SPLINE 2016 Technical Program Overview

	6th JULY	7th JULY	8th JULY
08:00			
		8:30-9:00 *Registration*	8:30-9:00 *Registration*
09:00		9:00-10:00 **Lars Kai Hansen** Sensing the Deep Structure of Signals	9:00-10:00 **Roger K. Moore** Vocal Interaction with 'Intelligent' Machines
10:00	9:30-13:00 *COST Action IC1206 Activities* (members only)	10:00-10:30 *Break*	10:00- 10:40 **Lars Dalgaard** Emerging Mobile Service Robots
11:00		10:30-12:30 *Deep Learning & Machine Learning*	10:40-11:10 *Break*
12:00			11:10-12:30 *Machine Learning & Image Processing*
13:00	13:00-14:00 *Registration*	12:30-14:00 Lunch Break	
14:00	14:00-14:25 *Opening*	14:00-15:00 **John H. L. Hansen** Speech & Speaker Variability	
	14:25-14:50 **Slobodan Ribaric** De-identification for Privacy Protection		
15:00	14:50-15:50 *De-identification for Privacy Protection*	15:00-15:30 *Break*	
16:00	15:50-16:20 *Break*	15:30-17:30 *Audio & Speech Processing*	
17:00	16:20-17:40 *Biometrics*		
18:00			

18:30
Shuttle Bus to Dinner (Social Event)

DAY 1 - WEDNESDAY, 6th JULY (ROOM 3.463)

9:30-13:00   **COST Action IC1206 Activities**   (members only)

13:00-14:00   **Registration**

14:00-14:25   **Opening**

14:25-14:50   **Invited Speech by Slobodan Ribaric**
                     University of Zagreb, Croatia
                                De-identification for Privacy Protection – COST Action IC1206: Objectives and Achievements

                     Chair: Isabel Trancoso, *INESC ID Lisbon, Portugal*

14:50-15:50   **Paper Session: De-identification for Privacy Protection**
                     Chair: Isabel Trancoso, *INESC ID Lisbon, Portugal*

                                Piecewise Linear Definition of Transformation Functions for Speaker De-Identification
                                Carmen Magariños, Paula Lopez-Otero, Laura Docio-Fernandez, Daniel Erro,
                                Eduardo Rodriguez-Banga, Carmen Garcia-Mateo

                                Cancelable Biometrics for Finger Vein Recognition
                                Emanuela Piciucco, Emanuele Maiorana, Christof Kauba, Andreas Uhl, Patrizio Campisi

                                Towards Neural Art-based Face Deidentification in Video Data
                                Karla Brkic, Tomislav Hrkac, Ivan Sikiric, Zoran Kalafatic

15:50-16:20   **Break**

16:20-17:40   **Paper Session: Biometrics**
                     Chair: Patrizio Campisi, *Roma Tre University, Italy*

                                Visually Evoked Potentials for EEG Biometric Recognition
                                Rig Das, Emanuela Piciucco, Emanuele Maiorana, Patrizio Campisi

                                Two-stage Model for Unconstrained Face Detection
                                Darijan Marcetic, Tomislav Hrkac, Slobodan Ribaric

                                Towards Biometric Features for 2D/3D Sensoring of Forensic Handwriting
                                Tobias Scheidat, Michael Kalbitz, Claus Vielhauer

                                Efficient Fingerprint Image Protection Principles using Selective JPEG2000 Encryption
                                Martin Draschl, Jutta Hämmerle-Uhl, Andreas Uhl

DAY 2 - THURSDAY, 7th JULY (ROOM 3.107/auditorium)

8:30-9:00   **Registration**

9:00-10:00   **Keynote Speech by Lars Kai Hansen**
Technical University of Denmark, Denmark
<u>Sensing the Deep Structure of Signals</u>

Chair: Børge Lindberg, *Aalborg University, Denmark*

10:00-10:30   **Break**

10:30-12:30   **Paper Session: Deep Learning & Machine Learning**
Chair: Zhanyu Ma, *Beijing University of Posts and Telecommunications, China*

Convolutional Neural Network for 3D Object Recognitions using Volumetric representation
Alireza Dehghani, Xiaofan Xu

Deep Learning Architectures for Tattoo Detection and De-identification
Tomislav Hrkac, Karla Brkic, Slobodan Ribaric, Darijan Marcetic

Unsupervised Representation Learning of Structured Radio Communication Signals
Tim J O'Shea, Johnathan Corgan, Charles Clancy

Cycled Merging Registration of Point Clouds for 3D Human Body Modeling
Yanjie Chen, Yuhong Li, Feng Qi, Zhanyu Ma, Honggang Zhang

Kernel Subclass Support Vector Description for Face and Human Action Recognition
Vasileios Mygdalis, Alexandros Iosifidis, Anastasios Tefas, Ioannis Pitas

Image Pre-Processing Detection: Evaluation of Benford's Law, Spatial and Frequency Domain Feature Performance
Tom Neubert, Mario Hildebrandt, Jana Dittmann

12:30-14:00   **Lunch Break**

14:00-15:00   **Keynote Speech by John H. L. Hansen**
University of Texas at Dallas, U.S.A.
<u>Speech & Speaker Variability: Assessing Who, What, Where and How from Earth to the Moon</u>

Chair: Jan Larsen, *Technical University of Denmark, Denmark*

15:00-15:30   **Break**

15:30-17:30 **Paper Session: Audio & Speech Processing**
Chair: Hong Kook Kim, *Gwangju Institute of Science and Technology, Korea*

Employing Speech and Location Information for Automatic Assessment of Child Language Environments
Maryam Najafian, Dwight Irvin, Ying Luo, Beth Rous, John H. L. Hansen

Delay Reduction in Real-time Recognition of Human Activity for Stroke Rehabilitation
Roozbeh Nabiei, Maryam Najafian, Manish Parekh, Peter Jancovic, Martin Russell

Improving the Convergence of CO-training for Audio-Visual Person Identification
Nicolai Bæk Thomsen, Xiaodong Duan, Zheng-Hua Tan, Børge Lindberg, Søren Holdt Jensen

Effect of Multi-Condition Training and Speech Enhancement Methods on Spoofing Detection
Hong Yu, Achintya Sarkar, Dennis Alexander Lehmann Thomsen, Zheng-Hua Tan, Zhanyu Ma, Jun Guo

Underwater Acoustic Sensor Fault Detection for Passive Sonar Systems
Yong Guk Kim, YoungShin Kim, Sang Hyuck Lee, Sang-Taeck Moon, Hong Kook Kim

GMM-Based Speaker Gender and Age Classification After Voice Conversion
Anna Pribilova, Jiri Pribil, Jindrich Matousek

18:30 **Shuttle Bus to Dinner (Social Event)**

DAY 3 - FRIDAY, 8th JULY (ROOM 3.107/auditorium)

8:30-9:00   **Registration**

9:00-10:00   **Keynote Speech by Roger K. Moore**
University of Sheffield, U.K.
<u>Vocal Interaction with 'Intelligent' Machines: Are we There Yet?</u>

Chair: Børge Lindberg, *Aalborg University, Denmark*

10:00- 10:40   **Invited Speech by Lars Dalgaard**
Technological Institute, Denmark
<u>Deploying Emerging Mobile Service Robots – lots of opportunitues but also barriers</u>

Chair: Zheng-Hua Tan, *Aalborg University, Denmark*

10:40-11:10   **Break**

11:10-12:30   **Paper Session: Machine Learning & Image Processing**
Chair: Aristodemos Pnevmatikakis, *AIT, Greece*

User Intention Understanding from Scratch
Ziheng Wang, Yonggang Qi, Jun Liu

Robust Community Detection on Dynamic Graph
Dan Wu, Kai Niu, Zhiqiang He

Projecting Emotional Speech into Arousal-Valence Space using Pairwise Preference Learning
Mohamed Abou-Zleikha, Mads Græsbøll Christensen, Zheng-Hua Tan, Søren Holdt Jensen

Background Subtraction for Patterns of Activities on Cities
Aristodemos Pnevmatikakis, Stefanos Astaras, Zheng-Hua Tan