

Loris Bazzani

Curriculum Vitæ

Date of Birth *September 7, 1984*
Gender *Male*
Nationality *Italian*
Office Address *Department of Computer Science, University of Verona,
Strada Le Grazie 15, 37134 Verona, Italy.*
Office Phone *+39 045 802 7804*
Personal Phone *+39 348 3179893*
E-mail *loris.bazzani@univr.it*
Website *<http://www.lorisbazzani.info>*
Supervisor *Prof. Vittorio Murino*

Education

- 2009–2012 **PhD student** in Computer Science, University of Verona, Verona, Italy
(expected)
- May 2010–Nov. 2010 **Research Intern**, Laboratory for Computational Intelligence, University of British Columbia, Vancouver, Canada
- 2006–2008 **M.Sc.** degree (*cum laude*) in Intelligent and Multimedia Systems, University of Verona, Verona, Italy
- 2003–2006 **B.Sc.** degree in Information Technology, University of Verona, Verona, Italy

Theses

- M.Sc. *Particle Filtering Approaches for Reliable Multi-target Tracking in Video Surveillance Application*, Supervisors: Prof. Vittorio Murino, Dr. Marco Cristani
- B.Sc. *Techniques for Analysis and Classification of MRI Images for Searching Pathology with Application to Mental Health*, Supervisors: Prof. Vittorio Murino, Dr. Umberto Castellani

Scientific Interests

- Areas Computer Vision, Machine Learning, and Pattern Recognition
- CV interests Multi-Target Tracking, Multi-Group Tracking, Social Interaction Detection Person Re-identification for Multi-Camera Tracking, Object Modeling for Tracking, Learning Features from Images
- ML interests Sequential Monte Carlo Methods, Restricted Boltzmann Machines and Deep Networks, Non-parametric Bayesian Models, Dynamic Bayesian Nets, Sequential Control Methods
- Applications Automatic Video Surveillance, Computational Models of Human Attention

Publications

- On review 2 journal papers on review process and PhD thesis in preparation.
- Book Chap. L. Bazzani, M. Cristani, G. Pagetti, D. Tosato, G. Menegaz, V. Murino, *Analyzing Groups: a Social Signaling Perspective*, Video Analytics for Business Intelligence (to appear).
- Journal L. Bazzani, D. Tosato, M. Cristani, M. Farenzena, G. Pagetti, G. Menegaz, V. Murino, *Social Interactions by Visual Focus of Attention in a Three-Dimensional Environment*, Expert Systems (to appear).
- Journal L. Bazzani, M. Cristani, A. Perina, V. Murino, *Multiple-shot Person Re-identification by Chromatic and Epitomic Analyses*, Pattern Recognition Letters (accepted with minor).
- Oral L. Bazzani, N. de Freitas, H. Larochelle, V. Murino, J. Ting, *Learning attentional policies for object tracking and recognition in video with deep networks*, International Conference on Machine Learning (ICML), 2011.
- Oral M. Cristani, L. Bazzani, G. Pagetti, A. Fossati, A. Del Bue, D. Tosato, G. Menegaz, V. Murino, *Social interaction discovery by statistical analysis of F-formations*, British Machine Vision Conference (BMVC), 2011.
- Poster D. S. Cheng, M. Cristani, M. Stoppa, L. Bazzani, V. Murino, *Custom Pictorial Structures for Re-identification*, British Machine Vision Conference (BMVC), 2011.
- Oral M. Cristani, G. Pagetti, A. Vinciarelli, L. Bazzani, G. Menegaz, V. Murino, *Towards Computational Proxemics: Inferring Social Relations from Interpersonal Distances*, International Conference on Social Computing (SocialCom), 2011.
- Poster L. Bazzani, N. de Freitas, J. Ting, *Learning attentional mechanisms for simultaneous object tracking and recognition with deep networks*, Workshop on Deep Learning and Unsupervised Feature Learning at the Conference on Neural Information Processing Systems (NIPS), 2010.
- Oral L. Bazzani, M. Cristani, and V. Murino, *Collaborative Particles Filters for Group Tracking*, International Conference on Image Processing (ICIP), 2010.
- Oral L. Bazzani, M. Cristani, A. Perina, M. Farenzena, and V. Murino, *Multiple-shot Person Re-identification by HPE signature*, International Conference on Pattern Recognition (ICPR), 2010.
- Poster M. Farenzena, L. Bazzani, A. Perina, V. Murino, and M. Cristani *Person Re-Identification by Symmetry-Driven Accumulation of Local Features*, International Conference on Computer Vision and Pattern Recognition (CVPR), 2010.
- Oral M. Farenzena, A. Tavano, L. Bazzani, D. Tosato, G. Pagetti, G. Menegaz, V. Murino, and M. Cristani, *Social Interaction by Visual Focus of Attention in a Three-dimensional Environment*, Workshop on Pattern Recognition and Artificial Intelligence for Human Behavior Analysis (PRAI*HBA), 2009.
- Poster L. Bazzani, M. Cristani, M. Bicego, and V. Murino, *Online Subjective Feature Selection for Occlusion Management in Tracking Applications*, International Conference on Image Processing (ICIP), 2009.
- Poster M. Farenzena, M. Cristani, L. Bazzani, and V. Murino, *Towards a Subject-Centered Analysis for Automated Video Surveillance*, International Conference on Image Analysis and Processing (ICIAP), 2009.

- Oral D. Bloisi, L. Bazzani, and V. Murino, *A Comparison of Particle Filter-based and Kalman filter-based Approaches in Multi-target Tracking*, IEEE International Workshop on Performance Evaluation of Tracking and Surveillance (PETS), 2009.
- Poster U. Castellani, L. Bazzani, D. Tosato, V. Murino, C. Rambaldelli, C. Perlini, M. Atzori, M. Tansella, and P. Brambilla, *A Learning by Example Approach for MRI Analysis of Human Brain in the Context of Mental Health*, Joint Annual Meeting ISMRM-ESMRMB, Berlin 2007.

Awards

- Award IBM Best Student Paper Award, track: Computer Vision at International Conference on Pattern Recognition (ICPR), 2010
- Scholarship International Conference on Machine Learning, 2011

Given Talks

- Oral *Learning attentional policies for object tracking and recognition in video with deep networks*, International Conference on Machine Learning (ICML), 2011. And, University of Verona, 20 June 2011, supervisor: prof. V. Murino. And, University of British Columbia, 24 June 2010, supervisor: prof. N. de Freitas.
- Seminar *Restricted Boltzmann Machines and Deep Networks for Unsupervised Learning*, Istituto Italiano di Tecnologia, Genova, 7 June 2011, supervisor: prof. V. Murino. And, University of Verona, 16 September 2011, supervisor: prof. V. Murino
- Lecture *Person Re-identification: a recent issue for the video surveillance community and a technique for approaching it*, S4 summer school 2011, University of Modena and Reggio Emilia, 17 May 2011.
- Seminar *Multi-armed Bandit Problem and Bayesian Optimization in Reinforcement Learning*, University of Verona, Verona, 16 March 2011, supervisor: prof. V. Murino.
- Seminar *Multi-target Tracking for Social Interactions Detection and its Extension to Multi-Camera Case*, University of British Columbia, Vancouver, 10 June 2010, supervisor: prof. N. de Freitas.
- Seminar *Maximally Stable Extremal Regions and its Extensions*, University of Verona, Verona, 14 December 2009, supervisor: prof. A. Giachetti.
- Seminar *Multi-Group Tracking with Adaptive Target Model*, University of Verona, Verona, 18 November 2009, supervisor: prof. V. Murino.
- Seminar *Gradient-free Methods for Stochastic Optimization*, University of Verona, Verona, 22 May 2009, supervisor: prof. L. Pellegrini.
- Seminar *Multi-target Tracking in Automated Surveillance Systems*, University of Verona, Verona, 21 April 2009, supervisor: prof. Vittorio Murino.
- Seminar *Techniques for the Analysis and the Classification of MRI Images for Searching Pathology with Application on Mental Health Field*, University of Verona, Verona 2007, supervisor: prof. Vittorio Murino.

Attended Courses

- 2011 P. Norvig and S. Thrun's Artificial Intelligence Class, <http://www.ai-class.org/>

- 2011 A. Ng's Machine Learning Class, <http://www.ml-class.org/>
- 2011 Computer Vision and Machine Learning Summer School, <http://www.di.ens.fr/willow/events/cvml2011/>
- 2011 Short Spring School in Surveillance S4, <http://imagelab.ing.unimore.it/s4/>
- 2011 2nd PLUS Advanced School on Computer Vision, Pattern Recognition, and Image Processing, <http://plusschool.voice.iit.it/plus-school/>
- 2010 A. Ng's 2007 Machine Learning Course, http://videlectures.net/stanfordcs229f07_machine_learning/
- 2010 Cognitive Science and Machine Learning Summer School, <http://www.mlss.cc/sardinia10>
- 2010 9th VIPS Advanced School on Numerical Geometry of Non-Rigid Shapes, http://vips.sci.univr.it/VipsSchool2010_Bron/
- 2009 Medical Image Processing @University of Verona.
- 2009 Optimization Theory and Methods @University of Verona.

Programming Skills

- advanced MATLAB, LaTeX
- intermediate C/C++, Java, unix console, XML, HTML, SQL
- basic Python, Assembly, LISP

Languages

- Italian Mother tongue
- English Reading and comprehension: Upper-Intermediate
- English Writing and speaking: Upper-Intermediate