

PERSONAL INFORMATION

Michela Goffredo



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Sex Female | Date of birth 12 May 1978 | Nationality Italian

POSITION

Research Assistant

WORK EXPERIENCE

2007–2009

Senior Research Assistant

University of Southampton, Department of Electronics and Computer Science, Southampton (United Kingdom)

Research activity on markerless gait biometrics

2009–2011

Research Fellow

University Roma TRE, Applied Electronics Dept, Rome (Italy)

Research activity on Biomedical Engineering: human motion analysis and functional electrical stimulation for tremor suppression.

2011–Present

Research Assistant

University Roma TRE, Engineering Dept, Applied Electronics, Rome (Italy)

Teaching the course 'Neuroengineering'. Research activity on Biomedical Engineering: human motion analysis and virtual environment systems for rehabilitation.

EDUCATION AND TRAINING

1997–2003

M. Sc (Laurea)

University Roma TRE, Rome (Italy)

Electronic Engineering

2003–2006

Philosophy doctorate

University Roma TRE, Rome (Italy)

Biomedical Electronics

PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C2	C1	C1	C2
Spanish	A2	A2	A2	A2	A2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2: Proficient user
[Common European Framework of Reference for Languages](#)

ADDITIONAL INFORMATION

MEMBERSHIP IN PROFESSIONAL SOCIETIES

2007 - present: IEEE Society
2007 - 2009: British Computer Society
2004 - present: Order of the Engineers of Rome
2003 - present: Italian National Bioengineering Group

PARTICIPATIONS TO PROJECTS AND PROGRAMS

Erasmus-IP NUIT2: Natural User Interface Technology to Business is an Erasmus Intensive Programme (IP) granted by the Finnish National Agency under the contract number 2013-1-F11-ERA10-12995

EN PLEIN: a Virtual Reality platform for the prevention of learning disorders in pre-school children, Internationalization Grant of the University Roma TRE, 2012-2013.

MIUR project PRIN: A new generation of personal interactive technologies to support motor skill learning and neuro-rehabilitation, grant agreement no 2009X3L8SW, 2009.

Erasmus-IP TrabHCI: Technologies to Reduce the Access Barrier in Human Computer Interaction is an Erasmus Intensive Programme (IP) granted by the Finnish National Agency under the contract number IP29588-1-1731-10

TREMOR: An ambulatory BCI-driven tremor suppression system based on functional electrical stimulation, European Community's Seventh Framework Programme (FP7), grant agreement no 224051, 2008-2011.

SCOVIS: Self-configurable COgnitive Video Supervision, European Community's Seventh Framework Programme (FP7), grant agreement no 216465, 2008-2011.

DATA & INFORMATION FUSION DEFENCE TECHNOLOGY CENTRE Cluster Project: Fusion of Novel Biometrics for Real-World Secure Environments (DTC 117), 2006-2009.

INFOTEL: Integrated Multimedia System for the automatic management of telemedicine services DDPACS (Demand Data Picture Archiving and Communication System), 2005-2006.

MIUR project FIRB: Human Movement analysis for diagnosis and rehabilitation: new techniques of image processing for a marker-free analysis, 2002-2004.

CONFERENCES AND MEETING ATTENDED

International Conference on NeuroRehabilitation (ICNR), 14-16 Nov. 2012, Toledo, Spain.

International Conference on Biomedical Engineering IASTED BioMed 2010, 17-19 Feb. 2010, Innsbruck, Austria.

IV European Congress of the International Federation for Medical and Biological Engineering (eMBEC), 23-27 Nov. 2008, Antwerp, Belgium.

II IEEE International Conference on Biometrics: Theory, Applications and Systems (BMVA), 29 Sept.-1 Oct. 2008, Washington D.C., USA.

VIII IEEE International Conference on Automatic Face and Gesture Recognition (FG), 17-19 September 2008, Amsterdam, The Netherlands.

BMVA symposium at the British Computer Society "Smart Environments", 6 June 2008, BCS London, UK (INVITED TALK).

BMVA symposium at the British Computer Society "3D Video Analysis, Display and Applications", 6 February 2008, BCS London, UK.

XI IEEE International Conference on Computer Vision (ICCV), 14-20 October, 2007, Rio de Janeiro, Brazil.

Data and Information Fusion Defence Technology Centre (DIF DTC) Conference, 3-4 September 2007, Cardiff, UK.

BMVA symposium at the British Computer Society "Vision-based Biometrics", 14 February 2007, BCS London, UK.

XXIII Summer School on Bioengineering "Neuro-robotics", 25-29 September 2006, Università di

Padova, Bressanone, Italy.

XVI Congress of the International Society of Electrophysiology and Kinesiology (ISEK), 28 June - 1 July 2006 Turin, Italy.

XI Multidimensional Signal Processing and Analysis International School, 18-30 July 2005, University of Transilvania, Brasov, Romania.

SPIE's Medical Imaging Conference, 12-17 February 2005, Town and Country Hotel, San Diego, USA.

XXIII Summer School on Bioengineering "Advanced elaboration techniques for biomedical signals", 20-23 September 2004, Università di Padova, Bressanone, Italy.

XXII Summer School on Bioengineering "Bioengineering of Posture and Movement", 22-25 September 2003, Università di Padova, Bressanone, Italy.

Publications

PUBLICATIONS ON INTERNATIONAL JOURNALS

M. Goffredo, M. Schmid, S. Conforto, B. Amorosi, T. D'Alessio, C. Palma. Quantitative color analysis for capillaroscopy image segmentation. *Medical and Biological Engineering and Computing*, 50(6): 567-574, 2012

I. Bouchrika, M. Goffredo, J. Carter, M. Nixon. On Using Gait in Forensic Biometrics. *Journal of Forensic Sciences*, 56(4): 882-889, 2011

M. Goffredo, M. Schmid, S. Conforto, M. Carli, A. Neri, T. D'Alessio. Markerless Human Motion Analysis in Gauss-Laguerre Transform Domain: An Application to Sit-To-Stand in Young and Elderly People. *Information Technology in Biomedicine, IEEE Transactions on*, 13(2): 207-216, 2009

D. Torricelli, M. Goffredo, S. Conforto, M. Schmid. An adaptive blink detector to initialize and update a view-based remote eye gaze tracking system in a natural scenario. *Pattern Recognition Letters*, 30: 1144-1150, 2009

M. Goffredo, I. Bouchrika, J. N. Carter, M. S. Nixon. Performance analysis for automated gait extraction and recognition in multi-camera surveillance. *Multimedia Tools and Applications*, 50(1): 75-94, 2009

M. Goffredo, I. Bouchrika, J.N. Carter, M.S. Nixon. Self-Calibrating View-Invariant Gait Biometrics. *Systems, Man, and Cybernetics, Part B: Cybernetics, IEEE Transactions on*, 99: 1-12, 2009

M. Goffredo, I. Bernabucci, M. Schmid, S. Conforto. A neural tracking and motor control approach to improve rehabilitation of upper limb movements. *Journal of NeuroEngineering and Rehabilitation*, 5: 5, 2008

M. Goffredo, M. Schmid, S. Conforto, T. D'Alessio. A Markerless sub-pixel motion estimation technique to reconstruct kinematics and estimate the centre of mass in posturography. *Medical Engineering and Physics*, 28(7): 719-726, 2005

PUBLICATIONS ON INTERNATIONAL BOOKS

R. Seely, M. Goffredo, J. N. Carter, M. S. Nixon. *View Invariant Gait Recognition. Handbook of Remote Biometrics*, Springer, ISBN: 978-1-84882-384-6, 2009

M. Goffredo, N. Spencer, D. Pearce, J. N. Carter, M. S. Nixon. Human Perambulation as a Self Calibrating Biometric. S.K. Zhou et al. (Eds.): *AMFG 2007, LNCS, 4778*: 139-153, 2007

CONTRIBUTIONS APPEARED ON PROCEEDINGS OF INTERNATIONAL CONFERENCES

C. D'Anna, D. Bibbo, M. Goffredo, M. Schmid, S. Conforto. Efficacy of TtB-Based Visual Biofeedback in Upright Stance Trials. *XIII Mediterranean Conference on Medical and Biological Engineering and Computing 2013, Sevilla, Spain: September 25-28, 2013*

M.J. Castro-Bleda, I. Bernabucci, M. Goffredo, E. Hassinen, B. Hollas, E. Lleida, A. Ortega, J. Pastor-Pellicer, A. Salopuro. Collaborative learning in international teams on Technologies to Reduce the Access Barrier in Human Computer Interaction (TrabHCI) Erasmus Intensive Programme. *Proceedings of the 24th International Conference on European Association for Education in Electrical and Information Engineering, Chania, Greece: May 30 -31, 2013*

B. D'Elia, M. Schmid, I. Bernabucci, M. Goffredo, T. D'Alessio. A Comparison between Influence of Visual and Haptic Feedback on Jerk Indicators in Hand Exercises. *Proc. International Conference on*

NeuroRehabilitation ICNR2012, 1: 317-320, 2012

M. Goffredo, M. Schmid, S. Conforto, T. D'Alessio. 3D Reaching in Visual Augmented Reality using Kinect™: the Perception of Virtual Target. Proc. International Conference on NeuroRehabilitation ICNR2012, vol. 2: 711-715, 2012

M. Goffredo, S. Conforto, M. Schmid, T. D'Alessio. Strength-Duration Properties of the Upper Limb under Surface Electrical Stimulation for Rehabilitation. Proc. 7th IASTED International Conference on Biomedical Engineering BioMed, Innsbruck, Austria: 303-307, 2010

M. Goffredo, S. Tricarico, L. Schinaia, M. Schmid, S. Conforto, T. D'Alessio. Active model of nerves in the upper limb under surface electrical stimulation. Proceedings of the XVIII ISEK Congress, Aalborg, Denmark: June 16-19, 2010

S. Tricarico, M. Goffredo, F. Bilotti, T. D'Alessio, L. Vegni. Transient quasi-static passive model of the upper limb under surface electrical stimulation: finite integration based approach. Proceedings of the XVIII ISEK Congress, Aalborg, Denmark: June 16-19, 2010

M. Goffredo, J. N. Carter, M. S. Nixon. 2D Markerless Gait Analysis. 4th European Conference of the International Federation for Medical and Biological Engineering, 22: 67-71, 2009

I. Bouchrika, M. Goffredo, J.N. Carter, and M.S. Nixon. Covariate Analysis for View-Point Independent Gait Recognition. Proc. 3rd IAPR/IEEE International Conference on Biometrics, 1: 997-1006, 2009

M. Goffredo, M. Schmid, L. Lopez, S. Conforto, T. D'Alessio. Markerless Sit to Stand analysis to predict SPPB scores in elderly people. International Conference ISPGR 2009, Bologna: 21-25 June, 2009

M. Gneo, R. Muscillo, M. Goffredo, S. Conforto, M. Schmid, T. D'Alessio. Real-time adaptive neural predictors for upper limb gestures blind recognition. 11th International Congress of the IUPESM - Medical Physics and Biomedical Engineering World Congress 2009, Munich, Germany: September 7-12, 2009

M. Goffredo, R. Muscillo, M. Gneo, M. Schmid, S. Conforto, T. D'Alessio. Estimation of Physical Performance for Elderly People via Markerless Sit to Stand Analysis. 11th International Congress of the IUPESM - Medical Physics and Biomedical Engineering, Munich, Germany: September 7-12, 2009

D. Torricelli, I. Bernabucci, M. Goffredo, T. D'Alessio. Eye-reach: a multimodal interface based on user intention prediction. Gerontechnology 2008, 7:2: 225, 2008

M. Goffredo, R. D. Seely, J. N. Carter, M. S. Nixon. Markerless View Independent Gait Analysis with Self-camera Calibration. IEEE International Conference on Automatic Face and Gesture Recognition 2008, 1: 73-80, 2008

M. Goffredo, J. N. Carter, M. S. Nixon. Front-view Gait Recognition. Biometrics: Theory, Applications and Systems, 2008. BTAS 2008. 2nd IEEE International Conference on, 1: 1-6, 2008

M. Goffredo, I. Bouchrika, J. N. Carter, M. S. Nixon. Performance Analysis for Gait in Camera Networks. International Multimedia Conference, 1: 73-80, 2008

D. Pearce, C. Harvey, S. Day, M. Goffredo. Scene segmentation from motion in multispectral imagery to aid automatic human gait recognition. Proc. SPIE Biometrics I, 6741: 67410E, 2007

A. Neri, F. Battisti, M. Carli, M. Salatino, M. Goffredo, T. D'Alessio. Perceptually Lossless Ultrasound Video Coding for Telemedicine Applications. Proc. 2007 International Workshop on Video Processing and Quality Metrics (VPQM 2007), Scottsdale, Arizona - USA: January 25-26, 2007

M. Goffredo, S. Conforto, M. Schmid, T. D'Alessio. Human silhouette tracking by a neural approach: neural snakes. XVI International Society of Electrophysiology and Kinesiology ISEK Congress, Torino, Italy: June 29 -July 1, 2006

M. Goffredo, S. Conforto, M. Schmid, A. Neri, T. D'Alessio. Markerless evaluation of sit-to-stand strategy in Gauss-Laguerre domain. XVI International Society of Electrophysiology and Kinesiology ISEK Congress, Torino, Italy: June 29 -July 1, 2006, 2006

M. Goffredo, M. Schmid, S. Conforto, T. D'Alessio. A Neural approach to the tracking of human body silhouette. ICSIP - IEEE International Conference on Signal and Image Processing, Hubli, Karnataka - India: december 7-9, 2006

M. Carli, M. Goffredo, M. Schmid, A. Neri. Study of muscular deformation based on surface slope estimation. Proc. SPIE Image Processing: Algorithms and Systems, Neural Networks, and Machine Learning, 6064: 271-278, 2006

M. Goffredo, I. Bernabucci, M. Schmid, S. Conforto, T. D'Alessio. TwinN-FES: Tracking with Neural Network to assist and restore upper arm movements through smart Functional Electrical Stimulation in hemiplegia. Proc. 2nd ICINCO International Workshop on Biosignal Processing and Classification,

Setubal, Portugal: , 2006

D. Torricelli, M. Goffredo, S. Conforto, M. Schmid, T. D'Alessio. A novel neural eye gaze tracker. ICINCO II International Workshop on Biosignal Processing and Classification, Setúbal, Portugal: August 1-5, 2006

D. Torricelli, M. Goffredo, S. Conforto, M. Schmid. A Gaze-detection system based on a novel neural approach. XVI International Society of Electrophysiology and Kinesiology ISEK Congress, Torino, Italy: June 1-3, 2006

P. Caselli, M. Goffredo, I. Bernabucci, M. Schmid. A study for a combined analysis of planar arm movements. 6th SIAMOC congress, Tirrenia (PI), Italy: October 26-29, 2005

M. Goffredo, M. Schmid, S. Conforto, M. Carli, A. Neri, T. D'Alessio. Coarse-to-fine markerless gait analysis based on PCA and Gauss-Laguerre decomposition. Proc. SPIE Medical Imaging, 5747: 1076 , 2005

M. Goffredo, M. Carli, S. Conforto, D. Bibbo, A. Neri, T. D'Alessio. Evaluation of skin and muscular deformations in a non-rigid motion analysis. Proc. SPIE Medical Imaging, 5746: 535, 2005

M. Goffredo, M. Schmid, S. Conforto, M. Carli, T. D'Alessio. Posture kinematics reconstruction and body model creation. Proc. SPIE Electronic Imaging, 5298: 136 , 2004

D. Bibbo, M. Goffredo, S. Conforto, M. Schmid, T. D'Alessio . Experimental setup for evaluating the accuracy of markerless human motion estimation techniques. Proc. IMEKO-IEEE-SICE 2004, Genova, Italy: June 14-16, 2004

SHORT AND EXTENDED ABSTRACTS APPEARED ON INTERNATIONAL JOURNALS

M. Goffredo, S. Tricarico, S. Conforto, F. Bilotti, M. Schmid, L. Vegni, T. D'Alessio. Multimodal BCI-driven FES: a model for in-silico tests on array electrodes. International Journal of Bioelectromagnetism, 13(1): 16-17, 2011

CONTRIBUTIONS ON PROCEEDINGS OF NATIONAL CONGRESSES

M. Goffredo, S. Conforto, M. Schmid, S. Tricarico, F. Bilotti, L. Vegni, T. D'Alessio. Modelling arm behaviour under surface electrical stimulation. Secondo Congresso Nazionale di Bioingegneria, Torino, Italy: July 8-10, 2010

M. Goffredo, C. Palma, M. Ardigò, T. D'Alessio. Classification of microcirculation diseases with quantitative parameters from nailfold capillaroscopy. Secondo Congresso Nazionale di Bioingegneria, Torino, Italy: July 8-10, 2010

I. Bernabucci, M. Goffredo, M. Schmid, S. Conforto, C. Palma, T. D'Alessio. A video-based system to estimate multi-segment postural stability and spinal curvature in an ambulatory environment. Secondo Congresso Nazionale di Bioingegneria, Turin, Italy: July, 8-10, 2010

BIBLIOMETRIC ANALYSIS

From Scopus:

based on documents published between 2004 and present: h index: 6, citations = 88