"SpeD 2013" PROGRAM

October 16, 2013

Technical University of Cluj-Napoca

Aula "Domşa"

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, Representations and Models. Audio Signal Processing

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

9:30 – 11:00

- *Invited presentation*: Recent Advances in Automatic Speech Recognition,
  Jean-Paul Haton,
  Institut Universitaire de France, LORIA - Université de Lorraine, Nancy.
- *Invited paper*: Singing Voice Identification and Lyrics Transcription for Music Information Retrieval,
  Annamaria Mesaros,
  Department of Signal Processing and Acoustics, Aalto University, Espoo, Finland.
- Evaluation of Sentiment Polarity Prediction using a Dimensional and a Categorical Approach,
  Ioana Mureşan[1], Adriana Stan[1], Mircea Giurgiu[1], Rodica Potolea[2],
  [1]Department of Communications, Technical University of Cluj-Napoca, Romania,
  [2]Department of Computer Science, Technical University of Cluj-Napoca, Romania.
- Extensive Evaluation Experiments for the Accumulated Cross-Power Spectrum Methods for Time Delay Estimation,
  Radu-Sebastian Marinescu, Andi Buzo, Horia Cucu, Corneliu Burileanu,
  Speech and Dialogue (SpeeD) Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.
- *Prospective presentation*: Voice and Text Analysis as a Tool for Fast Disaster Effects Estimation – A Preliminary Exploration,
  Horia-Nicolai Teodorescu *[1,2]*, ***Monica Feraru*** *[1]*,
  [1]Institute for Computer Science, Romanian Academy,
  [2]Faculty of Electronics, Telecommunications and Information Technology, "Gheorghe Asachi" Technical University of Iaşi, Romania.

11:00 – 11:30 Break and Poster session

11:30 – 12:30

- Algorithm for Detection of Voice Signal Periodicity,
  Ovidiu Buză[1], Gavril Toderean[1], József Domokos[2],
  [1]Department of Communications, Technical University of Cluj-Napoca, Romania,
  [2]Department of Electrical Engineering, Sapientia University, Targu Mures, Romania.
- Error Correction Mechanism for Five-Key Chording Keyboards,
  Adrian Tărniceriu, Bixio Rimoldi, Pierre Dillenbourg,
  School of Computer and Communication Sciences, Ecole Polytechnique Fédérale de Lausanne, Switzerland.
- A Romanian Language Modeling using Linguistic Factors,
  Marilena Lazăr, Diana Militaru,
  Information Systems and Communications Test & Evaluation Scientific Research Center, Military Equipment and Technologies Research Agency, Bucharest, Romania.

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Spoken Language Recognition. Keyword Spotting and Information Retrieval. Human-Computer Interfaces

Chairs: **Horia-Nicolai Teodorescu**, **Dragoş Burileanu**

14:00 – 16:00

- *Invited paper*: On the Design of an Acoustic Based Wildlife Intruder Detection System,
  Corneliu Rusu[1], Marius Ghiurcău[1], Radu Bîlcu[2], Marius Sîrbu[3], Jaakko Astola[4],
  [1]Technical University of Cluj-Napoca, Romania,
  [2]Nokia Research Centre, Tampere, Finland,
  [3]WsComm Cluj-Napoca, Romania,
  [4]Tampere International Center for Signal Processing, Finland.
- A Comparison of Arabic Speech Recognition for Multi-Dialect vs. Specific Dialects,
  Khalid Almeman, Mark Lee,
  School of Computer Science, University of Birmingham, UK.
- An Incremental Methodology for Improving Pronunciation Dictionaries for Arabic Speech Recognition,
  Khalid Almeman, Mark Lee,
  School of Computer Science, University of Birmingham, UK.
- Improved Recognition of Hungarian Call Center Conversations,
  Balázs Tarján[1], Gellért Sárosi[1], Tibor Fegyó[1,2], Péter Mihajlik[1,3],
  [1]Department of Telecommunications and Media Informatics, Budapest University of Technology & Economics, Hungary,
  [2]AITIA International Inc., Hungary,
  [3]THINKTech Research Center, Vác, Hungary.
- Lightly Supervised Acoustic Model Training for Imprecisely and Asynchronously Transcribed Speech,
  Péter Mihajlik[1,2], András Balog[1],
  [1]THINKTech Research Center, Vác, Hungary,
  [2]Department of Telecommunications and Media Informatics, Budapest University of Technology & Economics, Hungary.

16:00 – 16:15 Break

16:15 – 17:15

- Text Spotting in Large Speech Databases for Under-Resourced Languages,
  Andi Buzo, Horia Cucu, Corneliu Burileanu,
  Speech and Dialogue (SpeeD) Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.
- Multilingual Query by Example Spoken Term Detection for Under-Resourced Languages,
  Andi Buzo, Horia Cucu, Mihai Safta, Corneliu Burileanu,
  Speech and Dialogue (SpeeD) Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.
- Estimating the Hurst Exponent in Motor Imagery-based Brain Computer Interface,
  Roxana Aldea, Daniela Tărniceriu,
  Faculty of Electronics, Telecommunications and Information Technology, "Gheorghe Asachi" Technical University, Iaşi, Romania.

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Natural Language Processing. Speech Translation

Chairs: **Dan Tufiş**, **Dan Cristea**

9:00 – 10:40

- *Invited paper*: The RACAI Speech Translation System. Challenges of Morphologically Rich Languages,
  Dan Tufiş, Tiberiu Boroş, Ştefan Daniel Dumitrescu,
  RACAI – Research Institute for Artificial Intelligence, Romanian Academy, Bucharest, Romania.
- *Invited paper*: Linking Book Characters. Toward A Corpus Encoding Relations Between Entities,
  Dan Cristea[1,2], Eugen Ignat[1],
  [1]"Alexandru Ioan Cuza" University of Iaşi, Department of Computer Science (UAIC-FII),
  [2]Institute of Computer Science, Romanian Academy, Iaşi, Romania.
- A Novel Discriminative Method for Pruning Pronunciation Dictionary Entries,
  Seppo Enarvi, Mikko Kurimo,
  Aalto University School of Electrical Engineering, Department of Signal Processing and Acoustics, Espoo, Finland.
- Acknowledgement or Reply? Prosodic Features for Disambiguating Pragmatic Functions of the Italian Token 'sì',
  Michelina Savino[1], Mario Refice[2],
  [1]Department of Education, Psychology, Communication, University of Bari, Italy,
  [2]Department of Electrical and Information Engineering, Polytechnics of Bari, Italy.

10:40 – 11:00 Break

11:00 – 12:20

- An Integrated Language Identification for Code-Switched Speech using Decoded-Phonemes and Support Vector Machine,
  Koena Ronny Mabokela, Madimetja Jonas D. Manamela,
  Telkom Centre of Excellence for Speech Technology (TCoE4ST), Department of Computer Science, University of Limpopo, Turfloop Campus Limpopo Province, Polokwane, South Africa.
- Aspects of a Romanian Syntactic-Prosodic Interface for an Intonation Prediction Module,
  Doina Jitcă, Vasile Apopei, Otilia Păduraru,
  Institute of Computer Science of the Romanian Academy, Iaşi branch.
- Robust Spectral Representation Using Group Delay Function and Stabilized Weighted Linear Prediction for Additive Noise Degradations,
  Dhananjaya Gowda, Jouni Pohjalainen, Paavo Alku, Mikko Kurimo,
  Aalto University School of Electrical Engineering, Department of Signal Processing and Acoustics, Espoo, Finland.
- On Letter to Sound Conversion for Romanian: A Comparison of Five Algorithms,
  Ştefan-Adrian Toma, Traian Bîrsan, Felix Totir, Eugeniu Oancea,
  Military Technical Academy, Bucharest, Romania.

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14:00 – 14:30 **Demo Session for the project "Simple4All"**

Text-to-Speech Synthesis. Speaker Recognition. Assistive Technologies

Chairs: **Inge Gavăt**, **Gavril Toderean**

14:30 – 16:00

- Statistically Augmented Preprocessing/Normalization Module for a Romanian Text-to-Speech System,
  Cătălin Ungurean, Dragoş Burileanu, Mihai Surmei,
  Speech and Dialogue (SpeeD) Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.
- Specific Acoustic Unit Processing in Concatenative Romanian Speech Synthesis Used for Talking Agents,
  Cristian Negrescu, Amelia Ciobanu, Mihai Daniel Ilie,
  Telecommunication Department, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.
- Experiments on Using Vocal Tract Estimates of Nasal Stops for Speaker Verification,
  Ewald Enzinger, Christian H. Kasess,
  Acoustics Research Institute, Austrian Academy of Sciences, Vienna, Austria.
- On Forensic Speaker Recognition Case Pre-Assessment,
  Gheorghe Pop[1], Dragoş Drăghicescu[2], Dragoş Burileanu[2],
  [1]National Institute of Forensic Expertise, Bucharest, Romania
  [2]Speech and Dialogue (SpeeD) Laboratory, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.

16:00 – 16:15 **Break**

16:15 – 17:15

- Speech Recognition of Aged Voice in the AAL Context: Detection of Distress Sentences,
  Frédéric Aman, Michel Vacher, Solange Rossato, François Portet,
  LIG Laboratory, GETALP Team, UMR CNRS/UJF/INPG/UPMF 5217, Grenoble, France.
- Some Aspects of Synthetic Elderly Voices in Ambient Assisted Living Systems,
  Csaba Zainkó, Bálint Tóth, Mátyás Bartalis, Géza Németh, Tibor Fegyó,
  Department of Telecommunications and Media Informatics, Budapest University of Technology and Economics, Hungary.
- Dantzig Selector for Audio Data Reconstruction,
  Ioan Buciu,
  Department of Electronics and Telecommunications, Faculty of Electrical Engineering and Information Technology, University of Oradea, Romania.

Concluding remarks, ***Corneliu Burileanu***, *University "Politehnica" of Bucharest*.

POSTER SESSION

Aula "Domşa" and Hall

Organizers: **Constantin Paleologu**, **Călin Vlădeanu**

- Text-Independent Speaker Verification Using the GMM-UBM Modelling,
  Svetlana Segărceanu, ***Tiberius Zaharia***,
  Department of Applied Electronics and Information Engineering, Faculty of Electronics, Telecommunications and Information Technology, University „Politehnica" of Bucharest, Romania.
- A Hybrid Approach for Speech Recognition,
  Tiberius Zaharia, Svetlana Segărceanu,
  Department of Applied Electronics and Information Engineering, Faculty of Electronics, Telecommunications and Information Technology, University "Politehnica" of Bucharest, Romania.
- Real-time Platform for Vocoders,
  András Balogh, Ovidiu Buză, Gavril Toderean,
  Department of Communications, Technical University of Cluj-Napoca, Romania.
- Unsupervised Speaker Recognition Approach using an Automatic Clustering Algorithm,
  Tudor Barbu,
  Institute of Computer Science of the Romanian Academy, Iasi.