

*Anna Esposito is Associate Professor at Seconda Università di Napoli, Department of Psychology, and Associate researcher at International Institute for Advanced Scientific Studies (IIASS)*

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*webpages:*

<http://win.iiassvietri.it/anna.html>

<http://www.iiassvietri.it/en/ricerca-in-campo-socio-sanitario.html>

## *Education*

Ph.D in Applied Mathematics and Computer Science, Naples University, “Federico II” Italy. Title of Ph.D. thesis: Features extraction from speech: The acoustic attributes of vowels and stop consonants in Italian (in Italian).

Massachusetts Institute of Technology, (MIT, Cambridge), visiting scientist in the Department of Electrical Engineering and Computer Science and the Department of Brain and Cognitive Sciences under the sponsorship of the Italian Ph.D. Fellowship (host professors: Kenneth Stevens and Michael Jordan).

"Laurea" in Computer Science earned with the maximum score earned at Salerno University, Italy. Title of thesis: A study on the behavior and the learning process of deterministic neural networks: how to increase their storage capacity (in Italian).

## *Short BIO*

**Anna Esposito** received her “Laurea Degree” *summa cum laude* in Information Technology and Computer Science from Università di Salerno in 1989 with a thesis on: *The Behavior and Learning of a Deterministic Neural Net* (published on **Complex System**, vol 6(6), 507-517, **1992**). She received her PhD Degree in Applied Mathematics and Computer Science from Università di Napoli “Federico II” in 1995. Her PhD thesis on: *Vowel Height and Consonantal Voicing Effects: Data from Italian* (published on **Phonetica**, vol 59(4),197-231, **2002**) was developed at Massachusetts Institute of Technology (MIT), Research Laboratory of Electronics (RLE), under the supervision of professor Kenneth N Stevens.

She has been Post Doc at the International Institute for Advanced Scientific Studies (IIASS), and Assistant Professor at the Department of Physics at the Università di Salerno (Italy), where she taught classes on Cybernetics, Neural Networks, and Speech Processing (1996-2000). She had a position as Research Professor (2000-2002) at the Department of Computer Science and Engineering at Wright State University (WSU), Dayton, OH, USA. She is currently associated with WSU as Research Affiliate.

Anna is currently working as an Associate Professor in Computer Science at the Department of Psychology, Seconda Università di Napoli (SUN). Her teaching responsibilities include Cognitive and Algorithmic Issues of Multimodal Communication, Human Machine Interaction, Cognitive Economy, and Decision Making. She authored 170+ peer reviewed publications in international journals, books, and conference proceedings. She edited/co-edited 24 books and conference proceedings with Italian, EU and overseas colleagues.

Anna has been the Italian Management Committee Member of:

- COST 277: Nonlinear Speech Processing, [www.cost.esf.org/domains\\_actions/ict/Actions/277](http://www.cost.esf.org/domains_actions/ict/Actions/277) (2001-2005)
- COST MUMIA: Multilingual and Multifaceted Interactive information Access, [www.cost.esf.org/domains\\_actions/ict/Actions/IC1002](http://www.cost.esf.org/domains_actions/ict/Actions/IC1002) (2010 -2014)
- COST TIMELY: Time in Mental Activity, [www.timely-cost.eu](http://www.timely-cost.eu) (2010-2014)

She has been the proposer and chair of COST 2102: Cross Modal Analysis of Verbal and Nonverbal Communication, [www.cost.esf.org/domains\\_actions/ict/Actions/2102](http://www.cost.esf.org/domains_actions/ict/Actions/2102) (2006 -2010).

Since 2006, she is a Member of the **European Network for the Advancement of Artificial Cognitive Systems, Interaction and Robotics** ([www.eucognition.org](http://www.eucognition.org));

She is currently the Italian Management Committee Member of ISCH COST Action IS1406: Enhancing children's oral language skills across Europe and beyond ([www.cost.eu/COST\\_Actions/isch/Actions/IS1406](http://www.cost.eu/COST_Actions/isch/Actions/IS1406))

Anna's research activities are on the following three principal lines of investigations:

- **1998 to date:** Cross-modal analysis of speech, gesture, facial and vocal expressions of emotions. Timing perception in language tasks.
- **1995 to date:** Emotional and social believable Human-Computer Interaction (HCI).
- **1989 to date:** Neural Networks: learning algorithm, models and applications

The interdisciplinary research background provided a novel perspective in the field of Human Computer Interaction with applications in Ambient Assistive Technology for improving life quality and developing models for the algorithmic implementation of friendly and emotionally coloured interactive dialog systems and *socially* believable ICT multimodal interfaces. Particular efforts are devoted to the following aspects:

1. The definition of qualitative and quantitative interactive behavioural (gestural and emotional) features
2. The development of mathematical models measuring the quality of human-human and human-computer interaction
3. The cognitive and psychological support for developing specific rehabilitation tools to preserve cognitive and motoric abilities.

### *Academic*

o **Dec 2002 to date:** Associate professor in Computer Science, Department of Psychology, Second University of Naples, Caserta, IT

o **Nov 1 2000 – Nov 30 2002:** Research Professor at Wright State University, Department of Computer Science and Engineering, Dayton, Ohio, USA

o **Dec 1997 – 2009:** Assistant Professor at SALERNO UNIVERSITY, DEPARTMENT OF PHYSICS, Baronissi, Salerno IT.

o **Dec 1995 – Oct 30 2000:** Assistant professor at International Institute for Advanced Scientific Studies (IIASS), Vietri sul Mare, IT

o **Mar 1 1995 – Oct 30 1995:** Post-doc research fellowship on Perceptual and Acoustic Analysis of Speech. International Institute for Advanced Scientific Studies (IIASS), Vietri sul Mare, IT

o **Oct 1 1989 – Nov 1 1990:** System Manager (article n. 26) of the Computer Laboratory of Physics, Department of Theoretical Physics, Salerno University, IT

o **Apr 1989 – Sep 30 1989:** Research position in the Communications Software Department of TELETTTRA (government owned company), Milan, IT

### *Teaching Activities*

*Aims: To foster the excellence and creativity of students committing myself to ensure their learning through:*

- a) the exploitation of state of art and advanced research materials*
- b) the engagement into the design of experimental team and individual research projects*
- c) the employment of innovative teaching methods and the delivery of innovative course material*
- d) the involvement into to challenging research questions*

## **TEACHING ACTIVITIES at SECOND UNIVERSITY OF NAPLES, DEPARTMENT OF PSYCHOLOGY**

- **AA 2015-2016 to date:** Teacher at the Master Degree Programme in “Psychology of Cognitive Processes”. Laboratory Course on **Laboratory of Social Dynamic Networks** (4 CFU)
- **AA 2013-2014 to date:** Teacher at the Master Degree Programme in “Psychology of Cognitive Processes”. Laboratory Course on **Laboratory of Economic and Cognitive Models of Information Processing** (4 CFU)
- **AA 2009-2010 to date:** Teacher at the Master Degree Programme in “Psychology of Cognitive Processes”. Master Course on **Multimodal Communication: Cognitive and Algorithmic Issues** (8 CFU)
- **Academic Years (AA) 2015-2016 to date:** Teacher at the Doctoral School in MIND, GENDER AND LANGUAGES PhD Course on Computer Science (2 CFU)
- **Academic Years (AA) 2014-2015 to date:** Teacher at the Doctoral School in MIND, GENDER AND LANGUAGES PhD Course on Computer Science (2 CFU)
- **Academic Years (AA) 2013-2014 to date:** Teacher at the Doctoral School in MIND, GENDER AND LANGUAGES PhD Course on Computer Science (3 CFU)
- **AA 2009-2010 to 2012-2013:** Teacher at the Doctoral School in Science for life and Environment. PhD Course on **Modes and Models of Communication and Reasoning** (8 CFU)
- **AA 2005-2009:** Teacher at the Master Degree Programmes in “Psychology of Cognitive Processes and Functional Rehabilitation” and “Clinical and Developmental Psychology”. Master Courses on **Informatics** ( 4 CFU)
- **AA 2005-2009:** Teacher at the Bachelor degree in “Scientific and Psychological Methods for Understanding People and Communities”. Bachelor Course on **Fundamentals of Computer Science** (4 CFU, Doubled)
- **AA 2003- 2005:** Teacher at the Bachelor degree in “Psychology of learning and developmental processes”. Bachelor Course on **Programming tools for creating Multimodal products** (4 CFU)
- **AA 2002-2005:** Teacher at the Bachelor degree Programmes in “Psychology for preventing individual and relational discomfort” and “Psychology of learning and developmental processes”. Bachelor Courses on **Fundamentals of Computer Science** ( 4 CFU)

## **TEACHING ACTIVITIES at UNIVERSITY OF NAPLES, “Federico II”**

## **DEPARTMENT OF PSYCHOLOGY**

- **Academic Years (AA) 2015-2016 to date:** Teacher at the Doctoral School in MIND, GENDER AND LANGUAGES PhD Course on Computer Science (2 CFU)
- **Academic Years (AA) 2014-2015 to date:** Teacher at the Doctoral School in MIND, GENDER AND LANGUAGES PhD Course on Computer Science (2 CFU)
- **Academic Years (AA) 2013-2014 to date:** Teacher at the Doctoral School in MIND, GENDER AND LANGUAGES PhD Course on Computer Science (3 CFU)

## **TEACHING ACTIVITIES at SALERNO UNIVERSITY, DEPARTMENT OF PHYSICS**

- AA 2006-2009: Course at the Bachelor degree in "Physics and Cybernetics" on **Processing and Encoding of Physical Signals** (3 CFU)
- **AA 2002-2006:** Course at the *Bachelor degree in "Physics and Cybernetics"* on **Laboratory of Cybernetics** (3 CFU)
- **AA 1997-2000:** Course at the "*Laurea*" degree in "Physics and Cybernetics" on **Laboratory of Cybernetics** (8 CFU)

## **TEACHING ACTIVITIES at INTERNATIONAL INSTITUTE FOR ADVANCED SCIENTIFIC STUDIES (IIASS)**

- **Dec 1995 – Oct 30 2000:** 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Cycles of the Master Programme in "Advanced Technologies for Information Processing and Communication" (sponsored by the Italian Government, M.U.R.S.T. D.M. n. 308 of Jul 3 1995 and the European Community). Courses on
  - **Speech and Signal processing**
  - **Information Theory and Coding**
  - **Neural Networks**
  - **Distributed Systems**

## *Research Interests*

Anna research activity is on the following three principal research lines of investigation:

- 1) **1998 to date:** Behavioural and contextual analysis of interaction. Semantics and sentiment analysis in dialogues and interactions. **Cognitive and Emotional Processes.** Cross-modal analysis of speech, gesture, facial and vocal expressions of emotions. Timing perception in language tasks.
- 2) **1995 to date:** Cognitive and computational social information processing. Emotional and social believable Human-Computer Interaction (HCI) . Predictions of oro-facial motions to animate talking faces. Algorithmic and computational issues for the automatic recognition and synthesis of speech and emotions.
- 3) **1989 to date: Neural Networks: algorithm, models and applications. Incremental**

## **Learning. Neural Auditory Processing.**

The interdisciplinary research background provided a novel perspective in the field of Human Computer Interaction with applications in Ambient Assistive Technology for improving life quality and developing models for the algorithmic implementation of friendly and emotionally coloured interactive dialog systems and socially believable ICT multimodal interfaces. Particular efforts are devoted to the following aspects:

1. The definition of qualitative and quantitative interactive behavioural (gestural and emotional) features;
2. The development of mathematical models able to describe and measure the quality of human-human interaction accounting for embodied knowledge acquisition and embodied knowledge use
3. The cognitive and psychological support for developing specific rehabilitation tools designed to preserve cognitive and motoric abilities.

## **PAST RESEARCH RESULTS**

Audio and Multimedia Applications for disabled persons results: A Multimedia Program aimed to help teachers of deaf students.

Incremental Learning results: A Neural Network Model for function approximation, based on Incremental Learning has been developed.

Acoustic and Perceptual Analysis of Gemination in Italian results: The perceptual and acoustic attributes of the stop consonants in geminate and non-geminate form have been measured.

Spectrum shape analysis of Italian stop consonants results: A set of acoustic features has been extracted from the spectrum shape analysis of stop consonants that allow to discriminate among the place of articulation.

Acoustic Analysis of Italian Speech results: The fundamental frequency, the formant frequencies, and the durations were measured throughout the vocalic portions of a number of phonemically symmetric Italian consonant-vowel-consonant utterances. Moreover, preliminary studies on Dysarthic speech were done.

Phonemes recognition, Speech Noise Cancellation and Noise Source Identification results: A set of experiments for classifying phonemes extracted from TIMIT have been performed. A set of experiments aimed to cancel noise from speech and to identify the noise source have been performed.

Neural Network (theory and applications) and Auditory Processing results: A neural network for speaker adaptation implemented. A new learning paradigm for neural nets has been developed and applied to implement a parallel neural adder and a neural network for correcting and decoding binary linear code. A model of the auditory apparatus was developed and implemented.

*Current Publications*

## **Last 2 years (2014-2016) PUBLICATIONS *Book Contributions with peer review***

2016

Anna Esposito, Filomena Scibelli, Alessandro Vinciarelli (2016) A Pilot Study on the Decoding of Dynamic Emotional Expressions in Major Depressive Disorder. In Bassis et al. (Eds): *Advances in Neural Networks: Computational Intelligence for ICT*. Series: *Smart Innovation, Systems and Technologies*, Vol. 34, 189-200. DOI: 10.1007/978-3-319-33747-0\_19, Print ISBN: 978-3-319-33746-3, Online ISBN: 978-3-319-33747-0 [http://link.springer.com/chapter/10.1007/978-3-319-33747-0\\_19](http://link.springer.com/chapter/10.1007/978-3-319-33747-0_19)

Anna Esposito, Simone Bassis, Francesco Carlo Morabito, Eros Pasero (2016). Some Notes on Computational and Theoretical Issues in Artificial Intelligence and Machine Learning. In Bassis et al. (Eds): *Advances in Neural Networks: Computational Intelligence for ICT*. Series: *Smart Innovation, Systems and Technologies*, Vol. 34, 3-12. DOI: 10.1007/978-3-319-33747-0\_1, Print ISBN: 978-3-319-33746-3, Online ISBN: 978-3-319-33747-0. [http://link.springer.com/chapter/10.1007/978-3-319-33747-0\\_1](http://link.springer.com/chapter/10.1007/978-3-319-33747-0_1)

Raffaele Sperandeo, Anna Esposito, Mauro Maldonato, Silvia Dell'Orco (2016) Analyzing Correlations Between Personality Disorders and Frontal Functions: A Pilot Study. In Bassis et al. (Eds): *Advances in Neural Networks: Computational Intelligence for ICT*. Series: *Smart Innovation, Systems and Technologies*, Vol. 34, 293-302.

DOI: 10.1007/978-3-319-33747-0\_29, Print ISBN: 978-3-319-33746-3, Online ISBN: 978-3-319-33747-0 [http://link.springer.com/chapter/10.1007/978-3-319-33747-0\\_29](http://link.springer.com/chapter/10.1007/978-3-319-33747-0_29)

Esposito, A., Jain, L.C. (2016) Modeling Social Signals and Contexts in Robotic Socially Believable Behaving Systems.. In Esposito A. & Jain L.C. (Eds) *Toward Robotic Socially Believable Behaving Systems Volume II - "Modeling Social Signals"* (Eds). *Intelligent Systems Reference Library*, ISRL 106: 5-13, Springer International Publishing Switzerland. <http://www.springer.com/fr/book/9783319310527>

Esposito, A., Jain, L.C. (2016) Modeling Emotions in Robotic Socially Believable Behaving Systems. In Esposito A. & Jain L.C. (Eds). *Toward Robotic Socially Believable Behaving Systems Volume I - "Modeling Emotions"* *Intelligent Systems Reference Library*, 105: 9-15, Springer International Publishing Switzerland. <http://www.springer.com/gp/book/9783319310558>.

Kiss, G.C., Tulics, M.G., Sztahó, D., Esposito, A., Vicsi, K. (2016). Language Independent Detection Possibilities of Depression by Speech. In Esposito A. et al (Eds), *Springer SIST series on Recent Advances in Nonlinear Speech Processing*, 48:103-114.. DOI: 10.1007/978-3-319-28109-4\_11, Print ISBN: 978-3-319-28107-0, Online ISBN: 978-3-319-28109-4, Series ISSN: 2190-3018 [http://link.springer.com/chapter/10.1007%2F978-3-319-28109-4\\_11](http://link.springer.com/chapter/10.1007%2F978-3-319-28109-4_11)

Esposito, A., Faundez-Zanuy, M., Esposito, A.M., Cordasco, G., Drugman, T., Solé-Casals, J., Morabito, F.C. (2016). Recent Advances in Nonlinear Speech Processing: Directions and Challenges. In Esposito A. et al. (Eds), *Springer SIST series on Recent Advances in Nonlinear Speech Processing*, 48:5-11. Print ISBN:978-3-319-28107-0, Online ISBN: 978-3-319-28109-4, DOI: 10.1007/978-3-319-28109-4\_2, Series ISSN: 2190-3018 [http://link.springer.com/chapter/10.1007%2F978-3-319-28109-4\\_2](http://link.springer.com/chapter/10.1007%2F978-3-319-28109-4_2)

Esposito, A., Esposito, A.M., Likforman-Sulem, L., Maldonato, N.M., Vinciarelli, A. (2016). On the significance of speech pauses in depressive disorders: Results on read and spontaneous narratives. In Esposito A. et al. (Eds), *Springer SIST series on Recent Advances in Nonlinear Speech Processing*, 48, 73-82.. DOI: 10.1007/978-3-319-28109-4\_8, Print ISBN: 978-3-319-28107-0, Online ISBN: 978-3-319-28109-4, Series ISSN: 2190-3018 [http://link.springer.com/chapter/10.1007%2F978-3-319-28109-4\\_8](http://link.springer.com/chapter/10.1007%2F978-3-319-28109-4_8)

2015

Likforman-Sulem, L., Esposito, A., Faundez-Zanuy, M., Cléménçon, S. (2015). Extracting Style and Emotion from



Handwriting. In Bassis S. et al (eds) *Advances in Neural Networks: Computational and Theoretical Issues*. Springer SIST Series, 37:347-355. Springer Verlag Heidelberg, ISBN 978-3-319-18163-9 (print) ISBN 978-3-319-18164-6 (eBook)

DOI: 10.1007/978-3-319-18164-6\_34

[http://link.springer.com/chapter/10.1007/978-3-319-18164-6\\_34](http://link.springer.com/chapter/10.1007/978-3-319-18164-6_34)

[http://dx.doi.org/10.1007/978-3-319-18164-6\\_34](http://dx.doi.org/10.1007/978-3-319-18164-6_34)

Esposito, A., Palumbo, D., Troncone, A. (2015). Effects of Narrative Identities and Attachment Style on the Individual's Ability to Categorize Emotional Voices. In Bassis S. et al. (eds) *Advances in Neural Networks: Computational and Theoretical Issues*. Springer SIST Series 37:265-272. Springer Verlag Heidelberg, ISBN 978-3-319-18163-9 (print) ISBN 978-3-319-18164-6 (eBook)

DOI: 10.1007/978-3-319-18164-6\_25

[http://link.springer.com/chapter/10.1007/978-3-319-18164-6\\_25](http://link.springer.com/chapter/10.1007/978-3-319-18164-6_25)

[http://dx.doi.org/10.1007/978-3-319-18164-6\\_25](http://dx.doi.org/10.1007/978-3-319-18164-6_25)

Esposito A, Bassis S, Morabito FC (2015) Recent Advances of Neural Networks Models and Applications: An Introduction. In Bassis S. et al (eds) *Advances in Neural Networks: Computational and Theoretical Issues*. Series: Smart Innovation, Systems and Technologies, Vol. 37, pages 3-8, Springer Verlag Heidelberg, ISBN 978-3-319-18163-9 (print) ISBN 978-3-319-18164-6 (eBook)

DOI: 10.1007/978-3-319-18164-6\_1

[http://link.springer.com/chapter/10.1007/978-3-319-18164-6\\_1](http://link.springer.com/chapter/10.1007/978-3-319-18164-6_1)

[http://dx.doi.org/10.1007/978-3-319-18164-6\\_1](http://dx.doi.org/10.1007/978-3-319-18164-6_1)

Koutsombogera, M., Galanis, D., Riviello, M.T., Tseren, N., Karabetsos, S., Esposito, A., Papageorgiou, H. (2015). Conflict Cues in Call Center Interactions. In F. D'Errico et al. (Eds), *Conflict and Multimodal Communication*, 26:431-447, Springer Verlag Heidelberg. DOI; 10.1007/978-3-319-14081-0\_20, Print ISBN 978-3-319-14080-3, Online ISBN 978-3-319-14081-0

[http://link.springer.com/chapter/10.1007/978-3-319-14081-0\\_20](http://link.springer.com/chapter/10.1007/978-3-319-14081-0_20)

Series: Computational Social Sciences

## 2014

Riviello MT, Capuano V, Ombrato G, Baldassarre I, Cordasco C, Esposito A (2014) The Influence of Positive and Negative Emotions on Physiological Responses and Memory Task Scores. In Bassis S et al. (Eds), *Recent Advances of Neural Network Models and Applications*, vol. 26, 315-324, Springer Verlag Heidelberg, DOI 10.1007/978-3-319-04129-2, ISBN 978-3-319-04129-2, 2014.

<http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978-3-319-04128-5>  
Series: Smart Innovation, Systems and Technologies,

Troncone A, Palumbo D, Esposito A (2014) Mood effects on the decoding of emotional voices. In Bassis S et al. (Eds), *Recent Advances of Neural Network Models and Applications*, vol. 26, 325-332, Springer Verlag Heidelberg, DOI 10.1007/978-3-319-04129-2, ISBN 978-3-319-04129-2, 2014.

<http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978-3-319-04128-5>  
Series: Smart Innovation, Systems and Technologies,  
[http://dx.doi.org/10.1007/978-3-319-04129-2\\_32](http://dx.doi.org/10.1007/978-3-319-04129-2_32)

Riviello MT, Maskeliunas R, Kruminienė J, Esposito A (2014) Language and gender effect in decoding emotional information: A study on Lithuanian subjects. . In Bassis S et al. (Eds), *Recent Advances of Neural Network Models and Applications*, vol. 26, 353-362, Springer Verlag Heidelberg,, DOI 10.1007/978-3-319-04129-2, ISBN 978-3-319-04129-2, 2014.

<http://www.springer.com/engineering/computational+intelligence+and+complexity/book/978-3-319-04128-5>  
Series: Smart Innovation, Systems and Technologies,  
[http://dx.doi.org/10.1007/978-3-319-04129-2\\_35](http://dx.doi.org/10.1007/978-3-319-04129-2_35)

Esposito A, Esposito AM, Esposito M: On Distinctive Visual and Auditory Timing Cues in Language Tasks. In Lewandowska-Tomaszczyk B, Kosecki K (Eds): *Timing-Time and Temporality in Human Experience* ISBN:978-3-631-64339-6, Peter Lang/Frankfurt am Main, 201-218, 2014.

## International Journal with peer review

### 2015

Baranyi P , Charaf H, Esposito A, Földesi P, Meng H (2015) Multimodal biases in CogInfoCom networks. Journal on Multimodal User Interfaces, pp 1-2. DOI 10.1007/s12193-015-0201-8, Print ISSN: 1783-7677, Online ISSN: 1783-8738, <http://link.springer.com/article/10.1007/s12193-015-0201-8>

Fortunati, L., Esposito, A., Lugano, G. (2015). Beyond Industrial Robotics: Social Robots Entering Public and Domestic Spheres. The Information Society: An International Journal, 31(3): 229-236. DOI: 10.1007/s12369-015-0316-9; Print ISSN:1875-4791; Online ISSN: 1875-4805, <http://link.springer.com/article/10.1007/s12369-015-0316-9>

Fortunati L, Esposito A, Lugano G (2015) Beyond Industrial Robotics: Social Robots Entering Public and Domestic Spheres”, The Information Society: An International Journal,31:3, 229-236. DOI:10.1080/01972243.2015.1020195, ISSN: 0197-2243 (Print), 1087-6537 (Online), <http://dx.doi.org/10.1080/01972243.2015.1020195>

Vinciarelli , A., Esposito, A., André, E., Bonin, F., Chetouani, M., Cohn, J.F., Cristan, M., Fuhrmann, F., Gilmartin, E., Hammal, Z., Heylen, D., Kaiser, R., Koutsombogera, M., Potamianos, A., Renals, S., Riccardi, G., Salah, A.A. (2015) . Open Challenges in Modelling, Analysis and Synthesis of Human Behaviour in Human–Human and Human–Machine Interactions. Cognitive Computation, 7(4):397-413. DOI10.1007/s12559-015-9326-z, Print ISSN1866-9956, Online ISSN1866-9964. <http://link.springer.com/article/10.1007/s12559-015-9326-z#>

Vinciarelli, A., Chatziioannou, P., Esposito, A. (2015). When the words are not everything: the use of laughter, fillers, back-channel, silence, and overlapping speech in phone calls. Frontiers in ICT, 4(4):1-11. DOI: doi: 10.3389/fict.2015.00004, <http://journal.frontiersin.org/article/10.3389/fict.2015.00004/abstract>

Esposito, A., Esposito, A.M., Vogel, C. (2015). Needs and challenges in human computer interaction for processing social emotional information. Pattern Recognition Letters, 66, 41-51.. ISSN: 0167-8655, DOI: 10.1016/j.patrec.2015.02.013, PII: S0167-8655(15)00061-6, <http://www.sciencedirect.com/science/article/pii/S0167865515000616>  
<http://www.sciencedirect.com/science/article/pii/S0167865515000616>

### 2014

Esposito A, Fortunati L, Lugano G (2014) Modeling emotion, behaviour and context in socially believable robots and ICT interfaces. Cognitive Computation, 6( 4), 623-627, DOI 10.1007/s12559-014-9309-5, <http://link.springer.com/article/10.1007/s12559-014-9309-5>, <http://dx.doi.org/10.1007/s12559-014-9309-5>

Esposito A, Palumbo D, Troncone A (2014) The influence of the attachment style on the decoding accuracy of emotional vocal expressions. Cognitive Computation, ISSN 1866-9956, Volume 6, Number 4, 699-707, DOI: 10.1007/s12559-014-9292-x. <http://link.springer.com/article/10.1007/s12559-014-9292-x>

<http://dx.doi.org/10.1007/s12559-014-9292-x>

Fortunati L, Esposito A, Ferrin G, Viel M (2014) Approaching social robots through playfulness and doing-it-yourself: children in action. Cognitive Computation, ISSN 1866-9956, Volume 6, Number 4, 789-801,

DOI:10.1007/s12559-014-9303-y. SCOPUS CODE: eid=2-s2.0-84906651431,  
<http://link.springer.com/article/10.1007/s12559-014-9303-y> <http://dx.doi.org/10.1007/s12559-014-9303-y>

Klára Vicsi and Anna Esposito (2014): Communicative social signals: Computational and behavioural aspects of human-human and human-machine interaction. *Intelligent Decision Technologies*, 8 (2014) 253–254, ISSN print 1872-4981 ISSN online 1875-8843 DOI 10.3233/IDT-140193 IOS Press,  
<http://iospress.metapress.com/content/yu35256315737352/>

### International Conferences with Peer Review

#### 2015

Psarologou A, Esposito A, Bourbakis N (2015). *A Synthesis of Stochastic Petri Net (SPN) Graphs for Natural Language Understanding (NLU) Event/Action Association*. In *IEEE Proceedings of the 27<sup>th</sup> IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2015)*, 218-225, ISSN: 1082-3409/15, DOI 10.1109/ICTAI.2015.43

<http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=7372139&url=http%3A%2F%2Fieeexplore.ieee.org%2Fstamp%2Fstamp.jsp%3Ftp%3D%26arnumber%3D7372139>

Esposito A, Vassallo J, Esposito AM, Bourbakis N (2015) On the Amount of Semantic Information Conveyed by Gestures. In *IEEE Proceedings of the 27<sup>th</sup> IEEE International Conference on Tools with Artificial Intelligence (ICTAI 2015)*, 660-667 1082-ISSN: 3409/15, ISSN: 1082-3409/15, DOI 10.1109/ICTAI.2015.100.

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