Marco Cristani *Curriculum Vitae*

Contacts

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Synopsis

I have been **Associate Professor** at the University of Verona (since 11/2014), **Associate Member** at the National Research Council (CNR) (since 7/2014), **Team Leader** at the Italian Institute of Technology (IIT) (3/2009-1/2013) and, at the same institute, **External Collaborator** (**Researcher**) (since 3/2013). My main research interest is in the area of **machine intelligence**, and in particular on statistical pattern recognition for computer vision and multimedia. In the last five years, I have focused on **social signal processing** (SSP), the crossroad between pattern recognition, computer vision and social/medical sciences. I have not only worked in the domain, but also contributed to shape its research agenda by connecting SSP with the communities of *video-surveillance* and *applied ontology*. This resulted in a dense event organization (**10 intl. workshops** since 2010, hosted in top-class pattern recognition conferences) and dissemination: I gave/will give **9 invited talks** at international conferences and workshops, **12 invited seminars** and I taught in a **PhD school**. I am an active member of the computer vision and pattern recognition community, co-chairing many top-class events (**IEEE ICME 2015**, **IEEE WACV 2015**, **ICIAP 2015**, **ACM Multimedia 2013**, **ACM ICMI 2014**). I **reviewed more than 100 journal papers** and I am **Associate Editor** of **PLOS ONE**, **Neurocomputing**, **Pattern Recognition Letters** and **Cognitive Processing**; I am **Review Editor** of **Frontiers in Human-Computer Interaction**.

Overall, I published **one edited volume, 6 book chapters, 31 journal articles** and **114 conference papers**, winning 6 intl. prizes (notably, the **Best student paper award IBM prize** at the **IEEE ICPR 2010**). According to Google Scholar, my works have attracted more than **2820 citations**; my current **H-index is 28**. In the period 2008-2011 I was ranked in the **top 3% in the SSD ING-INF/05** for **number of published papers**, and in the **top 11%** for **number of citations**. In the same period, I was ranked in the **top 1% in the SSD INF/01** for **number of published papers**, and in the **top 8%** for **number of citations** (ORP-based evaluation for IIT members, 2013, performed by Research Value s.r.l.). As for **team-building activities**, at the University of Verona **I have been Tutor of 7 PhD students** (one of them defended on 05/2014), **3 Postdoc scholars** and **9 temporary research associates**. This success in recruitment has been achieved thanks to **a successful didactic activity** (7 different courses taught since 2007) that has encouraged local students to ask for supervision and tutoring, and **a strong international visibility** that have stimulated international people (from Yemen, Japan) to come in Verona under my supervision, and that have allowed me to be invited in the **PhD Committee of 9 international students**. I have been also able to fund people autonomously, thanks to **10 research projects** (among which a European H2020 project) I have coordinated/I am coordinating as **Principal Investigator** in these last three years, for a total amount of **€ 486.4K**. I've also raised resources thanks to two **Convenzioni Quadro** (with IIT, and the National Research Council), which offered **2 Postdoctoral researchers** and **a PhD grant** for three years.

General Information

Date of Birth	July 14, 1976
Citizenship	Italian
Residence	Rovereto, Trento

Higher Education

2005	**Ph.D. in Computer Science**, University of Verona. *Thesis:*"Generative Probabilistic Modeling of Audio-Video Sequences", supervised by Prof. V. Murino.
2002	**M.S. in Computer Science**, University of Verona. *Thesis:*"Bayesian approaches for modeling spatio-temporal video sequences in surveillance applications", supervised by Prof. V. Murino.

Professional History

2014-*pres*	**Associate Professor** at Dept. of Computer Science, University of Verona (*Settore Scientifico Disciplinare* INF/01)
2007-2014	**Assistant Professor** at Dept. of Computer Science, University of Verona (*Settore Scientifico Disciplinare* INF/01)
2014-*pres*	**Associate Member** at Institute of Cognitive Sciences and Technologies, National Research Council (CNR)
2013-*pres*	**External Collaborator (Researcher)** at Pattern Analysis and Computer Vision Dept., Italian Institute of Technology
2009-2013	**Team Leader** at Pattern Analysis and Computer Vision Dept., Italian Institute of Technology
2006-2007	**Postdoctoral Associate** at Dept. of Computer Science, University of Verona
2006-2007	**Adjunct Professor** at Dept. of Medicine and Surgery, University of Verona
2005-2008	**Adjunct Professor** at Dept. of Literature and Philosophy, University of Verona

On December 2013 I have obtained the "Abilitazione Scientifica Nazionale" (ASN) for the *associate professor* grade in the 09-H1 sector (formerly ING-INF/05), and in January 2014 that for the 01-B1 sector (formerly INF/01).

CV contents

1 Research Activities

1.1 Research Interests and Selected Publications

In the following, I will shortly discuss my research interests, **presenting the 12 most relevant studies I have carried out so far**.
My area of interest is machine intelligence; specifically, I am interested in statistical pattern recognition and computer vision, with some applications in multimedia. Generative models are statistical classifiers which describe visible data (images, video sequences, 3D volumes, EEG signals, etc.), assuming them as the outcome of a hidden probabilistic process. The statistical nature of these models makes them particularly robust to noise and well-suited to deal with real data. In one of my explorative studies on the use of generative models, I have applied them for describing 3D volumes [30].

In the early steps of my career, I have studied generative modeling for automated analysis of surveillance data, with special emphasis on activity modeling. As significant contributions, I proposed a framework for detecting and discriminating generic human activities when in presence of both audio and video patterns [31], designing a novel generative hybrid model. This model has been further developed, focusing on the notion of *interaction*, with a generative technique where interacting dynamic processes can be modeled as weighted linear pairwise combination of first-order Markov chains. This produced a novel kind of statistical feature called *Steady Conversational Period* (SCP) [21]. SCPs have shown to be effective in many contexts (surveillance, medicine, sociology), leading to many papers (most notably, [9]) and prizes; in particular, they have been successful on individuating discriminative characteristics of dialogs, especially under a *generative embedding* classification context.

The generative embedding is the methodological argument that I have been studying with more emphasis during these years. It is a procedure that extracts features from a generative model other than the likelihood, allowing to use them as they were standard cues (like color, height, weight). For example, the parameters of a generative model (as the means of multivariate Gaussian distributions) can be used as features for describing the human appearance; on this topic I focused much of my efforts, producing important contributions (see the next paragraph). Another contribution in the generative embedding has been the free energy methodology [14], that produces a set of features describing how good is the fit of the data with a generative model. This model has been applied in many contexts, having a great impact on the communities of pattern recognition, computer vision and artificial intelligence through many relevant publications (ICCV, NIPS).

The problem of modeling human appearance using generative models has been central in my career; in particular, I have designed a generative model for capturing the structure of an individual, dubbed SDALF (Symmetry Driven Accumulation of Local Features). SDALF is a robust and fast human descriptor which encodes the aspect of people by means of visual symmetry and asymmetry principia [96]. SDALF had a strong impact in the computer vision and pattern recognition community: the paper collected 243 citations in three years (source: Google Scholar), and led me to being invited speaker at two international conferences, to teach at international schools, to host international students, to coordinate international workshops and to edit a Springer book. On the same line, I have built another human descriptor, Histogram Plus Epitome (HPE), particularly

suited to model humans in videosequences [15]. Lately, I have extended the SDALF descriptor to deal with the tracking problem, facing the problem of continuously associating detections to the same subject [11].

In the last five years, I have gradually moved from classical pattern recognition to a new field, dubbed social signal processing (SSP). SSP is the crossroad between pattern recognition, computer vision and social/medical sciences, focused on modeling the social behavior of people using intelligent systems; this happens by analyzing social signals, that is, non verbal signals which convey information about feelings, mental state, personality, and other traits. Connecting SSP and surveillance by analyzing the state of the art of both the fields and envisaging novel interdisciplinary perspectives has been the focus of the study in [12]. Among the different research directions individuated in this work, I have chosen that of focusing on human interactions on social media. This brought me to analyze with novel generative models the conversational style of chats, and to model preferences of heterogeneous data (images so far, but also video, text, audio etc.), connecting them with the personality traits of the users. This impacted the computer vision and multimedia communities, allowing me to obtain a "brave new idea paper" in the ACM Multimedia conference, discussed as oral presentation in 2013 [55][1]. This has represented the starting point for a successive study exploiting visual preferences as a biometric trait [8].

SSP allowed me to understand the limitations of generative models: whenever the visible data to be modeled are complicated (like the posture of a person, or the visual preferences of a user), generative models have to be combined in a complex graphical structure. This structure is often crafted by hand, depending on the experience of the researcher. My idea is to obtain this information with the support of ontological resources, which represent objective knowledge of the domain being analyzed; this brought me to design a system which could be very useful for the computer vision, pattern recognition and artificial intelligence communities: the system provides an arbitrary number of images depicting an object (defined by a text string, like in a search engine), paying attention to capture all its visual variability [3]. This is substantially different from what is offered by the common Google Image platform and its PageRank algorithm, and allows to learn much better classifiers. The future perspective of this work is to move from objects to actions and activities, whose visual characterization and labeling is crucial in the design of a classifier.
Concluding, learning generative models for describing humans and their social behavior by means of ontologies is my present theoretical long-term goal, which needs competencies in pattern recognition, computer vision and artificial intelligence.

[1]The "brave new idea" track at ACM Multimedia is particularly selective: the submitted papers undergo two PASS/FAIL review cycles

1.2 Awards and Grants

I was ranked #15 of 742 scientists (including assistant, associate and full professors) in the SSD ING-INF/05 (period 2008-2011) for number of published papers, and #81 of 742 for number of standardized citations[2] In the same period, in the SSD INF/01, I was ranked #9 of 907 for number of published papers, and #77 of 907 for number of standardized citations (ORP-based evaluation system for the Istituto Italiano di Tecnologia members, year 2013, performed by Research Value s.r.l.).

External awards and grants:

2015	**Outstanding reviewer award** at the International Conference on Computer Vision, 2015
2014	**Outstanding reviewer award** at the Asian Conference on Computer Vision, 2014
	Best poster presentation award at Developmental Neuropsychology workshop - IXth edition, 2014, for publication [68]
2010	**Best student paper award IBM prize** at IEEE Conference on Pattern Recognition, for publication [97]
2010	**Best paper award**, at DEXA Workshop on Interactive Multimodal Pattern Recognition in Embedded Systems, for publication [100]
2007	**Best poster presentation award**, at IEEE International Conference on Image Analysis and Processing (ICIAP 2007), for publication [131]

Internal (at University of Verona) awards and grants:

Dec. 2012	**Research award**, rewarding success in the application for the PRIN 2010/2011 grant, even if the project has not been funded by the MIUR, €1450
Dec. 2012	**Research award**, rewarding success in the application for the FIRB 2010 grant, even if the project has not been funded by the MIUR, €2900
Nov. 2007	**Grant for young researchers**, €2900
July 2002	**Master thesis of exceptional quality**

1.3 Research Projects

In these last two years I have coordinated as **Principal Investigator** 10 projects (7 industrial, 1 research project, 1 public grant, 1 european H2020 project), for a total amount of **€486.4K**.

2015-2017	**Principal Investigator** for an industrial-research project named *Studio, sviluppo ed implementazione embedded di algoritmi di classificazione e tracking di pedoni e di cellule ematiche*, in collaboration with Embedded Vision Systems s.r.l, €35K, 2 temporary research associates hired

[2]The standardization factor is the one suggested in Abramo et al., 2012 (Journal of Informetrics), that is, the average number of citations obtained by all the national publications on the same subject.

2015-2016	**Principal Investigator** for an industrial-research project named *Studio e sviluppo di algoritmi per il tracking di persone in tempo reale*, in collaboration with Embedded Vision Systems s.r.l, €22.3K, 2 temporary research associates hired
2015	**Principal Investigator** for an industrial-research project named *Studio e sviluppo di un sistema di visione per il controllo processo di macchine industriali*, in collaboration with Embedded Vision Systems s.r.l, €10K, 1 temporary research associate hired
2015-2018	**Principal Investigator** for a H2020 european project under the Innovative Training Networks H2020-MSCA-ITN-2015 call *Time-lapse understanding of the static and human scene and its lighting (SceneUnderLight)*, (EU project 676455), €258K
2015	**Project Coordinator** for a COOPERINT project named *Registration and Application to Wide Applications in Mapping and Medical Imaging*, hosting Prof. Shahriar Negahdaripour for 3 months, €6.8K
2013-2015	**Principal Investigator** for an industrial-research project named *Consulenza e supporto allo sviluppo relativi a metodologie tecniche per il riconoscimento, la classificazione, il tracking e la rimozione del background applicate al problema dell'analisi del reclutamento leucocitario*, in collaboration with Embedded Vision Systems s.r.l, €25K
2013-2015	**Principal Investigator** for a JOINT PROJECT named *EXternal-InTernal Vision Based Driving Assistance System (EXIT)*, in collaboration with Embedded Vision Systems s.r.l, €34.85K, 1 temporary research associate hired
2013-2014	**Principal Investigator** for an industrial project named *Statistical Analysis of Crowd*, paid by Italian Institute of Technology, €37.95K
2013	**Principal Investigator** for an industrial-research project named *Automated Statistical Analysis of Customers by Video Sequences*, funded by Fondo Sociale Europeo, €24K, 1 temporary research associate hired
2012-2013	**Principal Investigator** for an industrial project named *Development of Image Processing Algorithms for FPGA Platforms*, paid by Embedded Vision Systems s.r.l, €32.5K, 2 temporary research associates hired
2010	**Project Coordinator** for a FIRB project named *SAliency Learning for surVEILLANCE (SALVEILLANCE)*, not funded by MIUR but judged positively by the University of Verona
2008-2011	**Subgroup coordinator** for a FP7-SECURITY collaborative project named *Suspicious and Abnormal behaviour Monitoring Using a netwoRk of cAmeras & sensors for sItuation awareness enhancement (SAMURAI)* , Grant agreement No.: 217899
2008-2011	**Scientific participation** in a FP7-FET Open collaborative project named *Beyond Features: Similarity-based Pattern Analysis and Recognition (SIMBAD)* , Grant agreement No.: 213250
2008-2009	**Subgroup coordinator** for a PRIN project named *Metodi basati sulla similarità per la visione artificiale e il riconoscimento delle forme: Teoria, algoritmi, applicazioni*

2001-2004	**Scientific participation** in a FP5-competitive growth project named *Augmented Reality for Remotely Operated Vehicles based on acoustical and optical 3D sensors for underwater inspection and survey (ARROV)*, Grant agreement No.: 2000-25409-GRD1

1.4 Editorial Service

Associate Editor for the international journal **PLOS ONE** (Impact Factor: 3.534).

Associate Editor for the international journal **Neurocomputing** (Impact Factor: 2.005; the journal has been labelled "class 2" from the National Agency for the Evaluation of Universities and Research Institutes (ANVUR)).

Associate Editor for the international journal **Cognitive Processing** (Impact Factor: 1.388).

Associate Editor for the international journal **Pattern Recognition Letters** (Impact Factor: 1.062; the journal has been labelled "class 2" from ANVUR).

Review Editor for the international journal **Frontiers in Human-Computer Interaction**.

Co-Editor for the book **Person Re-Identification** (*Series: Advances in Computer Vision and Pattern Recognition*), Springer, January 2014, ISBN 978-1-4471-6296-4.

Translator english-italian for part of the book *John L. Semmlow, "Biosignal and Medical processing: Matlab-Based Applications" CRC Press, Second Edition, ISBN 9780203024058*

1.5 Visits

2012	**University of Glasgow**, Glasgow, UK (May-June 2012, *one week*)
2004-2005	**University of Southern California**, Los Angeles, California, as *Research Scholar* (Nov. 2004 - May 2005)
2001-2002	**Instituto Superior Tecnico**, Lisboa, Portugal, as *Erasmus Student* where he did part of the master thesis (Sep. 2001 - Dec. 2001)

1.6 Boards of Research and Development Associations

I am **responsible** for the University of Verona in the SERIT research and development group, technology areas *TA1 - Surveillance and Situational Awareness* and *TA3 - Detection & Identification Systems*. The main aim is to individuate those major research technologies for surveillance which can be engineered by industries. Responsibilities include: participation to regular meetings and teleconferences, individuation of possible new partners, updating the partners about the research and development level of the technologies in TA1 and TA3 areas.
I am member of IEEE, ACM and Gruppo Italiano Ricercatori in Pattern Recognition.

1.7 Committees of International Conferences, Symposia, Workshops and Schools

2015 **Organizing Co-Chair** (together with Prof. Vittorio Murino, Prof. Shishir Shah and Prof. Silvio Savarese of the *International Workshop on GRoup and crOWd behavior analysis and understanding (GROW 2015)*, associated with the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Boston, Massachusetts, June 2015

Area Chair for the *IEEE International Conference on Multimedia and Expo*, June 2015, Torino, Italy

Workshop Co-chair for the *18th International Conference on Image Analysis and Processing (ICIAP)*, September 2015, Genova, Italy

Area Chair for the *IEEE Winter Conference on Applications of Computer Vision(WACV)* , January 6-8, 2015, Waikoloa Beach, HI

2014 **Doctoral Symposium Co-chair** for the *16th ACM International Conference on Multimodal Interaction (ICMI)*, November 2014, Istanbul, Turkey

Program Co-Chair (together with Prof. Tao Xiang, Prof. Nalini K. Ratha, Prof. Venu Govindaraju, Prof. Wei-Shi Zheng and Dr. Meina Kan) of the *International Workshop on Human Identification for Surveillance*, associated with the Asian Conference on Computer Vision (ACCV) 2014, Singapore, November 2014

Organizing Co-Chair (together with Prof. Shaogang Gong, Prof. Steve Maybank, Prof. Shuicheng Yan, Dr. James Orwell and Dr. Kaiqi Huang) of the *International Workshop on Visual Surveillance and Re-Identification*, associated with the European Conference on Computer Vision (ECCV) 2014, Zürich, Switzerland, September 2014

Organizing Co-Chair (together with Dr. Roberta Ferrario and Dr. Jason J. Corso) of the *First International Workshop on Computer vision + ONTology Applied Cross-disciplinary Technologies (CONTACT 2014)*, associated with the European Conference on Computer Vision (ECCV) 2014, Zürich, Switzerland, September 2014. During the workshop, a prize of the value of €500 will be assigned for the best paper

Organizing Co-Chair (together with Dr. Concetto Spampinato and Dr. Vasileios Mezaris) of the *3rd ACM International Workshop on Multimedia Analysis for Ecological Data*, associated with the ACM International Conference on Multimedia (ACM MM) 2014, Orlando, Florida, November 2014. During the workshop, a prize of the value of €500 will be assigned for the best paper

2013 **Doctoral Symposium Co-chair** for the *ACM International Conference on Multimedia*, Barcelona, Spain, September 2013

Organizing Co-Chair (together with Prof. Alessandro Vinciarelli and Prof. Vittorio Murino) of the *IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM) 2013*, associated with the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Portland (Oregon), June 2013

2012	**Organizing Co-Chair** (together with Prof. Shaogang Gong and Prof. Shuicheng Yan) of the *First International Workshop on Re-Identification*, associated with the European Conference on Computer Vision (ECCV) 2012, Florence, Italy, October 2012. During the workshop, a prize of the value of €500 was assigned for the best paper
	Organizing Co-Chair (together with Prof. Alessandro Vinciarelli and Prof. Vittorio Murino) of the *IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM) 2012*, associated with the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), Providence (Rhode Island), June 2012
2011	**PhD Chair** of the *Short Spring School in Surveillance S4*, Modena, May 2011
	Organizing Co-Chair (together with Prof. Alessandro Vinciarelli and Prof. Vittorio Murino) of the *IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM) 2011*, associated with the IEEE International Conference on Computer Vision (ICCV), Barcelona, Spain, November 2011
	Local organizer for the Second International PLUS Advanced School on Computer Vision, Pattern Recognition and Image Processing, Genova, Italy, March 21-24, 2011
2010	**Organizing Co-Chair** (together with Prof. Alessandro Vinciarelli and Prof. Vittorio Murino) of the *IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM) 2010*, associated with the IEEE Conference on Computer Vision and Pattern Recognition (CVPR), San Francisco (California), June 2010
	Organizing Co-Chair (together with Prof. Hamid Aghajan, Prof. Vittorio Murino and Prof. Nicu Sebe) of the *ACM Workshop on Multimodal Pervasive Video Analysis (MPVA)* , associated with the ACM International Conference on Multimedia, Florence, Italy, October 2010
	Local organizer for the International PLUS-VIPS Advanced School on Computer Vision, Pattern Recognition and Image Processing, Sestri Levante (Ge), Italy, July 18-22, 2010
2004-07	**Local organizer** for the international VIPS Advanced Schools on Computer Vision, Pattern Recognition and Image Processing, in the following 8 editions 2004a, 2004b, 2004c, 2005a, 2005b, 2005c, 2006a, 2007a

I have been in the **Program Committee** of the following international conferences:

2015	*Twenty-Ninth Conference on Artificial Intelligence (AAAI) 2015*, *International Conference on Computer Analysis of Image Patterns (CAIP) 2015*
2014	*Asian Conference on Computer Vision 2014 (ACCV)*, *Doctoral Symposium ACM-Multimedia 2014 (ACM MM DC)*, *ACM-Multimedia 2014 (ACM MM)*, *International Workshop on Human Behavior Understanding (HBU) 2014, associated with ECCV 2014*, *ASE/IEEE International Conference on Social Computing (SOCIALCOM) 2014*, *IEEE International Conference on Image Processing (ICIP) 2014*, *Workshop on Ontological Modelling of Socio-Technical Systems, associated with the International Conference on Formal Ontology in Information Systems (FOIS 2014)*, *International Workshop on Combinatorial Image Analysis (IWCIA) 2014*

2013	*Best Demo Committee at ACM-Multimedia 2013 (ACM MM)*, *6th International Congress on Image and Signal Processing (CISP 2013) / 2013 6th International Conference on BioMedical Engineering and Informatics (BMEI 2013)*, *International Conference on Computer Analysis of Images and Patterns (CAIP) 2013*, *ASE/IEEE International Conference on Social Computing (SOCIALCOM) 2013*, *International Workshop on Vision(s) on Deception and Non-Cooperation Workshop, associated with FG 2013*, *18th IAPR Iberoamerican Congress on Pattern Recognition(CIARP) 2013*, *IEEE International Conference on Connected Vehicles and Expo (ICCVE) 2013*
2012	*Asian conference on Computer Vision (ACCV) 2012*, *5th International Congress on Image and Signal Processing (CISP 2012) / 2012 5th International Conference on BioMedical Engineering and Informatics (BMEI 2012)*, *ASE International Conference on Social Computing (SOCIALCOM) 2012*, *15th International Workshop on Combinatorial Image Analysis (IWCIA) 2012*, *IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM) 2012* associated with CVPR2012, *First international workshop on re-identification (RE-ID) 2012* associated with ECCV2012
2011	*14th IAPR International Conference on Computer Analysis of Images and Patterns (CAIP) 2011*, *EURASIP 11th European Signal Processing Conference (EUSIPCO) 2011*, *CSI symposium on Artificial Intelligence and Signal Processing (AISP) 2011*, *IEEE International Workshop on Social Behavior Analysis (SBA) 2011* associated with FG2011, *IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM) 2011* associated with ICCV2011, *Third IEEE International Conference on Social Computing (SOCIALCOM) 2011*
2010	*IEEE International Workshop on Socially Intelligent Surveillance and Monitoring (SISM 2010)* associated with CVPR2010, *ACM Workshop on Multimodal Pervasive Video Analysis (MPVA) 2010*, *EURASIP 10th European Signal Processing Conference (EUSIPCO) 2010*, *International Workshop on Mobile Social Signal Processing (MSSP) 2010*
2009	*13th International Workshop on Combinatorial Image Analysis (IWCIA) 2009*, *AAAI Workshop on Pattern Recognition and Artificial Intelligence for Human Behaviour Analysis (PRAI*HBA)* associated with AI*IA 2009

1.8 Reviewing Activity

Activity as Referee (in addition to Program Committees):

Reviewer for international journals (in parenthesis the number of accomplished reviews, for a total of 104 reviews):

- IEEE Transactions on Multimedia (ISSN: 1520-9210) (6)
- IEEE Transactions on Pattern Analysis and Machine Intelligence (ISSN: 0162-8828) (6)
- IEEE Transactions on Information Forensics and Security (ISSN: 1556-6013) (2)
- IEEE Pervasive Computing (ISSN: 1536-1268) (2)

IEEE Transactions on Systems, Man, and Cybernetics Part B (ISSN: 1083-4419) (8)

IEEE Transactions on Image Processing (ISSN: 1057-7149) (6)

IEEE Transactions on Circuits and Systems for Video Technology (ISSN: 1051-8215) (3)

Artificial Intelligence in Medicine (Elsevier, ISSN: 0933-3657) (1)

Computer Vision and Image Understanding (Elsevier, ISSN: 1077-3142) (4)

Pattern Recognition (Elsevier, ISSN: 0031-3203) (5)

Pattern Recognition Letters (Elsevier, ISSN: 0167-8655) (1)

Neurocomputing (Elsevier, ISSN: 0925-2312) (2)

Machine Vision and Applications (Springer, ISSN: 0932-8092) (4)

Information Processing Letters (Elsevier, ISSN: 0020-0190) (2)

Transportation Research Part C: Emerging Technologies (Elsevier, ISSN: 0968-090X) (2)

Image and Vision Computing (Elsevier, ISSN: 0262-8856) (4)

IET Biometrics (IET, ISSN: 2047-4938) (2)

Signal, Image and Video Processing (Springer, ISSN: 1863-1703) (8)

Electronic Letters on Computer Vision and Image Analysis (Computer Vision Center/Universitat Autonoma de Barcelona, Barcelona, Spain, ISSN 1577-5097) (1)

Computing Reviews (ACM, ISSN: 0010-4884) (20)

Journal Of Information Science And Engineering (Academia Sinica, Taipei, Taiwan, ISSN: 1016-2364) (2)

Recent Patents on Electrical Engineering (Bentham Science, ISSN 18744761) (1)

International Journal of Pattern Recognition and Artificial Intelligence (World Scientific, Print ISSN: 0218-0014) (3)

Computer Science Review (Elsevier, Print ISSN: 1574-0137) (1)

IEEE Signal Processing Letters (IEEE Signal Processing Society , ISSN: 1070-9908) (1)

EURASIP Journal on Image and Video Processing (SpringerOpen, ISSN: 1687-5281) (1)

Sensors (MDPI AG, Basel, Switzerland , ISSN 1424-8220) (3)

EURASIP Journal on Advances in Signal Processing (SpringerOpen ISSN: 1687-6180) (2)

Optical Engineering (SPIE, ISSN: 0091-3286) (3)

Expert Systems (Blackwell Publishing, ISSN: 1468-0394) (2)

Reviewer for international conferences, workshops (selection):

IEEE International Conference on Computer Vision and Pattern Recognition (CVPR) 2006, 2007, 2008, 2009, 2010, 2012, 2014, 2015

AAAI Conference on Artificial Intelligence (AAAI-14)

ACM Multimedia (ACM-MM) 2013, 2014

International Conference on Intelligent Robots and Systems (IROS) 2013

IEEE International Conference on Computer Vision (ICCV) 2007, 2009, 2011, 2015

European Conference on Computer Vision (ECCV) 2004, 2010

Asian conference on Computer Vision (ACCV) 2010, 2012, 2014

British Machine Vision Conference (BMVC) 2006, 2012, 2013

IAPR International Conference on Pattern Recognition (ICPR) 2004, 2009, 2010, 2014

IEEE International Conference on Image Processing (ICIP) 2003-2014

IEEE International Conference on Social Computing (SOCIALCOM) 2011, 2012, 2014

IAPR Int. Conf. on Image Analysis & Processing (ICIAP) - 2003, 2005, 2007, 2009, 2013

Reviewer for book chapters:

C. Shan, F. Porikli, T. Xiang and S. Gong (Eds.), *Video Analytics for Business Intelligence*, Springer, 2012, ISBN 978-3-642-28597-4

L. Wang, L. Cheng, and G. Zhao (Eds.), *Machine Learning for Human Motion Analysis: Theory and Practice*, IGI Global, 2009, ISBN: 978-1-605-66900-7

Reviewer for international projects:

NWO, The Netherlands Organisation for Scientific Research, project title: *Self-Organizing Autoencoders For Face And Expression Recognition*(2011)

Reviewing activities outside Verona University:

2015	**Member of PhD Thesis Committee**, *Social interaction analysis in videos, from wide to close perspective* at University of Trento, Italy, candidate Paolo Rota
	Member of PhD Thesis Committee, *Multi-target tracking in unevenly illuminated scenes* at University of Trento, Italy, candidate Sinan Mutlu
2014	**Member of PhD Thesis Committee**, *Exploiting text corpora for data enrichment in language and vision applications* at University of Trento, Italy, candidate Dieu Thu Le
	Member of PhD Thesis Committee, *Behavior detection models using computer vision applied to security systems* at Pontifical University of Comillas, Madrid, candidate Manuel Alvar
	Mentor of PhD candidates, at the Doctoral Consortium of the *16th ACM International Conference on Multimodal Interaction (ICMI)*
	Member of PhD Thesis Committee, *Multi-task Learning and Feature Selection for Event Detection and Human Behaviour Understanding* at University of Trento, candidate Yan Yan
	Member of PhD Thesis Committee, *Unveiling Human Behaviors: Automated Behavioral Analysis from Small to Big Data* at University of Trento, candidate Jacopo Staiano
	President of the Qualifying Examination Committee at University of Trento, for 1 PhD candidate

Member of PhD Thesis Committee, *Investigating Brain Connectomics at Network Scale* at University of Genova, candidate Simona Ullo

Member of PhD Thesis Committee, *Bayesian Nonparametrics for Computer Vision: from Low to High-Level Tasks* at University of Genova, candidate Matteo Zanotto

Member of PhD Thesis Committee, *Statistical Data Fusion Techniques for Multi-Cue Image Classification* at University of Genova, candidate Marco San Biagio

International reviewer for the Outstanding MPhil Thesis Award (OTA) of the Faculty of Engineering of The Chinese University of Hong Kong

2013 **President of the Qualifying Examination Committee** at University of Trento, for 8 PhD candidates (AA.2011-12, 2012-13)

Mentor of PhD candidates, at the Doctoral Consortium of the *ACM International Conference on Multimedia*

2012 **Member of PhD Thesis Committee**, *Toward Semantic-Shape-Context-Based Augmented Descriptor* at Universit Blaise Pascal - Clermont-Ferrand II, candidate Samir Khoualed (2012)

1.9 Invited Talks and Conference Presentations

I gave/ will give 9 invited talks/ keynote speeches in international conferences, workshops, and summer schools.

2015	**LOGIMA workshop @Tlcom ParisTech Point**; *From Groups to Crowds: a Social Signal Processing Approach* - invited talk; Paris, FR (Nov. 27, 2015)
	ICIAP QoEM Workshop on Image and Video Processing for Quality of Multimedia Experience; *Personal Aesthetics: understanding people by their aesthetical preferences* - invited talk; Genova, It (Sep. 8, 2015)
	SMART School on Computational Social and Behavioral Sciences; *From Groups to Crowds: a Social Signal Processing Approach* - invited talk; Paris, FR (Aug. 31, 2015)
	Dagstuhl Seminar 15081: Holistic Scene Understanding; *From Groups to Crowds: a Social Signal Processing Approach* - invited talk; Schloss Dagstuhl - Leibniz Center for Informatics, DE (Feb. 16, 2015)
2014	**European Conference on Computer Vision, International Workshop on Human Behavior Understanding**; *From Groups to Crowds: a Social Signal Processing Approach* - keynote speech; Swiss Federal Institute of Technology Zurich, CH (Sept. 12, 2014)
	European Robotic Forum 2014, Workshop "Cognitive Systems: domain evolution and applications in Civil Robotics"; *Social Signal Processing for Group Recognition* - invited talk; Mart Rovereto, IT (Mar. 13, 2014)
2012	**Measuring Behavior 2012**; *Social Computer Vision for Group Behavior Analysis* - keynote speech; Utrecht University, NL (Aug. 30, 2012)
2011	**S4: Short Spring School in Surveillance**;*Person Re-Identification: A Recent Issue For The Video Surveillance Community And A Technique For Approaching It* - keynote speech; University of Modena and Reggio Emilia, IT (May 17, 2011)
2008	**VISIT08**; *Samurai Small Area 24-hours Monitoring Using a netwoRk of cAmeras & sensors for sItuation awareness enhancement* - invited talk; University of Modena and Reggio Emilia, IT (May 22, 2008)

As for the **conference presentations**, I gave/will give **18 oral presentations** for the following papers: [44, 62, 55, 65, 88, 92, 90, 89, 98, 102, 105, 97, 112, 119, 129, 123, 139, 140]; I gave/will give **17 poster presentations** for the following papers: [45, 54, 60, 61, 66, 78, 73, 87, 96, 117, 111, 122, 121, 124, 141, 143, 144].

1.10 PhD Schools and Seminars

I will be Lecturer, together with dr. Roberta Ferrario, dr. Daniele Porello and dr. Davide Conigliaro in a **PhD School** named *Computer Vision Meets Formal Ontology: advanced methods, recent applications and perspectives Stepping into Mixed reality*, 2015, University of Trento (around 20 hours).

I gave 12 seminars in national and international research centers.

In addition, I have been invited at the Dagstuhl Seminar 15081 titled "Holistic Scene Understanding", which will be held from February 15 to February 20 2015 at LZI Schloss Dagstuhl in Germany. The seminar schedule is still under work. Dagstuhl seminars promote personal interaction and open discussion of results as well as ideas. Dagstuhl invites on their behalf about 35 to 45 researchers of international standing from academia and industry, among them promising young researchers.

2013	**OSRAM**, *The VIPS Lab: a presentation*, invited by: Dr. Fabio Galasso, (Nov. 26, 2015)
2013	**Italian National Research Council (CNR)**, *A gentle tutorial on Computer Vision and related Video Surveillance applications*, invited by: Dr. Roberta Ferrario, (Apr. 17, 2013)
2012	**Korea University**, *Advanced Analysis Of Human Activities: A Social Signal Processing Perspective*, invited by: Prof. Seong-Whan Lee, (Nov. 6, 2012)
	Hankuk University, *Advanced Analysis Of Human Activities: A Social Signal Processing Perspective*, invited by: Dr. Cheng Dong Seon, (Nov. 5, 2012)
	University of Amsterdam, *Advanced Analysis Of Human Activities: A Social Signal Processing Perspective*, invited by: Dr. Hayley Hung, (Aug. 31, 2012)
	University of Glasgow, *Detection Of Group Interactions In Cocktail Party Scenarios: A Social Signal Processing Perspective*, invited by: Prof. Alessandro Vinciarelli, (May 30, 2012)
	Istituto Italiano di Tecnologia (IIT), *Advanced Analysis Of Human Activities: A Social Signal Processing Perspective*, invited by: Prof. Vittorio Murino, (Apr. 12, 2012)
	Fondazione Bruno Kessler, *Advanced Analysis Of Human Activities: A Social Signal Processing Perspective*, invited by: Dr. Oswald Lanz, (Jan. 12, 2012)
2009	**Keio University**, *The Hidden Markov Modeling paradigm for tackling computer vision problems*, invited by: Prof. Hideo Saito, (Sep. 24, 2009)
	University of Trento, *Generative Modeling and Classification of Dialogs by Low-Level Features*, invited by: Prof. Giuseppe Riccardi, (May 14, 2009)
2007	**Pompeu Fabra University**, *Hidden Markov Models: Theory and Applications*, invited by: Prof. Alejandro Frangi, (Mar 9, 2007)
2006	**Verona University**, *Mean Shift: Theory and Applications*, (July 4, 2006)

1.11 External Collaborations

The following list includes the ongoing active collaborations with researchers (in alphabetic order) that do not belong to Verona University or Istituto Italiano di Tecnologia. For a complete list, see the DBLP page of Marco Cristani.

Giovanni Bilancia, Università degli Studi di Parma

Roberta Ferrario, Consiglio Nazionale delle Ricerche

Shaogang Gong, Queen Mary University of London

Nebojsa Jojic, Microsoft Research

Daniele Porello, Consiglio Nazionale delle Ricerche

Nicu Sebe, University of Trento

Dong Seon Cheng, Hankuk University of Foreign Studies

Francesco Setti, Consiglio Nazionale delle Ricerche

Mauro Spera, Università Cattolica del Sacro Cuore

Alessandro Tavano, University of Leipzig

Alessandro Vinciarelli, University of Glasgow

Shuicheng Yan, National University of Singapore

2 Teaching Activities

The teaching activity started immediately after the Master Degree (2002), first as **Teaching assistant**, then as **Lecturer**. In the following I report only the course headed as lecturer. Courses have been taught mainly within the Computer Science Dept., but also within the Dept. of Philology, Literature and Linguistics, and within the Dept. of Medicine, University of Verona. *CFU* stands for *Crediti Formativi Universitari*.

2.1 Course Rating

The 4S02803 Pattern Recognition class has been graded by the students (in an anonymous way) 8.38/10 in AY 2011/2012 and 3.71/4 in AY 2013/2014 (data from "Questionario della didattica", the only years for which grades have been available for this class). This could be judged as a positive result, also considering that the mean values of appreciation the Master's course on Engineering and Computer Science have been 7.38/10 in AY 2011/2012 and 3.20/4 in AY 2013/2014, respectively.

2.2 List of the Courses

2013-2014	**4S02803 Pattern Recognition** (6 CFU), *Master's course on Engineering and Computer Science*
	4S02792 Advanced Recognition Systems (6 CFU), *Master's course on Engineering and Computer Science*
2012-2013	**4S02803 Pattern Recognition** (6 CFU), *Master's course on Engineering and Computer Science*
	4S02716 Information Recognition and Retrieval for Bioinformatics (3 CFU), *Bachelor's course on Bioinformatics*
2011-2012	**4S02716 Information Recognition and Retrieval for Bioinformatics** (3 CFU), *Bachelor's course on Bioinformatics*

	4S02803 Pattern Recognition (6 CFU), *Master's course on Engineering and Computer Science*
2010-2011	**4S02803 Pattern Recognition** (6 CFU), *Master's course on Engineering and Computer Science*
2009-2010	**4S02792 Advanced Recognition Systems** (6 CFU), *Master's course on Engineering and Computer Science*
	4S02803 Pattern Recognition (6 CFU), *Master's course on Engineering and Computer Science*
2008-2009	**4S00703 Advanced Human Computer Interaction** (5 CFU), *Master's course on Intelligent and Multimedia Systems*
	Image Processing (40h), *Master FSE, I level "Elaborazione informatica di dati biomedici e telecontrollo in medicina"*
2007-2008	**4S00703 Advanced Human Computer Interaction** (5 CFU), *Master's course on Intelligent and Multimedia Systems*
	4S01421 Communication and Interaction (6 CFU), *Master's course on Publishing and Journalism, Dept. of Philology, Literature, and Linguistics* (as Adjunct Professor)
2006-2007	**4S02803 Pattern Recognition** (6 CFU), *Master's course on Engineering and Computer Science* (as Teaching Assistant)
	4S01421 Communication and Interaction (6 CFU), *Master's course on Publishing and Journalism, Dept. of Philology, Literature, and Linguistics* (as Adjunct Professor)
	4S01896 Informatics Basics (2 CFU), *Master's course on Nursing and Obstetrics, Faculty of Medicine and Surgery* (as Adjunct Professor)
	Image Processing (40h), *Master FSE, I level "Elaborazione informatica di dati biomedici e telecontrollo in medicina"*
2005-2006	**4S01421 Communication and Interaction** (6 CFU), *Master's course on Publishing and Journalism, Dept. of Philology, Literature, and Linguistics* (as Adjunct Professor)
	Image Processing (40h), *Master FSE, I level "Elaborazione informatica di dati biomedici e telecontrollo in medicina"*
2004-2005	**Image Processing** (30h), *Master FSE, I level "Elaborazione informatica di dati biomedici e telecontrollo in medicina"*

3 Supervision

3.1 At the Verona University

Whereas not explicitly mentioned, the following supporting activities are/have been carried out within the Computer Science Dept., and funded by myself.

Postdoctoral scholars:

Dr. Francesco Setti (PhD from Cisas, Università di Padova, Italy), 6/2015 - 5/2016 (funded by the Computer Science Department, University of Verona)

Dr. Nicola Zeni (PhD from ICT, Università di Trento, Italy), 3/2014 - 2/2015 (funded by CNR, thanks to a Convenzione Quadro)

Dr. Loris Bazzani (PhD from Verona University, Italy), 12/2013

Dr. Francesco Setti (PhD from Cisas, Università di Padova, Italy), 9/2012 - 8/2015 (funded by CNR, thanks to a Convenzione Quadro)

Temporary research associates:

Dr. Sylvie Jasmine Poletti (MD from Verona University, Italy), 5/2015 - 11/2015

Dr. Daniele Tasson (MD from Verona University, Italy), 5/2015 - 11/2015

Dr. Marco Monguzzi (MD from Verona University, Italy), 6/2015 - 5/2015

Dr. Michele Tobanelli (MD from Verona University, Italy), 3/2014 - 9/2014

Dr. Walter Riviera (MD from Verona University, Italy), 4/2014 - (funded by Dr. Matteo Cristani)

Dr. Massimo Gambin (MD from Verona University, Italy), 1/2014 -

Dr. Alessio Montagnini (MD from Verona University, Italy), 11/2012 -

Dr. Omar Zandon (MD from Verona University, Italy), 11/2012 -

PhD students: I have been **Tutor** for the 7 following PhD students:

Dr. Irtiza Hasan, (MA from University of Oulu, Finland) Ph.D. program XXXI Series 10/2015 - 10/2018

Dr. Theodore Tsesmelis, (MA from Aalborg University, Denmark) Ph.D. program XXXI Series 10/2015 - 10/2018

Dr. Giorgio Roffo, (MA from Verona University, Italy) Ph.D. program XXIX Series 1/2014 - 12/2016

Dr. Sami Abduljalil Abdulhak, (MA from Dongseo University, South Korea) Ph.D. program XXVIII Series 1/2013 - 12/2015

Dr. Davide Conigliaro, (MA from Verona University, Italy) Ph.D. program XXVIII Series 1/2013 - 12/2015

Dr. Cristina Segalin, (MA from Verona University, Italy) Ph.D. program XXVIII Series 1/2013 - 12/2015

Dr. Anna Pesarin, (MA from Verona University, Italy) Ph.D. program XXV Series 1/2010 - 12/2013 (defended on 05/2014)

In addition, I have been **Co-Tutor** for two PhD students: Dr. Loris Bazzani, 2009-2011 (now at the Dartmouth college, Hanover, NH, USA) and Dr. Diego Tosato, 2009-2011 (now at Gruppo Eurosystem Sistemarca Spa, Treviso, Italy).

Graduate and Undergraduate students:
I have been **Supervisor** of 11 MA thesis (2010-2015), 6 BA thesis (2010-2015) and I'm currently advising 2 graduate students. I have been **Co-supervisor** for 8 MA thesis (2004-2008). At the Dept. of Philology, Literature, and Linguistics, I have been **Supervisor** for 9 MA thesis (2007-2009). During 2013, I have been **Co-supervisor** for a graduate student from Toyota Technological Institute, Nagoya, hosting the student for three months.

In addition, I am/have been **Member** in the PhD committee of 6 PhD students.

3.2 At the Istituto Italiano di Tecnologia

The advising activity is/has been carried out in support of Prof. Vittorio Murino, head of the Pattern Analysis and Computer Vision Dept..

Post-doc:

Dr. Marco Crocco (PhD from University of Genova, Italy), 7/2010 - 7/2014

Dr. Loris Bazzani (PhD from University of Verona, Italy), 2011 - 2012

Dr. Ha Quang Minh (PhD from Brown University, May 2006), 2010 - 2013

PhD students: I am/have been **Co-Tutor** for the following students, in the PhD course on Life and Humanoid Technologies:

Dr. Sebastiano Vascon, (MA from Ca' Foscari University, Venezia, Italy) 1/2013 - 12/2016

Dr. Pietro Salvagnini, (MA from Padova University, Italy) 1/2010 - 12/2012

Dr. Marco San Biagio, (MA from University of Palermo, Italy) 1/2011 - 12/2013

Graduate and Undergraduate students:
I have been **Co-supervisor** of an Erasmus Mundus student in Vision and Robotics (VIBOT) (2012).

4 University Service

The following activities have been carried out for the Verona University.

2014	**Member** of the Committee for the preparation of the preliminary proposal for the Master Degree Course (LM-32) on *bio-medical engineering*
2013-	**Preposto** of the *VIPS 1* lab, located at Department of Computer Science, Strada Le Grazie 15, Ca' Vignal 2, floor -2
2013-	**Member** of the *VQR Commission* for the analysis of the VQR 2007/2010 results of the Department of Computer Science

2013-	**Member** of the *AQ Commission* for the evaluation of the Master Degree in Engineering and Computer Science
2013-2014	**Member** of the Scientific Committee of the *Master in Computer Game Development*, AY. 2013/2014
2012-2014	**Scientific Responsible** of the Verona University for a *Convenzione Quadro* between the Verona University and the Istituto Italiano di Tecnologia (2012-2014)
	Scientific Responsible of the Verona University for a *Convenzione Quadro* between the Verona University and the Consiglio Nazionale delle Ricerche (CNR) (2012-2014). Thanks to this collaboration, the CNR supported financially two Post-Docs (Dr. Francesco Setti, 2012-2015 and Dr. Nicola Zeni, 2014-2015) and a PhD grant (Dr. Davide Conigliaro, PhD program XXVIII Series, 1/2013 - 12/2015).
2012-2013	**Member** of the Scientific Committee of the *Master in Computer Game Development*, AY. 2012/2013
2012	**Supervisor** of two high school students (Liceo Scientifico G. Galilei) for a stage on Multimedia in the VIPS lab (June-July 2012)
	Responsible for the VIPS lab during the event *Discovery on Film*, Riva del Garda, Italy (Apr. 19-21 2012)
2011	**Member** of the *Departmental Planning Committee* (Commissione di Programmazione di Dipartimento) (Dec. 2011)
	Responsible for the VIPS lab during the event *Notte dei Ricercatori*, Verona, Italy (Oct. 2011)
	Member of the *PhD Admissions Committee* (Set.-Oct. 2011)
	Supervisor of two high school students (Liceo Scientifico G. Galilei) for a stage on Multimedia in the VIPS lab (June-July 2011)
2010-2012	**Member** of the *Degree Course Council for Master Degree in Engineering and Computer Science* (Laurea Magistrale in Ingegneria e Scienze Informatiche)
2010-	**Member** of the *Teaching Staff Council for the PhD in Computer Science*
2007-2010	**Chair** of the Computer Science Colloquia (Seminari di Dipartimento)
2007-	**Member** of many *MA and BA Final Exam Committees* within the Dept. of Computer Science and Dept. of Philology, Literature, and Linguistics
	Member of the *Evaluation Committee* for several Research Grants
	Tutor Accademico for many *Internships* within the Master Degree in Engineering and Computer Science
	Tutor Aziendale for many *Internships* within the Master Degree in Engineering and Computer Science
2006	**Co-organizer** of a cycle of seminars on Computer Vision and Pattern Recognition within the Computer Science Dept. in collaboration with the Methods for Image and Data Analysis (MIDA) Lab, University of Genova (Mar-July 2006)

5 Publications

Publications have been organized in edited books, referred journal papers, conference papers and book chapters. Globally, I have published 148 papers. According to Google Scholar, my H-index is 26, with more than 2450 citations. Around 36% of the publications have one author coming from institutions different from University of Verona and Istituto Italiano di Tecnologia.

Regarding the journal papers, 13 of them are labeled as "class 1" from the National Agency for the Evaluation of Universities and Research Institutes (ANVUR), that are [3, 8, 11, 13, 14, 16, 20, 21, 28, 29, 30, 31, 32].

5.1 Edited Books

2014 [1] AA.VV. Person re-identification. In S. Gong, M. Cristani, S. Yan, and C. C. Loy, editors, *Advances in Computer Vision and Pattern Recognition*, pages 1–456. Springer, 2014

5.2 Refereed Journal Papers

A total of 31 refereed international journal papers have been published.

2015 [2] S. Vascon, E. Z. Mequanint, M. Cristani, H. Hung, M. Pelillo, and V. Murino. Detecting conversational groups in images and sequences: A robust game-theoretic approach. *Computer Vision and Image Understanding*, pages –, 2015

[3] D. Cheng, F. Setti, N. Zeni, R. Ferrario, and M. Cristani. Semantically-driven automatic creation of training sets for object recognition. *Computer Vision and Image Understanding*, 131(0):56 – 71, 2015

[4] P. Salvagnini, F. Pernici, M. Cristani, G. Lisanti, A. D. Bimbo, and V. Murino. Non-myopic information theoretic sensor management of a single pantiltzoom camera for multiple object detection and tracking. *Computer Vision and Image Understanding*, 134:74 – 88, 2015. Image Understanding for Real-world Distributed Video Networks

[5] F. Setti, C. Russell, C. Bassetti, and M. Cristani. F-formation detection: Individuating free-standing conversational groups in images. *PLoS ONE*, 10(5):e0123783, 05 2015

2014 [6] L. Bazzani, M. Zanotto, M. Cristani, and V. Murino. Joint individual-group modeling for tracking. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 2014. in print

[7] M. San Biagio, S. Martelli, M. Crocco, M. Cristani, and M. Murino. Encoding structural similarity by cross-covariance tensors for image classification. *International Journal of Pattern Recognition and Artificial Intelligence*, 2014. in print

[8] P. Lovato, M. Bicego, C. Segalin, A. Perina, N. Sebe, and M. Cristani. Faved! biometrics: Tell me which image you like and i'll tell you who you are. *Information Forensics and Security, IEEE Transactions on*, 9(3):364–374, March 2014

[9] A. Tavano, A. Pesarin, V. Murino, and M. Cristani. Automatic conversational scene analysis in children with Asperger syndrome/High Functioning Autism and typically developing peers. *PLOS ONE*, 2014

[10] D. Cheng, H. Salamin, P. Salvagnini, M. Cristani, A. Vinciarelli, and V. Murino. Predicting online lecture ratings based on gesturing and vocal behavior. *Journal on Multimodal User Interfaces*, pages 1–10, 2014

2013 [11] L. Bazzani, M. Cristani, and V. Murino. Symmetry-driven accumulation of local features for human characterization and re-identification. *Computer Vision and Image Understanding*, 117(2):130–144, Feb. 2013

[12] M. Cristani, R. Raghavendra, A. Del Bue, and V. Murino. Human behavior analysis in video surveillance: A social signal processing perspective. *Neurocomputing*, 100:86–97, Jan. 2013

[13] D. Tosato, M. Spera, M. Cristani, and V. Murino. Characterizing humans on riemannian manifolds. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 35(8):2–15, Aug. 2013

2012 [14] A. Perina, M. Cristani, U. Castellani, V. Murino, and N. Jojic. Free energy score spaces: Using generative information in discriminative classifiers. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 34(7):1249–1262, Jul. 2012

[15] L. Bazzani, M. Cristani, A. Perina, and V. Murino. Multiple-shot person re-identification by chromatic and epitomic analyses. *Pattern Recognition Letters*, 33(7):898–903, May 2012. Special Issue on Awards from ICPR 2010

[16] A. Perina, N. Jojic, M. Cristani, and V. Murino. Stel component analysis: Joint segmentation, modeling and recognition of objects classes. *International Journal of Computer Vision*, 100(3):241–260, Dec. 2012

[17] L. Bazzani, M. Cristani, D. Tosato, M. Farenzena, G. Paggetti, G. Menegaz, and V. Murino. Social interactions by visual focus of attention in a three-dimensional environment. *Expert Systems*, 30(2):115–127, May 2013

[18] A. Sedda, V. Manfredi, G. Bottini, M. Cristani, and V. Murino. Automatic human interaction understanding: lessons from a multidisciplinary approach. *Frontiers in Human Neuroscience*, 6(57), May 2012

[19] A. Pesarin, M. Cristani, V. Murino, and A. Vinciarelli. Conversation analysis at work: detection of conflict in competitive discussions through semi-automatic turn-organization analysis. *Cognitive Processing*, 13(2):533–540, Oct. 2012

2011 [20] U. Castellani, M. Cristani, and V. Murino. Statistical 3d shape analysis by local generative descriptors. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 33(12):2555–2560, Dec. 2011

[21] M. Cristani, A. Pesarin, C. Drioli, A. Tavano, A. Perina, and V. Murino. Generative modeling and classification of dialogs by a low-level turn-taking feature. *Pattern Recognition*, 44(8):1785–1800, Aug. 2011

[22] B. Torre, M. Lorenzoni, M. Bicego, M. Cristani, V. Murino, and A. Diaspro. Principal component analysis in dynamic force spectroscopy. *GIT Imaging & Microscopy*, 13(4):26–28, Aug. 2011

2010 [23] M. Cristani, M. Farenzena, D. Bloisi, and V. Murino. Background subtraction for automated multisensor surveillance: a comprehensive review. *EURASIP Journal on Advances in Signal Processing*, 2010:1–24, Feb. 2010

[24] B. Torre, M. Bicego, M. Cristani, V. Murino, A. Diaspro, and R. Cingolani. Combination of atomic force microscopy and principal component analysis as a general method for direct recognition of functional and structural domains in nanonocomposite materials. *Microscopy research and technique*, 73(10):973–981, Oct. 2010

[25] A. Perina, M. Cristani, and V. Murino. Learning natural scene categories by selective multi-scale feature extraction. *Image Vision Computing*, 28(6):927–939, June 2010

2009 [26] U. Castellani, M. Cristani, A. Daducci, P. Farace, P. Marzola, V. Murino, and A. Sbarbati. DCE-MRI data analysis for cancer area classification. *Methods of Information in Medicine*, 48(3):248–253, 2009

[27] M. Cristani, A. Perina, U. Castellani, and V. Murino. Geo-located image categorization and location recognition. *Pattern Recognition and Image Analysis*, 19(2):245–252, Jun. 2009

[28] A. Perina, M. Cristani, L. Xumerle, V. Murino, P. F. Pignatti, and G. Malerba. Fully non-homogeneous hidden markov model double net: A generative model for haplotype reconstruction and block discovery. *Artificial Intelligence in Medicine*, 45(23):135–150, Feb. 2009

2008 [29] U. Castellani, M. Cristani, C. Combi, V. Murino, A. Sbarbati, and P. Marzola. Visual mri: Merging information visualization and non-parametric clustering techniques for {MRI} dataset analysis. *Artificial Intelligence in Medicine*, 44(3):183–199, Nov. 2008

[30] U. Castellani, M. Cristani, S. Fantoni, and V. Murino. Sparse points matching by combining 3d mesh saliency with statistical descriptors. *Computer Graphics Forum*, 27(2):643–652, Apr. 2008

2007 [31] M. Cristani, M. Bicego, and V. Murino. Audio-visual event recognition in surveillance video sequences. *IEEE Transactions on Multimedia*, 9(2):257–267, Feb. 2007

2006 | [32] M. Bicego, M. Cristani, and V. Murino. Unsupervised scene analysis: A hidden markov model approach. *Computer Vision and Image Understanding*, 102(1):22–41, Apr. 2006

5.3 Refereed Conference Papers

A total of 114 refereed international conference papers have been published.

2015

[33] G. Roffo, S. Melzi, and M. Cristani. Infinite feature selection. In *IEEE 15th International Conference on Computer Vision (ICCV)*, 2015

[34] D. Porello, M. Cristani, and R. Ferrario. Integrating ontologies and computer vision for classification of objects in images. In *Workshop on Neural-Cognitive Integration, in conjunction with KI-2015*, 2015

[35] D. Conigliaro, P. Rota, F. Setti, N. Sebe, C. Bassetti, N. Conci, and M. Cristani. The s-hock dataset: Analyzing crowds at the stadium. In *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2014

[36] D. Tasson, A. Montagnini, M. Farenzena, R. Marzotto, and M. Cristani. Fpga-based pedestrian detection under strong distortions. In *11th Embedded Vision Workshop (CVPRW)*, 2015

[37] F. Setti and M. Cristani. The GRODE metrics: Exploring the performance of group detection approaches. In *International Workshop on GRoup and crOWd behavior analysis and understanding (CVPRW)*, 2015

[38] S. A. Abdulhak, W. Riviera, and M. Cristani. Crowdsearching training sets for image classification. In *IAPR International Conference on Image Analysis and Processing (ICIAP)*, 2015

2014

[39] C. Segalin, A. Perina, and M. Cristani. Recognizing people by their personal aesthetics: A statistical multi-view approach. In *12th Asian Conference on Computer Vision (ACCV)*, 2014

[40] S. Vascon, E. Z. Mequanint, M. Cristani, H. Hung, M. Pelillo, and V. Murino. A game-theoretic probabilistic approach for detecting conversational groups. In *12th Asian Conference on Computer Vision (ACCV)*, 2014

[41] M. Cristani and R. Ferrario. Statistical pattern recognition meets formal ontologies: Towards a semantic visual understanding. In *International Workshop on Roadmapping the Future of Multimodal Research (associated with ICMI 2014)*, 2014

[42] G. Roffo, C. Giorgetta, R. Ferrario, W. Riviera, and M. Cristani. Statistical analysis of personality and identity in chats using a keylogging platform. In *16th ACM International Conference on Multimodal Interaction (ICMI)*, 2014

[43] C. Segalin, A. Perina, and M. Cristani. Personal aesthetics for soft biometrics: A generative multi-resolution approach. In *16th ACM International Conference on Multimodal Interaction (ICMI)*, 2014

[44] S. Abdulhak, W. Riviera, N. Zeni, M. Cristani, R. Ferrario, and M. Cristani. Semantic-analysis object recognition: Automatic training set generation using textual tags. In *1st International Workshop on Computer vision + ONTology Applied Cross-disciplinary Technologies (associated to ECCV)*, 2014

[45] G. Roffo, C. Giorgetta, R. Ferrario, and M. Cristani. Just the way you chat: Linking personality, style and recognizability in chats. In *5th International Workshop on Human Behaviour Understanding (associated to ECCV)*, 2014

[46] C. Segalin, A. Perina, and M. Cristani. Biometrics on visual preferences: A "Pump and Distill" regression approach. In *IEEE International Conference on Image Processing (ICIP)*, 2014

[47] M. San Biagio, L. Bazzani, M. Cristani, and V. Murino. Weighted bag of visual words for object recognition. In *IEEE International Conference on Image Processing (ICIP)*, 2014

[48] P. Salvagnini, F. Pernici, M. Cristani, G. Lisanti, I. Masi, A. Del Bimbo, and V. Murino. Information theoretic sensor management for multi-target tracking with a single pan-tilt-zoom camera. In *IEEE Winter Conference on Applications of Computer Vision*, 2014

2013 [49] G. Roffo, M. Cristani, L. Bazzani, M. H. Quang, and V. Murino. Trusting Skype: Learning the way people chat for fast user recognition and verification. In *IEEE Workshop on Decoding Subtle Cues from Social Interactions (associated with ICCV 2013)*, 2013

[50] M. S. Biagio, M. Crocco, M. Cristani, S. Martelli, and V. Murino. Heterogeneous auto-similarities of characteristics (HASC): exploiting relational information for classification. In *IEEE 14th International Conference on Computer Vision (ICCV)*, 2013

[51] G. Roffo, M. Cristani, F. Pollick, and V. Murino. Statistical analysis of visual attentional patterns for video surveillance. In *18th Iberoamerican Congress on Pattern Recognition (CIARP)*, 2013

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