



Giuseppe Serra

Curriculum Vitæ (September 8, 2017)

<i>Surname</i>	Serra
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I am currently an Assistant Professor at University of Udine, Italy. I received my Ph.D. in Computer Engineering, Multimedia and Telecommunications in 2010 from the University of Florence. From 2014 to 2016 I was a senior postdoctoral researcher at the University of Modena and Reggio Emilia. I was a visiting researcher at Carnegie Mellon University, Pittsburgh, PA, and at Telecom ParisTech/ENST, Paris, in 2006 and 2010 respectively.

My research interests include Machine Learning, Egocentric Vision, Wearable Computing, Image and Video analysis and Multiple View Geometry. I have published more than 50 publications in the most prestigious journals and conferences in computer vision and multimedia. I received the best paper award by the IEEE International Conference on Intelligent Technologies for Interactive Entertainment in 2015 with the paper “Wearable Vision for Retrieving Architectural Details in Augmented Tourist Experiences”. I was the lead organizer of the “International Workshop on Egocentric Perception, Interaction and Computing (EPIC)” in 2016 (ECCV’16) and I gave tutorials at two international conferences (ICPR’12, CAIP’13). I also serves as a Guest Editor of the Special Issue on “Wearable and Ego-vision Systems for Augmented Experience” on IEEE Transactions on Human-Machine Systems. I was a Technical Program Committee member of several conferences and workshops. I regularly serves as reviewer for international conferences and journals such as ECCV, CVPR, ACM Multimedia, IEEE Transactions on Multimedia, IEEE Transactions on Information Forensics and Security and Pattern Recognition.

AWARDS

- 2017 - **Best Performer** of LSUN 2017 Saliency Prediction Challenge, held every year in conjunction with the IEEE Conference on Computer Vision and Pattern Recognition (CVPR).
- 2015 - **Best Paper Award** - “Wearable Vision for Retrieving Architectural Details in Augmented Tourist Experiences”, IEEE International Conference on Intelligent Technologies for Interactive Entertainment (INTETAIN), Torino, 2015.
- 2015 Italian Habilitation as Associate Professor in Computer Engineering 09/H1 (valid From 23/01/2015 to 23/01/2021)
- 2013 - **Best Performer** of the international IMAGECLEF competition on the image retrieval task. About 40 research groups have been registered and 13 of these submitted their results.

- 2010: **Grants** supported by Telecom Italia S.p.A. for the proposal “Flux of Meme”. (Working Capital Initiative - competitive call)
- - 2010 – **Best Paper Award** - “Tag suggestion and localization in user-generated videos based on social knowledge,” ACM International Workshop on Social Media (WSM) - ACM Multimedia, 2010.
- - 2007-2009: **MIUR Fellowship** for pursuing a Ph.D. in Computer Engineering, Multimedia and Telecommunication at Università degli Studi di Firenze (XXII cycle)

PARTICIPATION IN RESEARCH PROJECTS

- “Flux of MEME”, “Working Capital Initiative - competitive call supported by Telecom Italia S.p.A.. Goal of this project is to create a semantic web application capable of predicting the future through the analysis and clustering of social tweets.”, (Role: Coordinator (PI), 2010-2011) \$25,000.
- Social Topics and Media Analysis Tool, “Telecom Italia S.p.A. after seeing the results obtained in the project ”Flux of MEME”, decided to start this new collaboration with the University of Florence funding three scholarships for a period of one year each.”, (Role: Coordinator (PI), 2010-2011) \$65,000.
- MIUR FIRB, “Archivio Informatizzato delle Testimonianze di Cultura Artistica e Letteraria in fondi manoscritti tra ottocento e novecento: da Cavalcaselle a Brandi”, (Role: Workpackage Leader, 2009-2011).
- PON R&C, “Il progetto DICET-INMOTO e O.C.H.E.S.T.R.A: innovazione per lo sviluppo sostenibile del territorio”, (Role: Researcher, 2012-2015).
- EU IST, “Interactive Semantic Video Search With A Large Thesaurus Of Machine-Learned Audio-Visual Concepts (EU IST FP6-045547 VidiVideo)”, (Role: Researcher, 2007-2010).
- MIUR PRIN, “FREE Surveillance in a pRivacy-respectFul way”, (Role: Researcher, 2007-2010).
- Vision for Augmented Experiences: dall’ego-vision alla video personalization per la nuova cultura digitale, “Project between l’Università degli Studi di Modena e Reggio Emilia and Fondazione Cassa di Risparmio di Modena”, (Role: Researcher, 2014-2016).
- EU IST SME, “Immersive Multimedia Interfaces”, (Role: Researcher, 2008-2010).

PARTICIPATION IN TECHNOLOGY TRANSFER RESEARCH PROJECTS

- “Machine Learning Algorithms for Shoulder Injury Classification”, University of Udine - NCS LAB (Role: Coordinator (PI)) (2017)
- “Advanced video surveillance tools”, University of Florence - Thales (Role: Researcher and developer) (2008-2009)

PUBLICATIONS

Bibliometric indices (September 2017)

- H-index: 22 ([Google Scholar](#)), 18 ([Scopus](#))
- Number of citations: 1680 ([Google Scholar](#)), 1015 ([Scopus](#))

GEV09 = Journal ranking by the Italian ANVUR (2012)

AO = The authors are listed in alphabetical order according the laboratory guidelines

REPRESENTATIVE PUBLICATIONS

10. Varini P., Serra G., Cucchiara R. "Personalized Egocentric Video Summarization of Cultural Tour on User Preferences Input", *IEEE Transactions on Multimed*, in Press 2017. [[DOI](#)] [Imp Factor: 3.509] [GEV09: Class 1]
9. S. Alletto, R. Cucchiara, G. Fiore, L. Mainetti, V. Mighali, L. Patrono, G. Serra "An Indoor Location-aware System for an IoT-based Smart Museum", *IEEE Internet of Things Journal*, vol. 3 iss. 2, pp. 244-253, 2016. [AO] [[DOI](#)] [Imp Factor: 2.134] [GEV09: Class 1]
8. S. Alletto, G. Serra, S. Calderara, R. Cucchiara, "Understanding Social Relationships in Egocentric Vision", *Pattern Recognition*, vol. 48, iss. 12, pp. 4082-4096, 2015. [[DOI](#)] [Imp Factor: 1.540] [GEV09: Class 1]
7. G. Serra, C. Grana, M. Manfredi, R. Cucchiara, "GOLD: Gaussians of Local Descriptors for Image Representation", *Computer Vision and Image Understanding*, vol. 134, pp.22-32, 2015. [[DOI](#)] [Imp Factor: 1.540] [GEV09: Classe 1]
6. L. Ballan, M. Bertini, G. Serra, A. Del Bimbo, "A Data-Driven Approach for Tag Refinement and Localization in Web Videos", *Computer Vision and Image Understanding*, vol. 140, pp. 58-67, 2015. [[DOI](#)] [Imp Factor: 1.540] [GEV09: Classe 1]
5. L. Seidenari, G. Serra, A. Bagdanov, A. Del Bimbo, "Local Pyramidal Descriptors for Image Recognition", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. 36, iss. 5, pp. 1033-1040, 2014. [[DOI](#)] [Imp Fact: 4.795] [GEV09: Classe 1]
4. H. Sahbi, L. Ballan, G. Serra, and A. Del Bimbo, "Context-Dependent Logo Matching and Recognition," *IEEE Transactions on Image Processing*, vol. 22, iss. 3, pp. 1018-1031, 2013. [[DOI](#)] [Imp Factor: 3.199] [GEV09: Classe 1]
3. L. Ballan, M. Bertini, A. Del Bimbo, L. Seidenari, and G. Serra, "Effective Codebooks for Human Action Representation and Classification in Unconstrained Videos," *IEEE Transactions on Multimedia*, vol. 14, iss. 4, pp. 1234-1245, 2012. [[DOI](#)] [Imp Fact: 1.754] [GEV09: Classe 1][AO]
2. I. Amerini, L. Ballan, R. Caldelli, A. Del Bimbo, and G. Serra, "A SIFT-based forensic method for copy-move attack detection and transformation recovery," *IEEE Transactions on Information Forensics and Security*, vol. 6, iss. 3, pp. 1099-1110, 2011. [[DOI](#)] [Imp Fact: 1.340] [GEV09: Classe 1][AO]
1. L. Ballan, M. Bertini, A. Del Bimbo, and G. Serra, "Video Annotation and Retrieval using Ontologies and Rule Learning," *IEEE MultiMedia*, vol. 17, iss. 4, pp. 80-88, 2010. [[DOI](#)] [Imp Fact: 1.066] [GEV09: Classe 2][AO]

ACCREDITATIONS AND PROFESSIONAL SERVICE

Workshop Co-Organizer:

- IEEE International Workshop on Egocentric, Perception, Interaction and Computing (EPIC), collegato all'IEEE European Conference on Computer Vision (ECCV), 8/10/2016, Amsterdam, Netherlands.
- IEEE International Workshop on Wearable and Ego-vision Systems for Augmented Experience, in conjunction with the IEEE International Conference on Multimedia and Expo (ICME), 3/07/2015, Turin, Italy.
- IEEE International Workshop on Multimedia for Cultural Heritage, in conjunction with the International Conference on Image Analysis and Processing (ICIAP), 9/09/2013, Naples, Italy.

Tutorial Co-Organizer / Instructor:

- “The Bag of Visual Words model and recent advancements in image classification”, in conjunction with the International Conference on Computer Analysis of Images and Patterns, 1/09/2015, Valletta, Malta.
- “Recent advancements on the Bag of Visual Words model for image classification and concept detection”, in conjunction with the International Conference on Pattern Recognition (ICPR), 24/8/2014, Stockholm, Sweden.

Guest Editor:

- Special Issue on “Wearable and Ego-vision Systems for Augmented Experience” on IEEE Transactions on Human-Machine Systems, 2015-2016.
- Special Issue on “Multimedia for Cultural Heritage” on Multimedia Tools and Applications an International Journal, 2015-2016.

Session chair at the International Conference on Similarity Search and Applications (SISAP), 2-4 October, La Corugna, Spain.

Local Technical Committee member ACM Multimedia 2010, 25-29 October 2010, Florence (Italy) and European Conference on Computer Vision 2012, 7-13 October 2012, Florence (Italy).

Journal reviewer: IEEE Transactions on Image Processing (from 2015), IEEE Transactions on Multimedia (from 2009), IEEE Transactions on Information Forensics and Security (TIFS), (from 2013), IEEE Transactions on Circuits and Systems for Video Technology (from 2009), Computer Vision and Image Understanding (from 2007), Pattern Recognition (from 2008), Pattern Recognition Letters (from 2007), IEEE Multimedia (from 2007), Int'l Journal of Multimedia Information Retrieval (MMIR) (from 2014), Signal Processing: Image Communication - Elsevier (from 2010), Eurasip Journal on Image and Video Processing (from 2008), Pattern Analysis and Applications (from 2006), Multimedia Tools and Applications (from 2006).

Conference reviewer: IEEE International Conference on Pattern Recognition (ICPR), 2008-2012; IEEE International Conference on Multimedia & Expo (ICME), 2007-2015; ACM Multimedia, 2007-2015; ACM International Conference on Multimedia Information Retrieval (MIR), 2007-2010; IEEE International Conference on Computer Vision (ICCV), 2009; IEEE International Conference on Image Processing (ICIP), 2009-2011; IEEE International Conference on Image Analysis and Processing (ICIAP), 2007-2013; ACM international conference on Image and Video Retrieval (CIVR), 2007-2009; IEEE International Workshop on Content-Based Multimedia Indexing (CBMI), 2008-2015; IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2009.

TEACHING (SELECTED)

- Instructor: **Artificial Intelligence**
Computer Science, University of Udine, 2016–2018.
- Instructor: **Machine Learning**
Computer Science, University of Udine, 2016–2018.
- Instructor: **Fundamentals of Computing**
Computer Science, University of Udine, 2016–2018.
- Instructor: **Fundamentals of Computing**
Information Engineering, University of Modena and Reggio Emilia, 2015–2017.
- Instructor: **Egocentric and Wearable Systems**
Visual Computing and Multimedia Technologies Master, University of Modena and Reggio Emilia, 2015–2016.
- Instructor: **Multimedia Computing Systems**
Information Engineering, University of Modena and Reggio Emilia, 2013–2016.
- Instructor: **Lab. Disegno Industriale: Multimedia and Web design**
School of Architecture, University of Florence, 2010-2011.
- Instructor: **Multimedia Ontologies for Video Annotation**
University of Cagliari, 2007-2008.