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PERSONAL INFORMATION

Emanuele Frontoni



WORK EXPERIENCE

01/11/2016–Present

College / university teaching professional

Università Politecnica delle Marche, Ancona (Italy)

Emanuele Frontoni is Associate Professor of "Fondamenti di Informatica" and "Computer Vision" at the Università Politecnica delle Marche, Engineering Faculty.

He received the doctoral degree in electronic engineering from the University of Ancona, Italy, in 2003. In the same year he joined the Dept. of Ingegneria Informatica, Gestionale e dell'Automazione (DIIGA) at the Università Politecnica delle Marche, as a Ph.D. student in "Intelligent Artificial Systems". He obtained his PhD in 2006 discussing a thesis on Vision Based Robotics.

His research focuses on applying computer science, artificial intelligence and computer vision techniques to mobile robots and innovative IT applications. He is a member of IEEE and AI*IA, the Italian Association for Artificial Intelligence.

EDUCATION AND TRAINING

01/01/2003–01/01/2006

PhD in Intelligent Information Systems

Università Politecnica delle Marche, Ancona (Italia)

PERSONAL SKILLS

Mother tongue(s): Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
French	A2	A2	A2	A2	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Attachments: Scientific curriculum & publications

Emanuele Frontoni received the doctoral degree in electronic engineering from the University of Ancona, Italy, in 2003. In the same year he joined the Dept. of Ingegneria Informatica, Gestionale e dell'Automazione (DIIGA) at the Università Politecnica delle Marche, as a Ph.D. student in "Intelligent Artificial Systems". He obtained his PhD in 2006 discussing a thesis on Vision Based Robotics. At present he has a Post Doc position in the same department (at present named Department of Information Engineering – DII). Currently he is an Associate Professor of Computer Science in the same department. His research focuses on applying computer science, artificial intelligence and computer vision techniques to e-health, human behavior analysis and innovative data driven applications and novel data visualization techniques based on geo-spatial data and GIS. Computer vision applications on geo-spatioal data coming from satellites and UAVs or drones is a recent research area with interesting application and international industrial application on sematic geospatial applications.

He is also involved in several AI projects in the field of health data interoperability, cloud based deep learning technologies and big data analysis. He coordinated and participated to several industrial R&D projects in collaboration with ICT and mechatronics companies in the field of Industry 4.0 and Robotic Vision.

He is an expert for EU Commission in H2020 project evaluations and is currently involved in 2 ongoing EU projects (DWC and ROSIN sub-call).

He is a member of the European Association for Artificial Intelligence, of the European AI Alliance and of the International Association for Pattern Recognition.

PUBBLICATIONS

► International Journals & Conferences

[1] M. Martini, M. Paolanti, and E. Frontoni, "Open-world person re-identification with RGBD camera in top-view configuration for retail applications," IEEE Access, vol. 8, pp. 67756–67765, 2020, doi: 10.1109/ACCESS.2020.2985985.

[2] S. Moccia, L. Romeo, L. Migliorelli, E. Frontoni, and P. Zingaretti, Supervised cnn strategies for optical image segmentation and classification in interventional medicine, vol. 186. Springer, 2020, pp. 213–236.

[3] L. Romeo, J. Loncarski, M. Paolanti, G. Bocchini, A. Mancini, and E. Frontoni, "Machine learning-based design support system for the prediction of heterogeneous machine parameters in industry 4.0," Expert Syst. Appl., vol. 140, 2020, doi: 10.1016/j.eswa.2019.112869.

[4] A. Casella, S. Moccia, E. Frontoni, D. Paladini, E. De Momi, and L. S. S. Mattos, "Inter-foetus Membrane Segmentation for TTTS Using Adversarial Networks," Ann. Biomed. Eng., vol. 48, no. 2, pp. 848–859, 2020, doi: 10.1007/s10439-019-02424-9.

[5] R. Pierdicca et al., "Point cloud semantic segmentation using a deep learning framework for cultural heritage," Remote Sens., vol. 12, no. 6, 2020, doi: 10.3390/rs12061005.

[6] I. Patrini, M. Ruperti, S. Moccia, L. S. S. Mattos, E. Frontoni, and E. De Momi, "Transfer learning for informative-frame selection in laryngoscopic videos through learned features," Med. Biol. Eng. Comput., vol. 58, no. 6, pp. 1225–1238, 2020, doi: 10.1007/s11517-020-02127-7.

[7] E. Frontoni, R. Rosetti, M. Paolanti, and A. C. C. Alves, "HATS project for lean and smart global logistic: A shipping company case study," Manuf. Lett., vol. 23, pp. 71–74, 2020, doi: 10.1016/j.mfglet.2019.12.003.

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[TR01] E. Frontoni, S. La Porta, A. Candria "Implementazione di un riconoscitore facciale tramite Eigenfaces", 2003

[TR01] E. Frontoni, A. Larocca "Mix ottimo di produzione in un'azienda di cappelli", 2002

► Awards

[P2] BEST ROBOTIC PAPER 4th ASME/IEEE International Conference on Mechatronic and Embedded Systems and Applications, Beijing, China, 2008.

[P1] BEST PAPER International Conference on Simulation, Modelling and Programming for Autonomous Robots (SIMPAR 2008), Venice, Italy, 2008.

INVITED LECTURES

• E. Frontoni, Vision Based Mobile Robotics; Mobile Robot Localization using vision and active probabilistic approaches, Bayesian Cognition Winter school, Chamonix, France, January 6 – 11, 2008.

• E. Frontoni, Feature based robotics: novel ideas and approaches, Intelligent Autonomous System Lab ETHZ, Zurich, Switzerland, September 2007.

• E. Frontoni, Feature extraction using SIFT: tutorial and exercises, EURON PSFMR 2006 Summer School, Fermo, Italy, September 2006.

• E. Frontoni, The ability to sense and make sense, Intelligent Autonomous System Lab EPFL, Lausanne, Switzerland, February 2006.

• E. Frontoni, Tutorial and exercises on mobile robots localization, EURON PSFMR 2005 Summer School, Ancona, Italy, September 2005.

SCIENTIFIC COMMITEE

- 2010: è Chair del simposio "Mechatronic and Embedded System Applications" nella conferenza IEEE/ASME MESA'10, Quindao, Luglio 2010 (http://www.asmemesa.org/)
- 2009: è collaboratore all'organizzazione della "4nd European Conference on Mobile Robots – ECMR'09", Dubrovnik, 23-25 settembre 2009
- 2006: è organizzatore e Segretario Scientifico della scuola internazionale per giovani ricercatori "Perception and Sensor Fusion in Mobile Robotics – PSFMR 2006", Ancona, 11-16 settembre 2006 (http://psfmr.univpm.it/);
- 2005: è organizzatore e Segretario Scientifico della "2nd European Conference on Mobile Robots – ECMR'05", Ancona, 7-10 settembre 2005 (http://ecmr05.univpm.it/);
- 2005: è organizzatore e Segretario Scientifico della scuola internazionale per giovani ricercatori "Perception and Sensor Fusion in Mobile Robotics – PSFMR 2005", Ancona, 1-7 settembre 2005 (http://psfmr.univpm.it/2005);

INTERNATION REVIEWER

- IEEE Transactions on Robotics, IEEE Robots and Automation Magazine, International Journal of Intelligent Autonoumous System, Elsevier Robotics and Autonomous Systems, International Journal of Computer Vision, Computer Vision and Image Understanding, Elsevier Artificial Intelligence.

INTERNATIONA PROGRAM COMMITEE

- Symposium Chair IEEE/ASME Mesa from 2010 to 2020
- IEEE/ASME Mesa from 2008 to 2020
- RoboCup International Symposium 2006, 2007, 2008, 2009, 2010
- European Conference on Mobile Robots from 2005 to 2019
- RobVis International Workshop on Robot Vision, 2007, 2008

Porto San Giorgio, 2020

Firma
(Emanuele Frontoni)

Autorizzo al trattamento dei dati personali ai sensi della legge 675/96.