

11th INTERNATIONAL WORKSHOP
Models and Analysis of Vocal Emissions
for Biomedical Applications

MAVEBA 2019

December 17 – 19, 2019
Firenze, Italy



PROGRAMME

DECEMBER 17, 2019

08:30-08:45	WELCOME ADDRESS
08:45-10:45	SESSION I – PARKINSON'S DISEASE AND SPEECH Chairpersons: J. Schoentgen, A. Tsanas
08:45-09:00	FUNDAMENTAL FREQUENCY AND DURATION CUES FOR SENTENCE FOCUS IN MANDARIN: PARKINSON'S AND HEALTHY SPEAKERS X. Chen, D. Sidtis
09:00-09:15	TEMPORAL REVERSION OF PHONATION INSTABILITY IN PARKINSON'S DISEASE BY NEUROACOUSTICAL STIMULATION P.Gómez-Vilda, G.Gálvez-García, A. Gómez-Rodellar, D. Palacios-Alonso, G. de Arcas-Castro
09:15-09:30	A NEUROMECHANICAL MODEL OF JAW-TONGUE ARTICULATION IN PARKINSON'S DISEASE SPEECH A.Gómez, A. Tsanas, P. Gómez, D. Palacios, A. Álvarez, R. Martínez
09:30-09:45	PARKINSON'S DISEASE CLASSIFICATION BASED ON VOWEL SOUND D.Hemmerling, D. Sztaho
09:45-10:00	ANALYSIS OF PHONATORY FEATURES FOR THE AUTOMATIC DETECTION OF PARKINSON'S DISEASE IN TWO DIFFERENT CORPORA L. Moro-Velázquez, J. Andrés Gómez-García, N. Dehak, J. I. Godino-Llorente
10:00-10:15	JOINT ANALYSIS OF VOCAL JITTER, FLUTTER AND TREMOR IN VOWELS SUSTAINED BY NORMOPHONIC AND PARKINSON SPEAKERS J. Schoentgen, A. Kacha, F. Grenez
10:15-10:30	THE EFFECTS OF DEEP BRAIN STIMULATION ON SPEECH ARTICULATION AND VOCALIZATION IN PARKINSON'S DISEASE J.J. Sidtis, D. Van Lancker Sidtis
10:30-10:45	BIOMEDICAL SPEECH SIGNAL INSIGHTS FROM A LARGE SCALE COHORT ACROSS SEVEN COUNTRIES: THE PARKINSON'S VOICE INITIATIVE STUDY A. Tsanas, S. Arora
10:45-11:00	COFFEE BREAK
11:00-13:15	SESSION II – SINGING VOICE Chairpersons: M. Kob, O. Calcinoni

11:00-11:15	IMPACT OF HISTORIC RECORDING DEVICES ON THE SINGING VOICE Malte Kob
11:15-11:30	TOWARDS A SOMATOSENSORY TRAINING DIGITAL ENVIRONMENT FOR LYRIC SINGING PEDAGOGY E.Angelakis, A.Georgaki
11:30-11:45	ASSESSING ARTICULATION IN SINGING DURING A VOWEL MATCHING EXERCISE USING ARTICULOGRAPHY: A PILOT STUDY H. Daffern, A.Gully
11:45-12:00	INTONATION TENDENCIES IN A SINGING QUINTET: EVOLUTION ACROSS REHEARSALS S. D'Amario, D.M. Howard
12:00-12:15	FACE VIBRATIONS MEASUREMENT IN SINGING — PILOT STUDY M. Frič, P.Dlask, V. Hruška
12:15-12:30	COMPARISON OF SOUND RADIATION BETWEEN POP AND CLASSICAL SINGERS I. Podzimková, M. Frič
12:30-12:45	DISSOCIATION OF SPOKEN AND SUNG VOCAL PRODUCTION D. Van Lancker Sidtis, Y-J. Kim, J.J. Sidtis
12:45-13:00	SHOULD I OPEN MY MOUTH MORE TO SING LOUDER? A.Vurma
13:00-13:15	THE SINGER'S MIND L. Balliro
13:15-14:00	LUNCH
14:00-16:00	SESSION IIII - SPECIAL SESSION - EDUCATION AND REHABILITATION OF THE ARTISTIC VOICE Moderator: F. Fussi
14:00-14:30	SOVTE: BETWEEN MYTH AND REALITY F. Fussi
14:30-15:15	THE SOVTE PROTOCOLS: INDICATIONS AND CRITICISM IN VARIOUS SINGING STYLES E. Biavati, E. Bruni
15:15-16:00	G.E.M.M.A. TRAINING: A LINK BETWEEN PSYCHOLOGY AND LOGOPAEDICS IN THE TREATMENT OF SINGING VOICE DISORDERS E. Rosa
16:00-16:15	COFFEE BREAK
16:15-17:15	SESSION IV - VOICE AND EMOTIONS Chairpersons: N.Vanello, J. Schlömicher – Thier
16:15-16:30	THE CORRELATION BETWEEN POETIC RHYTHM AND HEART RATE VARIABILITY IN SUBJECTS READING AND PERCEIVING RUSSIAN POETRY K. Evgrafova, P.Skrelin, V. Evdokimova, T. Chukaeva
16:30-16:45	EMOTIONALLY EXPRESSED VOICES ARE RETAINED IN MEMORY FOLLOWING A SINGLE EXPOSURE Y-J. Kim, J. J. Sidtis, D. Van Lancker Sidtis
16:45-17:00	ELECTRODERMAL ACTIVITY AND SPEECH FEATURES AS PREDICTORS FOR AROUSAL LEVEL CHANGES AFTER AFFECTIVE WORD PRONUNCIATION N. Vanello, A. Greco, C. Marzi, E. P. Scilingo
17:00-17:15	A COMMONLY SHARED CODE FOR SADNESS IN HUMAN VOCALIZATIONS AND MUSIC REVEALED BY HUMAN INFANT CRIES G. Zeloni, F. Pavani

17:15-18:15	SESSION V - VOICE QUALITY Chairpersons: S. Ternström, P. Gómez-Vilda
17:15-17:30	TOWARDS ROBUST FEATURES IN VOICE DISEASE DIAGNOSIS: MFCCs VS. PNCCs M. Madruga, Y. Campos-Roca, C. J. Pérez
17:30-17:45	ELECTROGLOTTOGRAPHIC VOICE MAPS OF UNTRAINED VOCALLY HEALTHY ADULTS, WITH GENDER DIFFERENCES AND GRADIENTS S. Ternström, R. R. Patel
17:45-18:00	ACOUSTIC AND ELECTROGLOTTOGRAPHIC PARAMETRISATION OF PHONATORY QUALITY PROVIDE VOICE PROFILES OF PATHOLOGICAL SPEAKERS M. Pützer, W. Wokurek
18:00-18:15	VOCAL QUALITIES OF SARCASTIC UTTERANCES: CROSS-LINGUISTIC STUDY OF ENGLISH AND KOREAN S.-Y. Yang
18:15-19:30	MUSICAL ENTERTAINMENT - VOCAL ENSEMBLE "TEMPUS FLORIDUM" WELCOME COCKTAIL

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08:45-10:15	SESSION VIa - VOCAL FOLDS DYNAMICS Chairpersons: P. Aichinger, B. Richter
08:45-09:00	PERTURBATION OF CYCLE LENGTHS AND CYCLE PEAK AMPLITUDES IN DIPLOPHONIC VOICES P. Aichinger
09:00-09:15	TRACKING OF MULTIPLE FUNDAMENTAL FREQUENCIES IN STANDARD TEXT READINGS OF DIPLOPHONIC SPEAKERS P. Aichinger
09:15-09:30	AERODYNAMICS OF GLOTTAL VIBRATION ONSET P. H. DeJonckere, J. Lebacqz
09:30-09:45	A GLOTTAL AREA WAVEFORM MODEL FOR MULTI-PULSED VOCAL FRY V. Devaraj, P. Aichinger
09:45-10:00	MODELLING LONGITUDINAL PHASE DIFFERENCES IN A LUMPED AND DISTRIBUTED ELEMENTS VOCAL FOLD MODEL C. Drioli, P. Aichinger
10:00-10:15	EXTRACTING VOCAL FOLD KINEMATIC PARAMETERS FROM VIDEOKYMOTRACED DATA S. Bulusu, S. Pravin Kumar, J. G. Svec, P. Aichinger
10:15-10:30	COFFEE BREAK
10:30-12:30	SESSION VII - COMET SESSION - ACTOR'S AND ACTRESS' VOICES Moderator: P. Dejonckere
10:30-10:45	CELEBRATING THE 50 TH COMET ANNIVERSARY – INTRODUCTION AND GREETINGS FROM THE PRESIDENT EUGENIA CHÁVEZ P.H. DeJonckere
10:45-11:00	SPECTRAL SPECIFICITIES OF ACTING VOICE IN PROFESSIONAL ACTRESSES P.H. DeJonckere, H. Stoffels
11:00-11:15	SHORT TERM EFFECT OF 'SEMI-OCCLUDED VOCAL TRACT EXERCISES' ON HEALTHY ACTORS' VOICES V. Di Natale, G. Cantarella, C. Manfredi, A. Ciabatta, C. Bacherini, P. DeJonckere
11:15-11:30	SINGING WHILE ACTING AND VICE-VERSA O. Calcinoni
11:30-11:45	THE SHOUTING VOICE AND THE IMPORTANCE OF SHOUTING ABILITY AS A 'FITNESS' PARAMETER FOR ALL VOICE USERS J. Schlömicher – Thier, H. Tropper, I. Franke
11:45-12:00	THE ACTORS VOICE: LAUGHING, CRYING AND SHOUTING IN THE MRI B. Richter, L. Traser, M. Burdumy, M. Echternach, C. Spahn
12:00-12:15	DISTORTED VOCALITY: SUPRAGLOTTIC MANAGEMENT IN ACTING AND DUBBING F. Fussi, E. Bruni
12:15-12:30	HISTORICAL NOTE - CELEBRATING LEONARDO DA VINCI: AUDIOLOGY AND VOICOLOGY PRECURSOR O. Calcinoni
12:30-13:30	LUNCH

13:30-14:30	SESSION VIb - VOCAL FOLDS DYNAMICS Chairpersons: J.Sundberg , X. Pelorson
13:30-13:45	VOCAL FOLD OSCILLATORS AT LARGE ASYMMETRIES J. C. Lucero, X. Pelorson, A. Van Hirtum
13:45-14:00	PHYSICAL STUDY OF THE INFLUENCE OF LEFT-RIGHT VOCAL FOLDS ANGLE ASYMMETRY ON PHONATION A. Van Hirtum, A. Bouvet, X. Pelorson, I. Tokuda
14:00-14:15	THEORETICAL AND EXPERIMENTAL MODELING OF LESIONS OF THE VOCAL FOLDS X.Pelorson, A. Bouvet, A. Van Hirtum
14:15-14:30	VOICE SOURCE EFFECTS OF FUNDAMENTAL FREQUENCY VARIATION J. Sundberg
14:30-15:15	SESSION VIII – VOCAL FOLDS PARALYSIS/ABNORMALITIES Chairpersons: M. Pedersen, G. Cantarella
14:30-14:45	PHONOSURGICAL TREATMENT OF BILATERAL LARINGEAL PARALYSES G. Cantarella
14:45-15:00	SELECTIVE SURFACE STIMULATION IN UNILATERAL VOCAL FOLD PARALYSIS (UVFP) B. Schneider-Stickler, M. Leonhard, M. Krenn, W. Mayr
15:00-15:15	ULTRAHIGH RESOLUTION OPTICAL COHERENCE TOMOGRAPHY FOR DETECTING TISSUE ABNORMALITIES OF THE ORAL AND LARYNGEAL MUCOSA: A PRELIMINARY STUDY N.Møller Israelsen, A. Overgård Jønsson, M. Pedersen
15:15-15:45	COFFEE BREAK
15:45-16:45	SESSION IX - KEYNOTE LECTURE DEVELOPING NEW SPEECH SIGNAL PROCESSING ALGORITHMS FOR BIOMEDICAL AND LIFE SCIENCES APPLICATIONS: PRINCIPLES, FINDINGS, CHALLENGES, AND A VIEW TO THE FUTURE A. Tsanas
17:15-19:00	GUIDED VISIT OF THE ARCHAEOLOGICAL MUSEUM Piazza della Santissima Annunziata, 9B
19:15-23:00	DINNER AT LOGGIA DEL VERONE Piazza della Santissima Annunziata, 13

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08:45-09:45	SESSION X - BIOMECHANICS/DEVICES Chairpersons: J. Horáček, A.-M. Laukkanen
08:45-09:00	EXPERIMENTAL MODELLING OF GLOTTAL AREA DECLINATION RATE IN VOWEL AND RESONANCE TUBE PHONATION J. Horáček, R.Vojtěch, B. Viteslav, A.-M. Laukkanen
09:00-09:15	DEVELOPMENT AND USE OF AN ANECHOIC SUBGLOTTAL TRACT FOR EXCISED LARYNX EXPERIMENTS H. Lehoux, V. Hampala, J. G. Švec
09:15-09:30	SHAKER: PRELIMINARY OBSERVATIONS OF A POTENTIAL DEVICE FOR VOICE TRAINING AND THERAPY A.-M. Laukkanen , J.Horáček , V. Radolf
09:30-09:45	MECHANIZED ANIMATION OF EXCISED HUMAN LARYNX T.Legou, F. Silva, T. Helie, H.Boutin, D. Chalabi, D. Roze, A.Giovanni, A. Lagier
09:45-10:45	SESSION XI – SPEECH Chairpersons: N. Henrich, J. Lucero
09:45-10:00	BEATBOX SOUNDS RECOGNITION USING A SPEECH-DEDICATED HMM-GMM BASED SYSTEM S. Evain, A.Contesse, A.Pinchaud, D. Schwab, B. Lecouteux, N. Henrich
10:00-10:15	AM-FM DECOMPOSITION OF SPEECH SIGNAL: APPLICATIONS FOR SPEECH PRIVACY AND DIAGNOSIS P.Motliceck, H.Hermansky, S.Madikeri, A.Prasad, S.Ganapathy
10:15-10:30	THE TOMATIS ELECTRONIC EAR EFFECTS ON SIMPLE VOCALIZATIONS M. Prenassi, W.Coppola, G.Ramponi, T.Agostini, S. Marceglia
10:30-10:45	FREE SORTING TASK OF SPEECH DISORDERS BY EXPERT AND NON-EXPERT LISTENERS V.Woisard, P. Gaillard
10:45-11:00	COFFEE BREAK
11:00-12:45	SESSION XII - VOICE VS OTHER PHYSIOLOGICAL SIGNALS/DISEASES Chairpersons: C. A. Reyes-García, C. Drioli
11:00-11:15	THE EFFECT OF PHYSICAL ACTIVITY ON THE PHONETIC CHARACTERISTICS OF SPEECH V. V. Evdokimova, E. A. Zakharchenko
11:15-11:30	CHANGES TO VOICE PRODUCTION CAUSED BY LONG-TERM HEARING LOSS (HL) I.V. Kastyro, A.N. Kovalenko, V.I. Torshin, E.S. Doroginskaya
11:30-11:45	COMPARISON OF IMMEDIATE EFFECTS OF VOCAL BREATHING EXERCISES AND PHYSICAL EXERCISES ON HEART RATE VARIABILITY (HRV) IN HEALTHY STUDENTS A.N.Kovalenko, I.V. Kastyro, V.I.Torshin, Y.S. Guhschina, E.S. Doroginskaya, N.A. Kamanina
11:45-12:00	AN ALGORITHM FOR DETECTING THE ONSET OF LINGUISTIC SEGMENTS IN CONTINUOUS ELECTROENCEPHALOGRAM SIGNALS C. Tonatiuh Hernández-del-Toro, C. A. Reyes-García
12:00-12:15	DISCRIMINATION BETWEEN CHILDREN AND ADULT FACES USING BODY AND HEAD RATIO AND GEOMETRIC FEATURES C.A. Reyes-García, E. Morales-Vargas, H. Peregrina-Barreto, C. Manfredi

12:15-12:30	SONIFICATION TECHNIQUES APPLIED TO EEG SIGNALS OF NONMOTOR GENERALIZED ONSET EPILEPTIC SEIZURES L. Frassinetti, R. Guerrini, C. Barba, F. Melani, F. Piras, C. Manfredi
12:30-12:45	BIOVOICE: A MULTIPURPOSE TOOL FOR VOICE ANALYSIS M. S. Morelli, S. Orlandi, C. Manfredi
12:45-13:00	CONCLUDING REMARKS