institute of Computer Science Romanian Academy – Iasi Branch, Iasi, Romania.
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- Detecting Emotion from Short Messages on Nepal Earthquake,
  Navanath Saharia,
  Cotton College State University Panbazar, Guwahati, Assam, India.
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- Tool for monitoring Web sites for emergency-related posts and post analysis,
  Mironela Pirnau,
  Faculty of Informatics Titu Maiorescu University, Bucharest, Romania,
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16:00 – 16:30 Break

Audio Analysis for Event Detection. Speaker Verification in Mobile Biometry

Chairs: **Dragoş Burileanu**, **Sorin-Aurel Moraru**

16:30 – 17:30

- Alarming Events Detection Based on Audio Signals Recognition,
  Gabriel Oltean, Lăcrimioara Grama, Laura Ivanciu, Corneliu Rusu,
  Bases of Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania.
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- Quantization Effects on Audio Signals for Detecting Intruders in Wild Areas Using TESPAR S-Matrix and Artificial Neural Networks,
  Lăcrimioara Grama, Corneliu Rusu, Gabriel Oltean, Laura Ivanciu,

Bases of Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania.
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- Evaluation of the Generative and Discriminative Text-Independent Speaker Verification Approaches on Handheld Devices,
  ***Florin Curelaru**,*
  Military Technical Academy, Bucharest, Romania.
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Natural Language Processing. Speech Analysis for Linguistics and Phonetics
Chairs: **Dan Tufiş**, **Ioana Vasilescu**

9:30 – 11:10

- *Invited paper*: Large-Scale Data Based Linguistic Investigations Using Speech Technology Tools: the Case of Romanian,
  Ioana Vasilescu,
  Groupe TLP, LIMSI-CNRS, Université d'Orsay, France.
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- Voice Driven Type Design,
  Matthias Wölfel[1], Tim Schlippe[2], Angelo Stitz[3],
  [1]School of Digital Media Furtwangen University, Germany,
  [2]Research Karlsruhe, Germany,
  [3]School of Design Pforzheim University, Germany
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- Information Structure in Romanian Utterances with Contrast Relations,
  Doina Jitca,
  Institute of Computer Science Romanian Academy – Iasi Branch, Iasi, Romania.
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- Towards Prosodic Phrasing of Spontaneous and Read Speech for Romanian Corpora,
  Vasile Apopei, Otilia Păduraru,
  Institute of Computer Science Romanian Academy – Iasi Branch, Iasi, Romania.
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11:10 – 11:30 Break

11:30 – 12:50

- Classifying the Lexico-syntactic Patterns of Semantic Relations between Two Nouns in Romanian Language,
  Marilena Lazăr[1], Diana Militaru[2], Eugeniu Oancea,
  [1]Military Equipment and Technologies Research Agency, Bucharest, Romania,
  [2]University "Politehnica" of Bucharest, Romania
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- Methods for Automatic Generation of GRAALAN-based Phonetic Databases,
  Ştefan-Stelian Diaconescu, Monica-Mihaela Rizea, Felicia-Carmen Codîrlaşu,
  Mihaela Ionescu, Monica Rădulescu, Andrei Mincă, Ştefan Fulea,
  Research & Development Department SOFTWIN, Bucharest, Romania.
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- Unsupervised Aspect Level Sentiment Analysis Using Ant Clustering and Self-organizing Maps,
  Emil Şt. Chifu[1], Tiberiu Şt. Leţia[2], Viorica R. Chifu[1],
  [1]Department of Computer Science, Technical University of Cluj-Napoca, Romania,
  [2]Department of Automatic Control, Technical University of Cluj-Napoca, Romania.
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- Spoken Dialogue Systems for Flight Schedule Information in Nigeria: Acceptability Evaluation and User Satisfaction Comparison of Speech and DTMF,

Oyelami Olufemi Moses,
Department of Computer and Information Sciences, Covenant University, Ota, Nigeria.
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12:50 – 14:00 Lunch

Audio Signal Processing. Speech Analysis and Synthesis

Chairs: **Gavril Toderean**, **Constantin Paleologu**

14:00 – 15:40

- *Invited paper*: Spectrograms, Sparsograms and Spectral Signatures,
  Corneliu Rusu, Lăcrimioara Grama,
  Bases of Electronics Department, Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania.
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- An Optimized Affine Projection Algorithm for Acoustic Echo Cancellation,
  Silviu Ciochină[1], Constantin Paleologu[1], Jacob Benesty[2], Cristian Anghel[1],
  [1]University "Politehnica" of Bucharest, Romania,
  [2]INRS-EMT, University of Quebec, Montreal, Canada.
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- Estimating Competing Speaker Count for Blind Speech Source Separation,
  Valentin Andrei, Horia Cucu, Andi Buzo, Corneliu Burileanu,
  Speech and Dialogue (SpeeD) Research Laboratory, University "Politehnica" of Bucharest, Romania.
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- Achievements in the Field of Voice Synthesis for Romanian,
  Gavril Toderean, Ovidiu Buza, József Domokos,
  Faculty of Electronics, Telecommunications and Information Technology, Technical University of Cluj-Napoca, Romania.
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15:40 – 16:00 Break

Speech Databases, Technologies and Systems for Smart Homes and Assistive Applications

Chairs: **Inge Gavăt**, **Michel Vacher**

16:00 – 17:20

- Speech and Speaker Recognition for Home Automation: Preliminary Results,
  Michel Vacher, Benjamin Lecouteux, Javier Serrano Romero, Moez Ajili,
  François Portet, Solange Rossato,
  CNRS, LIG, Université Grenoble Alpes, Grenoble, France.
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- Speech Database Acquisition for Assisted Living Environment Applications,
  Mihai Dogariu, Horia Cucu, Andi Buzo, Dragoş Burileanu, Octavian Fratu,

Speech and Dialogue (SpeeD) Research Laboratory, University "Politehnica" of Bucharest, Romania.
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- Speech Applications in the eWALL Project,
  Mihai Dogariu, Horia Cucu, Andi Buzo, Dragoş Burileanu, Octavian Fratu,
  Speech and Dialogue (SpeeD) Research Laboratory, University "Politehnica" of Bucharest, Romania.
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- Database and System Design for Data Collection of Crying Related to Infant's Needs and Diseases,
  Mircea Sorin Rusu[1], Ştefan Stelian Diaconescu[1], Gheorghiţa Sardescu[2], Elvira Brătilă[2]
  [1]*Research & Development Department SOFTWIN, Bucharest, Romania,*
  [2]*Neonatology Department, "Sf. Pantelimon" Emergency Hospital, Bucharest, Romania.*
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Concluding remarks, **Corneliu Burileanu**, *University "Politehnica" of Bucharest*.

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Organizer: **Horia Cucu**

- Recent Evolutions in Virtual Reality - Based Solutions for Neuro-Motor Rehabilitation,
  Oana-Maria Ferche, Alin Moldoveanu, Florica Moldoveanu, Alexandra Voinea,
  University „Politehnica" of Bucharest, Romania.

- Linear Regression Processing Applied on Some Vocal Features in Direct Communication Processes,
  Valentin Eugen Ghişa, Sorin-Aurel Moraru, Dominic Mircea Kristaly,
  Department of Automatics and Information Technology, Transilvania University of Brasov, Romania.
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- Application of Speech Technology and Speaker Identification,
  George Suciu[1], Alexandru Stoica[1], Victor Suciu[1], Octavian Fratu[1], Swati Prasad[2],
  [1]Faculty of Electronics, Telecommunications and Information Technology, University „Politehnica" of Bucharest, Romania,
  [2] Center for TeleInFrastruktur, Aalborg University, Denmark.