

CURRICULUM VITAE ET STUDIORUM OF MARIA DE MARSICO

Personal data

Maria De Marsico, born in Pellezzano (Salerno) on the 24th of November 1963, CF DMRMRA63S64G426U, residing at Via Lazio 7, 00012 - Villalba Guidonia (Rome), tel. 0774 354106/338 1108259, e-mail demarsico@di.uniroma1.it

Nationality 'Italian

1. Present position

- From 03/01/2001 Assistant Professor (INF/01) at Sapienza University of Rome, Department of Computer Science.

2. Education

- Degree in Computer Science on 07/14/1988 at the University of Salerno, Faculty of Mathematical, Physical and Natural Sciences, 110/110 cum laude. Thesis title: "Structures and visual languages." The dissertation analyzed various approaches to image segmentation, with particular reference to techniques of structural type.

3. Scientific activity

4.1 Research interests

The research relates to two main areas: 1) Human-Computer Interaction, with a focus on design and usability evaluation of interactive systems and e-learning, 2) Image Processing and Biometric systems. The meeting point between the two areas is identified in the role of the image in the interaction between man and machine in contexts such as Ambient Intelligence and secure interaction.

4.2 Coordination of research activities

Head of Work Package WP5 - Standards for e-learning in the community project QUIS, QUality, Interoperability and Standards in e-learning (e-learning Project, starting Feb 2005)

Head of Scientific Unit of Rome for the project FIRB 2009 "E-learning, deafness, written language, a bridge of letters and signs for the knowledge society", code RBNE074T5L

Scientific Coordinator of the 2010 University project "Icara: using a mobile information system with functions of Context Aware Augmented Reality"

Scientific Coordinator of the 2011 University project "Moving Icara"

4.3 Activities related to research interests

- **International collaborations**
 - Prof. Harry Wechsler – Geroge Mason University – Virginia – USA

- Prof. Gianfranco Doretto – West Virginia University – USA
 - Prof. Jean-Luc Dugelay – EURECOM – France
 - Prof. Patrice Dalle – Université Paul Sabatier – Toulouse III - France
- **Advisor** for PhD activities of Fabrizio Borgia, PhD student in co-tutoring between Sapienza Università di Roma and Université Paul Sabatier - Toulouse III, in collaboration with Prof. Patrice Dalle
 - **Advisor** for PhD activities of Daniele Cipriani, PhD student del 28-simo ciclo presso il Dipartimento di Informatica della Sapienza Università di Roma
 - **Supervisor** for about 100 BSc/MSc dissertations most of all for the topics:
 - Image Processing, in particular for problems related to indexing and retrieval of images from pictorial databases;
 - Design, implementation and evaluation of e-learning tools, both synchronous and asynchronous;
 - Design and implementation of adaptive interfaces;
 - Biometric systems
 - **Referee** for international journals such as:
 - Journal of Computing and Information Technology
 - IEEE Transaction on Knowledge and Data Engineering
 - Image and Vision Computing Journal
 - Journal of Visual Languages and Computing
 - International Journal of Human-Computer Studies
 - International Journal of Computers and Applications
 - IEEE Transactions on System, Man and Cybernetics - Part A
 - IEEE Transactions on System, Man and Cybernetics – Part C
 - IEEE Transactions on Information Forensics and Security
 - Pattern Recognition
 - Pattern Recognition letters

and for international conferences such as:
 - **Program Committee Member** for international conferences such as:
 - Interaction Design for Children - IDC 2009
 - Interact 2009
 - AVI 2010
 - Didamatica 2010
 - Eurographics Italian Chapter Conference 2011 (EG-IT 2011)
 - 2012 IEEE Workshop on Biometric Measurements and Systems for Security and Medical Applications BIOMS 2012
 - IEEE Globecom 2012 - Communication and Information System Security Symposium
 - Emerging Security Technologies Conference – EST 2012 – EST 2013
 - International Conference on Biometrics – ICB 2013
 - 18th Iberoamerican Congress on Pattern Recognition – CIARP 2013
 - International Conference on Pattern Recognition – ICPR 2014
 - International Joint Conference on Biometrics – IJCB 2014
 - International Workshop on Biometrics - BIOMET 2014

- 13th International Conference on Web-based Learning - ICWL 2014

- **Member of the organization** of international conferences such as:
 - AVI 2002 Trento (Co-editor and Scientific Secretariat)
 - AVI 2004 Bari (Short paper & Poster Chair)
 - AVI 2006 Venezia (Short paper & Poster Chair)
 - Workshop on Multimodal Interaction Through Haptic Feedback- MITH 2008.(Chair)
 - AVI 2012 Capri (Publicity Chair)
 - BIOMS 2012 (Publication Chair)
 - ICPRAM 2013 (Program Chair)
 - ICPRAM 2014 (Program Co-Chair)
 - ICPRAM 2015 (Program Co-Chair)

- **Area Editor** of IEEE Biometrics Compendium (online) created by IEEE Biometrics Council

- **Associated editor** of Pattern Recognition in Physics

- **Member** IEEE (The Institute of Electrical and Electronics Engineers), ACM (Association for Computing Machinery), GIRPR (Gruppo Italiano dei Ricercatori in Pattern Recognition), EAB (European Association for Biometrics) e di INSTICC (Institute for Systems and Technologies of Information, Control and Communication).

4.4 Selected publications

Selected international Journals:

M. De Marsico, L. Cinque, S. Levialdi: "Indexing pictorial documents by their content: a survey of current techniques", *Image and Vision Computing* 15 (2) (1997) 119-141

A. Del Bimbo, M. De Marsico, S. Levialdi, G. Peritore: "Query-by-dialog: an interactive approach to pictorial querying", *Image and Vision Computing* 16 (1998) 557-569

M. De Marsico, S. Levialdi: "Evaluating web sites: exploiting user's expectations". *International Volume* 60, Issue 3 , March 2004, Pages 381-416

C. Ardito, M.F. Costabile, M. De Marsico, R. Lanzilotti, S. Levialdi, T. Roselli, V. Rossano: "An approach to Usability Evaluation of E-Learning Applications". *UAIS (Universal Access in Information Society)*. Special issue on User-Centred Interaction Paradigms for Universal Access in the Information Society. Vol. 4/3 March 2006, pp 270-283

M. De Marsico, S. Kimani, V. Mirabella, K.L. Norman, T. Catarci: “A Proposal Toward the Development of Accessible e-Learning Content by Human Involvement”. UAIS (Universal Access in Information Society). Vol. 5/2 August 2006, pp 150-169.

M. De Marsico, M. Nappi, D. Riccio, G. Tortora. “A Multiexpert Collaborative Biometric System for People Identification”. M. De Marsico, M. Nappi, D. Riccio. FARO: FAcE Recognition Against Occlusions and Expression Variations. IEEE Transactions on Systems, Man, and Cybernetics — Part A: Systems and Humans, Vol. 40, No. 1, 121-132

M. De Marsico, M. Nappi, D. Riccio, H. Wechsler. Iris segmentation using pupil location, linearization, and limbus boundary reconstruction in ambient intelligent environments. Vol. 2, 2011, pp. 153-162

P. Bottoni, D. Capuano, M. De Marsico, A. Labella, S. Levialdi. DELE: A deaf-centred E-learning environment. Chiang Mai ISSUE, 2011, Pages 31-57

M. De Marsico, M. Nappi, D. Riccio, G. Tortora. NABS: Novel Approaches for Biometric Systems. IEEE Transactions on Systems, Man, and Cybernetics — Part C: Applications and Reviews. Volume: 41 Issue:4, July 2011, pp. 481-493

M. De Marsico, M. Nappi, and D. Riccio. Face Authentication with Undercontrolled Pose and Illumination. Signal Image and Video Processing. - Vol. 5 N. 4 - Special Issue on Unconstrained Biometrics: Advances and Trends. pp. 401-413, November 2011

M. De Marsico, M. Nappi, D. Riccio, CABALA—Collaborative architectures based on biometric adaptable layers and activities. Pattern Recognition, Volume 45, Issue 6, June 2012, Pages 2348–2362.

M. De Marsico, M. Nappi, and D. Riccio. Noisy Iris Recognition Integrated Scheme. Pattern Recognition Letters- Special issue on the Recognition of Visible Wavelength Iris Images Captured At-a-distance and On-the-move Volume 33, Issue 8, 1 June 2012, Pages 1006–1011

M. De Marsico, G. Doretto, D. Riccio. M-VIVIE: a Multi-thread Video Indexer Via Identity Extraction. Pattern Recognition Letters – Special Issue on Novel Pattern Recognition-Based Methods for Reidentification in Biometric Context- BIOCON – Volume 33, Issue 14, October 2012, pp. 1882–1890

P. Bottoni, D. Capuano, M. De Marsico, A. Labella, DELE framework: an innovative sight on didactics for deaf people, Journal of e-Learning and Knowledge Society, v.8, n.3, September 2012, pp. 165-174

M. De Marsico, M. Nappi, D. Riccio, H. Wechsler. Robust Face Recognition for Uncontrolled Pose and Illumination Changes. Accepted for publication on IEEE Transactions on Systems, Man, and Cybernetics: Systems, Vol. 43, No. 1, January 2013, pp. 149-163

M. De Marsico, M. Nappi, D. Riccio, G. Tortora. Entropy Based Template Analysis in Face Biometric Identification Systems. Accepted for publication in Journal of Signal, Image and Video Processing - Special Issue "Human Vision and Information Theory", Vol. 7, pp. 493-505

P. Bottoni, F. Borgia, D. Buccarella, D. Capuano, M. De Marsico, A. Labella. Stories and signs in an e-learning environment for deaf people. Accepted for publication in International Journal on Universal Access in the Information Society. DOI: 10.1007/s10209-012-0283-y. Online First version available at <http://www.springerlink.com/content/t112448w2m742200/>

M. De Marsico, S. Levialdi, M. Nappi, S. Ricciardi. FIGI: Floating Interface for Gesture-based Interaction. Accepted for publication in Journal of Ambient Intelligence and Humanized Computing. DOI: 10.1007/s12652-012-0160-9. Online First version available at <http://www.springerlink.com/content/0915tj21703872ug/>

M. De Marsico, M. Nappi, D. Riccio. ES-RU: an entropy based rule to select representative templates in face surveillance. Accepted for publication in Multimedia Tools and Applications – Special issue on Advances in Multimedia Surveillance. DOI: 10.1007/s11042-012-1279-6. Online First version available at <http://www.springerlink.com/content/t761k0753060r561/>

M. De Marsico, C. Galdi, M. Nappi, D. Riccio. FIRME: Face and Iris Recognition for Mobile Engagement, Image and Vision Computing, Available online 10 January 2014, DOI:10.1016/j.imavis.2013.12.014.

Selected international conferences:

S. Levialdi, M. De Marsico: "Interaction & Distance education" .In: J. Jacko and C. Stephanidis (edits). Proceedings of HCI International 2003 Volume 1, pp. 361-365 (22-27 giugno 2003 Creta)

P. Bottoni, M. De Marsico, P. Di Tommaso, S. Levialdi, D. Ventriglia, "On the notion of transition in Visual Languages ", In: Proceedings HCC 2003, pp.117-119.

C. Ardito, F. Costabile, M. De Marsico, R. Lanzilotti, S. Levialdi, P. Plantamura, V. Rossano, M. Tersigni: "Towards guidelines for usability of e-learning applications". In Christian Stry and Constantine Stephanidis (Eds), "*User-Centered Interaction Paradigms for Universal Access in the Information Society*", 8th ERCIM Workshop "User Interfaces For All", Vienna, Austria, June 28-29, 2004, Springer-Verlag, Heidelberg, Germany, LNCS No: 3196/2004, pag. 185-202.

M. De Marsico, S. Fratarcangeli, S. Levialdi, L. Lombardo: "CoOL-Room – Collaboration Oriented Learning Room". In: Proceedings of VL/HCC 2004, 20-th Symposium on Visual Languages and Human-Centric Computing, pp. 189-192. 27-29 September 2004

- A. F. Abate, M. Nappi, D. Riccio, M. De Marsico, "Face, Ear and Fingerprint: Designing Multibiometric Architectures", Proceedings of the 14th International Conference on Image Analysis and Processing ICIAP 2007, 10-14 September 2007, Modena, Italy, pp. 437-442
- M. De Marsico, D. Riccio, "A New Data Normalization Function for Multibiometric Contexts: a Case Study", Proceedings of International Conference on Image Analysis and Recognition - ICIAR 08, June 25-27, 2008 Povoá de Varzim, Portugal, LNCS 5112, pp. 1033-1040
- M. De Marsico, "A User-oriented Visual Tool for Advanced Editing of Learning Material", Proceedings of the 8-th IEEE International Conference on Advanced Learning Technologies, ICALT 08, July 1-5, 2008 Santander, Cantabria, Spain, pp. 146-148
- M. De Marsico, M. Nappi, D. Riccio. A Self-Tuning People Identification System from Split Face Components. Proceedings of The 3rd Pacific-Rim Symposium on Image and Video Technology, PSIVT2009, January 13th—16th, 2009, Tokyo, Japan, LNCS 5414 pp. 1-12
- M. De Marsico, M. Nappi, D. Riccio. Multibiometric People Identification: A Self-Tuning Architecture. Proceedings of the Third International Conference on Biometrics, ICB 2009, Alghero, Italy, June 2-5, 2009, LNCS 5558, pp. 980-989
- P. Bottoni, M. De Marsico, S. Levialedi, G. Ottieri, M. Pierro, and D. Quaresima. A Dynamic Environment for Video Surveillance. In: T. Gross et al. (Eds.): Proceedings of INTERACT 2009, Uppsala, Sweden, August 24-28, 2009, Part II, LNCS 5727, pp. 892–895, 2009.
- M. Nappi, D. Riccio, M. De Marsico. FINE: Fractal Indexing Based on Neighborhood Estimation. 2009 IEEE International Conference on Image Processing, ICIP 2009, 7-20 November 2009, Cairo, Egypt, pp.245-248
- M. De Marsico, M. Nappi, D. Riccio. HERO: Human Ear Recognition Against Occlusions. Proceedings of IEEE Computer Society Workshop on Biometrics - In association with IEEE Conference on Computer Vision and Pattern Recognition - CVPR 2010 – 18 June San Francisco – USA, pp. 178-183
- M. De Marsico, M. Nappi, D. Riccio. ISIS: Iris Segmentation for Identification Systems. Proceedings of 20-th International Conference on Pattern Recognition - ICPR 2010 – 23-26 August 2010 – Istanbul – Turkey, pp 2857-2860
- M. De Marsico, M. Nappi, D. Riccio. FACE: Face Analysis for Commercial Entities. Proceedings of ICIP, 2010 International Conference on Image Processing, September 26-29 2010, Honk Kong, pp. 1597-1600
- M. De Marsico, M. Nappi, D. Riccio. Measuring Sample Distortions in Face Recognition. Proceedings of Multimedia in Forensics, Security and Intelligence - MiFor2010 - October 29th, 2010 Firenze, Italy - held in conjunction with ACM MultiMedia 2010, pp. 83-88

M. De Marsico, M. Nappi, D. Riccio, H. Wechsler. Robust Face Recognition after Plastic Surgery Using Local Region Analysis. Proceedings of International Conference on Image Analysis and Recognition - ICIAR 2011, June 22-24, 2011, Burnaby, BC, Canada, Lecture Notes in Computer Science, 2011, Volume 6754/2011, pp. 191-200

M. De Marsico, A. Sterbini, M. Temperini. The Definition of a Tunneling Strategy between Adaptive Learning and Reputation-based Group Activities. Proceedings of 11th IEEE International Conference on Advanced Learning Technologies - ICALT 2011, July 6-8, 2011 Athens, Georgia, USA; pp. 498-500

A. Abate, M. De Marsico, M. Nappi, D. Riccio. VIVIE: A Video-surveillance Indexer Via Identity Extraction. In Proceedings of IEEE International Workshop on Advances in Automated Multimedia Surveillance for Public Safety (AAMS-PS 2011) In conjunction with IEEE International Conference on Multimedia and Expo (ICME 2011) July 15, 2011, Barcelona, Spain

M. De Marsico, M. Nappi, D. Riccio. FOVEA: A video frame organizer via identity extraction and analysis . Proceedings of BIOMS 2011- 2011 IEEE Workshop on Biometric Measurements and Systems for Security and Medical Applications. Milan, Italy, 28 September 2011. pp. 1 - 4

M. De Marsico, M. Nappi, D. Riccio. Measuring Measures for Face Sample Quality. Proceedings of International ACM Workshop on Multimedia in Forensics and Intelligence (MiFor'11) - November 29th, 2011 Scottsdale, Arizona - USA - held in conjunction with ACM MultiMedia 2011, pp. 7-12

D. Riccio, M. De Marsico. Iris Recognition in Visible Light Domain. Proceedings of ICPRAM 2012 - 1-st International Conference on Pattern Recognition Applications and Methods. Vilamora, Algarve, Portugal, 6-8 February 2012, pp. 55-62

M. De Marsico, M. Nappi, D. Riccio, J.-L. Dugelay. Moving Face Spoofing Detection via 3d Projective Invariants. Proceedings of the 5th IAPR International Conference on Biometrics - ICB 2012, March 29 - April 1, 2012 New Delhi, India, pp.1-6.

F. Borgia, C. S. Bianchini, P. Dalle, M. De Marsico. Resource production of written forms of Sign Languages by a user centered editor, SWift (SignWriting improved fast transcriber). Proceedings of the eighth international conference on Language Resources and Evaluation - LREC) 2012, May 21-27 2012 Istanbul, Turkey, pp. 3779-3784

F. Borgia, M. De Marsico, E. Panizzi, L. Pietrangeli. ARMob - Augmented Reality for Urban Mobility in RMob. Proceedings of International Working Conference on Advanced User Interfaces - AVI 2012, Capri (Italy) May 21-25 2012, pp. 258-261

C. S. Bianchini, F. Borgia, P. Bottoni, M. De Marsico. SWift - A SignWriting improved fast transcriber. Proceedings of International Working Conference on Advanced User Interfaces - AVI 2012, Capri (Italy) May 21-25 2012, pp. 390-393

M. De Marsico, M. Nappi, D. Riccio. Entropy in Biometric Face Template Analysis. Proceedings of International Conference on Image Analysis and Recognition – ICIAR 2012, Aveiro, Portugal, June 25-27, 2012, Lecture Notes in Computer Science, 2012, Volume 7325/2012, pp. 72-79

C. S. Bianchini, F. Borgia, M. De Marsico. SWift - A SignWriting editor to bridge between deaf world and e-learning. Proceedings of 12th International Conference on Advanced Learning Technologies - ICALT 2012, Rome (Italy) July 4-6 2012, pp.526-530

D. Riccio, G. Tortora, M. De Marsico, H. Wechsler. EGA - Ethnicity, Gender and Age, a pre-annotated face database. Proceedings of 2012 IEEE Workshop on Biometric Measurements and Systems for Security and Medical Applications (BioMS 2012), Salerno (Italy), September 14 2012, pp. 38-45.

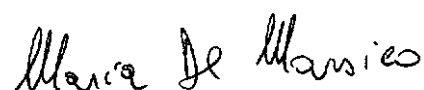
M. De Marsico, M. Nappi, D. Riccio. Entropy Based Biometric Template Clustering. Proceedings of International Conference on Pattern Recognition Applications and Methods - ICPRAM 2013 Barcelona, Spain, 15-18 February 2013, pp. 560-563

M. De Marsico, A. Sterbini, M. temperini. A Framework to Support Social-Collaborative Personalized e-Learning. M. Kurosu (Ed.): Human-Computer Interaction, Part II, HCII 2013, LNCS 8005, pp. 351–360.

M. De Marsico, M. Nappi, D. Riccio, H. Wechsler. Demographics versus Biometric Automatic Interoperability. International Conference on Image Analysis and Processing (ICIAP 2013), Napoli (Italy, September 11-13 2013, LNCS 8156, pp.472-481.

M. De Marsico, M. Nappi, D. Riccio. Fusion of multi-biometric recognition results by representing score and reliability as a complex number. 18th Iberoamerican Congress on Pattern Recognition (CIARP 2013), Havana CUBA, November 20-23 2013, J. Ruiz-Shulcloper and G. Sanniti di Baja (Eds.): CIARP 2013, Part II, LNCS 8259, pp. 302–309.

Maria De Marsico

A handwritten signature in black ink that reads "Maria De Marsico". The signature is written in a cursive style with a large initial 'M'.