. Record Nr. UNINA9910484038203321

Titolo Multimodal signals : cognitive and algorithmic issues : COST Action

2102 and euCognition International School Vietri sul Mare, Italy, April 21-26, 2008; Revised selected and invited papers / / Anna Esposito...

[et al.] (Eds.)

Pubbl/distr/stampa Berlin, : Springer, 2009

ISBN 3-642-00525-X

Edizione [1st ed. 2009.]

Descrizione fisica 1 online resource (XIII, 348 p.)

Collana Lecture notes in computer science, , 0302-9743 ; ; 5398. Lecture notes

in artificial intelligence

Classificazione DAT 610f

DAT 710f DAT 758f SS 4800

Altri autori (Persone) EspositoAnna

Disciplina 006.7

Soggetti Human-computer interaction

Computer vision
Artificial intelligence

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali Bibliographic Level Mode of Issuance: Monograph

Nota di bibliografia Includes bibliographical references and index.

Nota di contenuto Interactive and Unsupervised Multimodal Systems -- Multimodal

Human Machine Interactions in Virtual and Augmented Reality -Speech through the Ear, the Eye, the Mouth and the Hand -Multimodality Issues in Conversation Analysis of Greek TV Interviews -Representing Communicative Function and Behavior in Multimodal
Communication -- Using the iCat as Avatar in Remote Meetings -Using Context to Disambiguate Communicative Signals -- Modeling
Aspects of Multimodal Lithuanian Human - Machine Interface -- Using
a Signing Avatar as a Sign Language Research Tool -- Data Fusion at
Different Levels -- Voice Technology Applied for Building a Prototype
Smart Room -- Towards Facial Gestures Generation by Speech Signal
Analysis Using HUGE Architecture -- Multi-modal Speech Processing
Methods: An Overview and Future Research Directions Using a MATLAB

Based Audio-Visual Toolbox -- From Extensity to Protensity in CAS:

Adding Sounds to Icons -- Statistical Modeling of Interpersonal

Distance with Range Imaging Data -- Verbal and Nonverbal Communication Signals -- How the Brain Processes Language in Different Modalities -- From Speech and Gestures to Dialogue Acts --The Language of Interjections -- Gesture and Gaze in Persuasive Political Discourse -- Content in Embedded Sentences -- A Distributional Concept for Modeling Dialectal Variation in TTS --Regionalized Text-to-Speech Systems: Persona Design and Application Scenarios -- Vocal Gestures in Slovak: Emotions and Prosody --Spectrum Modification for Emotional Speech Synthesis -- Comparison of Grapheme and Phoneme Based Acoustic Modeling in LVCSR Task in Slovak -- Automatic Motherese Detection for Face-to-Face Interaction Analysis -- Recognition of Emotions in German Speech Using Gaussian Mixture Models -- Electroglottogram Analysis of Emotionally Styled Phonation -- Emoticonsciousness -- Urban Environmental Information Perception and Multimodal Communication: The Air Quality Example --Underdetermined Blind Source Separation Using Linear Separation System -- Articulatory Synthesis of Speech and Singing: State of the Art and Suggestions for Future Research -- Qualitative and Quantitative Crying Analysis of New Born Babies Delivered Under High Risk Gestation -- Recognizing Facial Expressions Using Model-Based Image Interpretation -- Face Localization in 2D Frontal Face Images Using Luminosity Profiles Analysis.

## Sommario/riassunto

This book constitutes the thoroughly refereed post-conference proceedings of the COST Action 2102 and euCognition supported international school on Multimodal Signals: "Cognitive and Algorithmic Issues" held in Vietri sul Mare, Italy, in April 2008. The 34 revised full papers presented were carefully reviewed and selected from participants' contributions and invited lectures given at the workshop. The volume is organized in two parts; the first on Interactive and Unsupervised Multimodal Systems contains 14 papers. The papers deal with the theoretical and computational issue of defining algorithms, programming languages, and determinist models to recognize and synthesize multimodal signals. These are facial and vocal expressions of emotions, tones of voice, gestures, eye contact, spatial arrangements, patterns of touch, expressive movements, writing patterns, and cultural differences, in anticipation of the implementation of intelligent avatars and interactive dialogue systems that could be exploited to improve user access to future telecommunication services. The second part of the volume, on Verbal and Nonverbal Communication Signals, presents 20 original studies devoted to the modeling of timing synchronisation between speech production. gestures, facial and head movements in human communicative expressions and on their mutual contribution for an effective communication.