

## COMPLETE LIST OF PUBLICATIONS

### INTERNATIONAL JOURNALS

- [A1] V.Murino, C.S.Regazzoni, G.Vernazza, "Distributed propagation of a-priori constraints in a Bayesian network of Markov Random Fields", *IEE Proceedings, Part I, Communications, Speech, and Vision*, Vol. 140, N. 1, Feb. 1993, pp. 46-55.
- [A2] V.Murino, G.L.Foresti, C.S.Regazzoni, G.Vernazza, "Distributed Spatial Reasoning for Multisensory Image Interpretation", *Signal Processing*, Special Issue on Intelligent Systems for Signal and Image Understanding, Vol.32, N.1-2, May 1993, pp. 217-255.
- [A3] V.Murino, C.S.Regazzoni, G.L.Foresti, "Distributed Hierarchical Regularization System for Recognition of Planar Surfaces", *Optical Engineering*, Vol. 32, N. 6, June 1993, pp. 1167-1192.
- [A4] V.Murino, G.L.Foresti, C.S.Regazzoni, G.Vernazza, "Grouping of Rectilinear Segments by the Labeled Hough Transform", *Computer Vision, Graphics, and Image Processing: Image Understanding*, Vol.59, N.1, Jan. 1994, pp. 22-42.
- [A5] V.Murino, G.L.Foresti, C.S.Regazzoni, G.Vernazza, "A Distributed Approach to 3D Road Scene Recognition", *IEEE Transactions on Vehicular Technology*, Vol. 43, N. 2, May 1994, pp. 389-406.
- [A6] V.Murino, G.L.Foresti, C.S.Regazzoni, G.Vernazza, "A Multilevel Fusion Approach to Object Identification in Outdoor Road Scenes", *International Journal on Pattern Recognition and Artificial Intelligence*, Vol. 9, N. 1, Feb. 1995, pp. 23-65.
- [A7] V.Murino, C.S. Regazzoni, A. Trucco, G. Vernazza, "A Non-Coherent Correlation Technique and Focused Beamforming for Ultrasonic Underwater Imaging: a Comparative Analysis", *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, vol. 41, No. 5, September 1994, pp. 621-630.
- [A8] V. Murino, A. Trucco, "Dynamic Focusing by FFT Beamforming for Underwater 3D Imaging", *Acoustics Letters*, Vol. 17, N. 9, March 1994, pp. 169-172.
- [A9] V.Murino, G.L.Foresti, "A Real-Time Image-Processing System for Visual Inspection of Real Environments", *Journal on Communications*, Vol. XLV, May-June 1994, pp. 61-64.
- [A10] V.Murino, C.S.Regazzoni, G.L. Foresti, "A Distributed Probabilistic System for Adaptive Regulation of Image Processing Parameters", *IEEE Transactions on Systems, Man, and Cybernetics*, Vol. 26, No. 2, February 1996, pp. 1-20.
- [A11] V.Murino, A. Trucco, C.S.Regazzoni, "Synthesis of Unequally Spaced Arrays by Simulated Annealing", *IEEE Transactions on Signal Processing*, Vol. 44, N. 1, Jan. 1996, pp. 119-123.
- [A12] V.Murino, "Acoustic Image Reconstruction by Markov Random Fields", *Electronics Letters*, Vol. 32, N. 7, March 1996, pp. 697-698.
- [A13] V.Murino, G.L.Foresti, C.S.Regazzoni, "Grouping as a Searching Process for Minimum-Energy Configurations of Labelled Random Fields", *Computer Vision and Image Understanding*, Vol. 64, No. 1, July 1996, pp. 157-174.

- [A14] V.Murino, G.L.Foresti, C.S.Regazzoni, "Adaptive camera regulation for investigation of real scenes", *IEEE Transactions on Industrial Electronics*, Vol. 43, N. 5, Oct. 1996, pp. 588-600.
- [A15] V.Murino, B.Bianco, A.Oneto, T.Tommasi, A.Diaspro, "A frequency-domain analysis of 3D reconstruction techniques based on defocusing", *International Journal of Modelling and Simulation* 16 (2), pp. 92-94, 1996.
- [A16] V.Murino, A.Tesei, A.Trucco, "Beam Pattern Formulation and Analysis for Wide-Band Beamforming Systems using Sparse Arrays", *Signal Processing*, Vol. 56, No. 2, pp. 177-183, 1997.
- [A17] V.Murino, G.L.Foresti, C.S.Regazzoni, A.Trucco, "A voting-based approach for fast object recognition in underwater acoustic imaging", *IEEE Journal on Oceanic Engineering*, Vol. 22, No. 1, January 1997, pp. 57-65.
- [A18] V.Murino, G.L.Foresti, "2D into 3D Hough-Space Mapping for Planar Object Pose Estimation", *Image and Vision Computing*, no. 15, pp. 435-444, 1997.
- [A19] V.Murino, A.Trucco, "Markov-based Methodology for the Restoration of Underwater Acoustic Images", *International Journal of Imaging Systems and Technology*, Special Issue on Advanced Microwave and Acoustical Imaging and Applications, Vol. 8, No. 4, pp. 386-395, 1997.
- [A20] V.Murino, G.L.Foresti, C.S.Regazzoni, "A Belief-based Approach for Adaptive Image Processing", *International Journal on Pattern Recognition and Artificial Intelligence*, Vol. 11, No. 3, pp. 359-392, 1997.
- [A21] V.Murino, A.Trucco, "On Nonlinear Effects of Envelope Detection in Beamforming Systems", *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 44, No. 4, pp. 948-952, July 1997.
- [A22] V.Murino, A.Trucco, "A Co-operative Approach to Feature Extraction from Acoustic Images", *Applied Signal Processing*, no. 3, pp. 128-135, 1996.
- [A23] V.Murino, G.L.Foresti, C.S.Regazzoni, "Vehicle recognition and tracking from road image sequences", *IEEE Transactions on Vehicular Technology*, Vol. 48, No. 1, pp. 301-318, January 1999.
- [A24] V.Murino, C.Ottonello, S.Pagnan, "Noisy Texture Classification: A Higher Order Statistics Approach", *Pattern Recognition*, Vol. 31, No. 4, pp. 383-393, 1998.
- [A25] V. Murino, A. Trucco, C.S. Regazzoni, "A Probabilistic Approach to the Coupled Reconstruction and Restoration of Underwater Acoustic Images", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 20, No. 1, pp. 9-22, January 1998.
- [A26] V. Murino, "Structured Neural Networks for Pattern Recognition", *IEEE Transactions on Systems, Man, and Cybernetics*, Part B: Cybernetics, Vol. 28, N. 4, pp. 553-561, August 1998.
- [A27] V.Murino, A.Trucco, "Confidence-based Approach to Enhancing Underwater Acoustic Image Formation ", *IEEE Transactions on Image Processing*, Vol. 8, No. 2, February 1999 pp. 270-285.
- [A28] A.Trucco, V.Murino, "Stochastic Optimization of Linear Sparse Arrays", *IEEE Journal on Oceanic Engineering*, Vol. 24, No. 3, pp. 291-299, July 1999.

- [A29] V. Murino, A. Trucco, "A Geometric Approach to the Surface Fitting Problem in Underwater 3-D Acoustic Images", *Measurement Science and Technology*, Vol. 10, No. 12, pp. 1135-1141, December 1999.
- [A30] V. Murino, A. Fusiello, "Calibration of an optical-acoustic sensor", *Machine Graphics & Vision*, Vol. 9, No. 1/2, May 2000, pp. 207-214.
- [A31] V. Murino, A. Trucco, "Guest Editors' Introduction - Underwater Computer Vision and Pattern Recognition", *Computer Vision and Image Understanding*, Vol. 79, No. 1, July 2000, pp. 1-3.
- [A32] V. Murino, A. Trucco, "Three-Dimensional Image Generation and Processing in Underwater Acoustic Vision", *Proceedings of the IEEE*, Vol. 88, No. 12, Dec. 2000, pp. 1903-1946.
- [A33] V. Murino, "Reconstruction and Segmentation of Underwater Acoustic Images combining Confidence Information in MRF Models", *Pattern Recognition*, Vol. 34, No. 5, May 2001, pp. 981-997.
- [A34] V. Murino, G. Vernazza, "Guest Editorial - Artificial Neural Networks for Image Analysis and Computer Vision", *Image and Vision Computing*, Vol. 19, No. 9-10, August 2001, pp. 583-584.
- [A35] A. Trucco, V. Murino, "Synthesis of Unequally Spaced Arrays with Asymmetric Beam Patterns," *Journal of Computational Acoustics*, vol. 9, no. 3, pp. 789-803, September 2001.
- [A36] U. Castellani, A. Fusiello, V. Murino, "Registration of multiple acoustic range views for underwater scene reconstruction", *Computer Vision and Image Understanding*, Vol. 87, no. 3, 2002, pp. 78-89.
- [A37] M. Bicego, V. Murino, M.A.T. Figueiredo, "A sequential pruning strategy for the selection of the number of states in hidden Markov models", *Pattern Recognition Letters*, Vol. 24, No. 9-10, Feb. 2003, pp. 1395-1407.
- [A38] A. Fusiello, V. Murino, "Augmented Scene Modeling and Visualization by Optical and Acoustic Sensor Integration", *IEEE Transactions on Visualization and Computer Graphics*, Vol. 10, No. 6, 2004, pp. 625-636.
- [A39] H. Zha, H. Saito, A. Fusiello, and V. Murino, "3-D Image Analysis and Modeling - Editorial Message", *IEEE Transactions on Systems, Man, and Cybernetics - Part B: Cybernetics, Special Issue on 3-D Image Analysis and Modeling*, Vol. 33, No. 4, August 2003, pp. 550-553.
- [A40] M. Bicego and V. Murino, "Investigating Hidden Markov Models' Capabilities in 2D Shape Classification", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 26, No. 3, Feb. 2004, pp. 281-286.
- [A41] M. Bicego, V. Murino, M.A.T. Figueiredo, "Similarity-based classification of sequences using Hidden Markov Models", *Pattern Recognition*, Vol. 37, No. 12, Dec. 2004, pp. 2281-2291.
- [A42] U. Castellani, V. Murino, L. Tao, "Efficient Scene Modeling of Underwater ROV Driving", *Sea Technology*, Vol. 45, No. 12, December 2004, pp. 47-52.

- [A43] M. Bicego, M. Del Rosario Martinez, V. Murino, "A supervised data-driven approach for microarray spot quality classification", *Pattern Analysis & Applications*, Vol. 8, No. 1-2, September 2005, pp. 181-187.
- [A44] U. Castellani, A. Fusiello, V. Murino, L. Papaleo, E. Puppo, M. Pittore, "A complete system for on-line modelling of acoustic images", *Signal Processing: Image Communication*, Special Issue on European Projects on Visual Representation Systems and Services, Vol. 20, No. 9-10, October-November 2005, pp. 832-852.
- [A45] M. Bicego, U. Castellani, V. Murino, "A Hidden Markov Model approach for appearance-based 3D object recognition", *Pattern Recognition Letters*, Vol. 26, No. 16, pp. 2588-2599, December 2005.
- [A46] M. Bicego, M. Cristani, V. Murino, "Unsupervised Scene Analysis: A Hidden Markov Model Approach", *Computer Vision and Image Understanding*, Vol. 102/1, pp. 22-41, April 2006.
- [A47] M. Bicego, V. Murino, M. Pelillo, A. Torsello, "Guest Editors' Introduction - Similarity-based Pattern Recognition", *Pattern Recognition*, Vol. 39, No. 10, October 2006.
- [A48] A. Colombari, A. Fusiello, V. Murino, "Segmentation and Tracking of Multiple Video Objects", *Pattern Recognition*, Vol. 40, No. 4, April 2007, pp. 1307-1317.
- [A49] M. Cristani, M. Bicego, V. Murino, "Audio-Visual Event Recognition in Surveillance Video Sequences", *IEEE Transactions on Multimedia*, Vol. 9, No. 2, Feb. 2007, pp. 257-267.
- [A49] R. Gherardi, A. Fusiello, U. Castellani, V. Murino, "Automatic selection of MRF control parameters by Reactive Tabu Search", *Image and Vision Computing*, Vol. 25, No. 11, November 2007, pp. 1824-1832.
- [A50] U. Castellani, M. Cristani, S. Fantoni, V. Murino, "Interest points detection and matching by exploiting 3D mesh saliency in a Hidden Markov Model framework", *Computer Graphics Forum*, Vol. 27, No. 2, pp. 643-652, (also published in the *Proceedings of Eurographics 2008*, Crete, Greece).
- [A51] U. Castellani, M. Cristani, C. Combi, V. Murino, A. Sbarbati, P. Marzola, "Visual MRI: Merging Information Visualization and non-parametric clustering techniques for MRI data set analysis", *Artificial Intelligence in Medicine*, Vol. 44, No. 3, November 2008, pp. 171-282.
- [A52] A. Perina, M. Cristani, L. Xumerle, V. Murino, P.F. Pignatti, G. Malerba, "Fully non-homogenous hidden Markov model double net: a generative model for haplotype reconstruction and block discovery", *Artificial Intelligence in Medicine*, Vol. 45, No. 2-3, Feb.-March 2009, pp. 135-150.
- [A53] U. Castellani, M. Cristani, A. Daducci, P. Farace, P. Marzola, V. Murino, A. Sbarbati, "DCE-MRI Data Analysis for Cancer Area Classification", *Methods of information in medicine*, Vol. 48, No. 3, June 2009, pp. 248-253.
- [A54] M. Cristani, A. Perina, U. Castellani, V. Murino, "Geo-located image categorization and location recognition", *Pattern Recognition and Image Analysis*, Vol. 19, No. 2, June 2009, pp. 245-252.
- [A55] A. Perina, M. Cristani, V. Murino, "Learning natural scene categories by selective multi-level feature extraction", *Image and Vision Computing*, Vol. 28, Issue 6, June 2010, pp. 927-939.
- [A56] B. Torre, M. Bicego, M. Cristani, V. Murino, A. Diaspro, R. Cingolani, "Combination of Atomic Force Microscopy and Principal Component Analysis as a general method for

direct recognition of functional and structural domains in nanocomposite materials”, *Microscopy Research and Technique*, 2010. Accepted for publication.

- [A57] R.Marzotto, P.Zoratti, D.Bagni, A.Colombari, V.Murino, “A real-time versatile roadway path extraction and tracking on an FPGA platform”, *Computer Vision and Image Understanding*, 2010. Accepted for publication.
- [A58] M. Cristani, M. Farenzena, D. Bloisi, V. Murino, Background Subtraction for Automated Multisensor Surveillance: a Comprehensive Review, *EURASIP Journal on Advances in Signal Processing*, 2010. Accepted for publication.

## CONTRIBUTIONS ON BOOKS

- [L1] V.Murino, E.Frumento, F.Gabino, "Restoration of noisy underwater acoustic images using Markov Random Fields", in *Lecture Notes in Computer Science n. 974, Image Analysis & Processing*, Springer Verlag, Berlin, pp. 355-360, 1995.
- [L2] V.Murino, C.Ottonello, S.Pagnan, "Robust features for textures in additive noise", in *Lecture Notes in Computer Science, Image Analysis & Processing n. 974*, Springer Verlag, Berlin, pp. 393-398, 1995.
- [L3] V.Murino, G.L.Foresti, C.Regazzoni, "Depth Estimation for Adaptive Regulation of Camera Parameters", in *Machine Learning and Perception, Series in Machine Perception and Artificial Intelligence*, G. Tascini, F. Esposito, V. Roberto, P. Zingaretti Eds., Vol. 23, World Scientific, Singapore, pp. 83-90, 1996.
- [L4] V.Murino, G.L.Foresti, "Moving object recognition from an image sequence for autonomous vehicle driving", in *Time-Varying Image Processing and Moving Object Recognition 3*, V. Cappellini Eds., Elsevier, Amsterdam, pp. 383-390, 1994.
- [L5] V.Murino, G.L.Foresti, G.Vernazza, "A Hough-based method to extract straight-segments from complex scenes", in *Progress in Image Analysis and Processing*, S. Impedovo Ed., World Scientific, Singapore, pp. 205-208, 1993.
- [L6] V.Murino, G.L.Foresti, C.Regazzoni, "A Markov Random Field approach to grouping of descriptive primitives", in *Image Processing: Theory and Applications*, Elsevier, Amsterdam, pp.167-172, 1993.
- [L7] V.Murino, C.S.Regazzoni, G.L.Foresti, "A Markovian Model for Perceptual Grouping of Different Shape Primitives", in *Lecture Notes in Artificial Intelligence n. 745, Intelligent Perceptual Systems*, Springer Verlag, Berlin, pp. 161-180, 1993.
- [L8] V.Murino, G.L.Foresti, C.S.Regazzoni, G.Vernazza, "Integration of a voting scheme and a stochastic relaxation algorithm for edge-labeling", in *Signal Processing VI, Theories and Applications*, J. Vandewalle, M. Moonen, A. Oosterlinck Eds., Elsevier, Amsterdam, Vol.II, pp. 579-582, 1992.
- [L9] V.Murino, M.F.Peri, C.S.Regazzoni, "Distributed belief revision for adaptive image processing regulation", in *Lecture Notes in Computer Science n. 588, Computer Vision*, Springer Verlag, Berlin, pp. 87-90, 1992.
- [L10] V.Murino, G.L.Foresti, C.Regazzoni, R.Zunino, "3D Object Recognition by Integration of Associative and Symbolic Techniques", in *Visual Form Analysis and Recognition*, C. Arcelli, L.P.Cordella, G. Sanniti di Baja Eds., Plenum Press, New York, pp. 259-266, 1991.
- [L11] V.Murino, C.Regazzoni, G.Vernazza, R.Zunino, "Mellin based classification: a performance analysis", in *Digital Signal Processing - 91*, V.Cappellini, A.G.Costantinides Eds., Elsevier, Amsterdam, pp. 462-467, 1991.
- [L12] V.Murino, R.Feri, G.L.Foresti, C.S.Regazzoni, G.Vernazza, "Spatial reasoning by knowledge-based integration of visual and IR fuzzy cues", in *Signal Processing V Theories and Applications*, L. Torres, E. Masgrau, M.A. Lagunas Eds., Elsevier, Amsterdam, pp. 1719-1722, 1990.

- [L13] V.Murino, A.Trucco, "An analytical formulation for wide-band beam patterns using sparse arrays", in *Acoustical Imaging*, Vol. 22, Tortoli, MAsotti Eds., Plenum Press, New York, pp. 69-74, 1996.
- [L14] V.Murino, S.Pagnan, C.Ottonello, A.Trucco, "Texture Analysis: comparison of autocorrelation-based with cumulant-based approaches", in *Signal Processing VIII Theories and Applications*, Vol. III, Ramponi, Sicuranza, Carrato, Marsi Eds., LINT, Trieste, pp. 1503-1505, 1996.
- [L15] V.Murino, "Integration of Confidence Information by Markov Random Fields for Reconstruction of Underwater 3D Acoustic Images", in *Lecture Notes on Computer Science n. 1223*, M.Pelillo, E.Hancock Eds., Springer, pp. 475-490, 1997.
- [L16] V. Murino, A. Trucco, "Coupled Segmentation and Reconstruction of Underwater 3D Acoustic Images using Confidence Information", in *Advances in Visual Form Analisys*, C. Arcelli, L.P. Cordella, G. Sanniti di Baja, Eds., World Scientific, Singapore, pp.415-424, 1997.
- [L17] G.G.Pieroni, G.L.Foresti, V. Murino, "Integration of Optical and Acoustical Imaging Sensors for Underwater Applications", in *Lecture Notes in Computer Science no. 1311, Image Analysis & Processing*, A. Del Bimbo Ed., Springer, Berlin, pp. 749-156, 1997.
- [L18] A. Trucco, V. Murino, "A Weighted Fresnel Approximation for the Delays Used in Focused Beamforming," in *Acoustical Imaging*, Vol. 23, S. Lees, L.A. Ferrari, Eds., Plenum Press, New York, pp. 261-266, 1997.
- [L19] L. De Floriani, V. Murino, G.G. Pieroni, E. Puppo, "Virtual Environment Generation by CAD-Based Methodology for Underwater Vehicle Navigation", in *Signal Processing IX, Theories and Applications (EUSIPCO '98)*, Vol. II, S.Theodoridis, I.Pitas, A.Stouraitis, N.Kalouptsidis Eds., 1998, pp. 1105-1108.
- [L20] A. Trucco, V. Murino, "Synthesis of Unequally Spaced Array with Asymmetric Beam Patterns", *Int. Conf. on Theoretical and Computational Acoustics*, Trieste, Italy, May 1999.
- [L21] V. Murino, A Fusiello, "Augmented Reality by Integrating Multiple Sensory Modalities for Underwater Scene Understanding", in *Confluence of Computer Vision and Computer Graphics, NATO Science Series, 3. High Technology - Vol. 84*, A.Leonardis, F.Solina, R.Bajcsy Eds., Kluwer Academics Publ., 2000, pp. 331-349.
- [L22] M. Bicego, A. Dovier, V.Murino, "Designing the Minimal Structure of Hidden Markov Models by Bisimulation", in *Lecture Notes on Computer Science n. 2134*, M.Figueiredo, J.Zerubia, A.K.Jain Eds., Springer, pp. 75-90, 2001.
- [L23] A. Fusiello, U. Castellani, V. Murino, "Relaxing Symmetric Multiple Windows Stereo using Markov Random Fields", in *Lecture Notes on Computer Science n. 2134*, M.Figueiredo, J.Zerubia, A.K.Jain Eds., Springer, pp. 91-104, 2001.
- [L24] A. Trucco, M. Palmese, A. Fusiello, and V. Murino, "Three-dimensional underwater acoustical imaging and processing," in *Underwater Acoustic Digital Signal Processing and Communication Systems*, R.S.H. Istepanian and M. Stojanovic, Eds. Boston: Kluwer Academic Publishers, pp. 247-274, 2002.
- [L25] A. Fusiello, U. Castellani, L. Ronchetti, V. Murino, "Model acquisition by registration of multiple acoustic range views", in *Computer Vision - ECCV 2002, Lecture Notes in Computer Science 2351*, A. Heyden, G. Sparr, M. Nielsen, and P. Johansen Eds., pp.

- 805-819. Springer, 2002 (Proceedings of the 7th European Conference on Computer Vision).
- [L26] F. Fontana, A. Fusiello, M. Gobbi, V. Murino, D. Rocchesso, L. Sartor, and A. Panuccio, "A cross-modal electronic travel aid device", *Human Computer Interaction with Mobile Devices*, in *Lecture Notes in Computer Science no. 2411*, F. Paternò, editor, pp. 393-397. Springer, 2002. (Proceedings of the 4th Interaction Symposium, Mobile HCI 2002).
- [L27] A. Panuccio, M. Bicego, V. Murino, "A Hidden Markov Model-based approach to sequential data clustering", *Structural, Syntactic and Statistical Pattern Recognition*, Lecture Notes on Computer Science 2396, T. Caelli, A. Amin, R.P.W. Duin, M. Kamel, and D. de Ridder Eds., Springer, pp. 734-742, 2002.
- [L28] M. Bicego, V. Murino, M.A.T. Figueiredo, "Similarity-based Clustering of Sequences Using Hidden Markov Models", *3rd Int. Conf. on Machine Learning and Data Mining in Pattern Recognition MLDM 2003, Lecture Notes on Artificial Intelligence LNAI 2734*, P. Perner, A. Rosenfeld Eds., Springer, pp. 86-95, 2003.
- [L29] M. Bicego, M. Cristani, A. Fusiello, V. Murino, "Watershed-based Unsupervised Clustering", in *Lecture Notes on Computer Science 2683*, A. Rangarajan, M. Figueiredo, J. Zerubia Eds., Springer, pp. 83-94, 2003.
- [L30] M. Cristani, M. Bicego, V. Murino, "Audio-video integration for background modelling", in *Computer Vision - ECCV 2004, Lecture Notes in Computer Science 3022*, T. Pajdla, J. Matas, Eds., pp. 202-213, Springer, 2004 (Proceedings of the 8th European Conference on Computer Vision).
- [L31] U. Castellani, A. Fusiello, and V. Murino. Underwater environment modelling by fast 3D mosaicing. In A. Gagdalowicz, O. Grau, and W. Philips C. Guiard, editors, *Mirage 2005 Proceedings. Computer Vision / Computer Graphics Collaboration Techniques and Applications*, pages 145-152, INRIA Rocquencourt, France, March 2005.
- [L32] U. Castellani, M. Bicego, G. Iacono, V. Murino, "3D Face Recognition Using Stereoscopic Vision", in *Lecture Notes in Computer Science 3161*, M. Tistarelli, J. Bigun, E. Grosso, Eds., pp. 126-137, Springer, 2005.
- [L33] U. Castellani, C. Combi, P. Marzola, V. Murino, A. Sbarbati, M. Zampieri, "Towards Information Visualization and Clustering Techniques for MRI Data Sets", in *Lecture Notes in Artificial Intelligence LNAI 3581*, S. Miksch, et al. Eds.: *Artificial Intelligence in Medicine AIME 2005*, pp. 315–319, Springer, 2005.
- [L34] R. Gherardi, U. Castellani, A. Fusiello, V. Murino, "Optimal Parameter Estimation for MRF Stereo Matching", in *Lecture Notes in Computer Science 3617*, F. Roli et al. (Eds.): *Int. Conf. on Image Analysis and Processing ICIAP 2005*, pp. 818–825, Springer, 2005.
- [L35] S. Ceresola, A. Fusiello, M. Bicego, A. Belussi, V. Murino, "Automatic Updating of Urban Vector Maps", in *Lecture Notes in Computer Science 3617*, F. Roli et al. (Eds.): *Int. Conf. on Image Analysis and Processing ICIAP 2005*, pp. 1133–1139, Springer, 2005.
- [L36] V. Murino, M. Palmese, A. Trucco, "Processing tools for acoustic 3D images", in *Buried Waste in the Seabed: Acoustic Imaging and Bio-toxicity*, P. Blondel, A. Caiti Eds., pp. 39–64, Springer, 2006.

- [L37] A. Caiti, V. Murino, M. Palmese, A. Trucco, M. Zakharia, "3D acoustical image analysis and feature extraction", in *Buried Waste in the Seabed: Acoustic Imaging and Bio-toxicity*, P. Blondel, A. Caiti Eds., pp. 143–164, Springer, 2006.
- [L38] M. Cristani, A. Perina, V. Murino, "Geo-located Image Grouping Using Latent Descriptions", in *Lecture Notes in Computer Science* Vol. 5008, *6th Int'l Conf. on Computer Vision Systems ICVS 2008*, Springer, pp. 425-434, 2008.
- [L43] A. Daducci, U. Castellani, C. Marco, P. Farace, P. Marzola, A. Sbarbati, V. Murino, "Learning Approach to Analyse Tumor Heterogeneity in DCE-MRI Data During Anti-cancer treatment", in *Lecture Notes in Computer Science (Artificial Intelligence in Medicine, AIME 2009)*, *LNCS 5651*, C. Combi et al. Eds., pp. 385-389 Springer, 2009.
- [B40] M.Bicego, M.Cristani, V.Murino, E.Pekalska, R.P.W.Duin, "Clustering-based construction of Hidden Markov Models for Generative Kernels", in *Lecture Notes in Computer Science 5681*, D.Cremers, Y.Boykov, A.Blake, R.Schmidt Eds. (*Int'l Wks. on Energy Minimization Methods in Computer Vision and Pattern Recognition EMMCVPR 2009*, Bonn, Germany), pp. 466-479, Sept. 2009.
- [L41] U. Castellani, E. Rossato, V. Murino, M. Bellani, G. Rambaldelli, M. Tansella, P. Brambilla. "Local Kernel for brains classification in Schizophrenia", in *Lecture Notes in Computer Science (XI Conference on Italian Association for Artificial Intelligence AlxA 2009*, Reggio Emilia, Italy), *LNCS 5883*, R.Serra, R.Cucchiara Eds., Springer, pp. 112-121, 2009.
- [L42] D. S. Cheng, M. Cristani, V. Murino, "Distillation: a super-resolution approach for the selective analysis of noisy and unconstrained video", in *Machine Learning for Human Motion Analysis*, L.Wang , L.Cheng , G.Zhao, eds., IGI Global , 2009 (book chapter).
- [L43] A. Perina, M.Cristani, U.Castellani, V.Murino, "A New Generative Feature Set Based on Entropy Distance for Discriminative Classification", in *Lecture Notes in Computer Science (Image Analysis and Processing, ICIAP 2009)*, *LNCS 5716*, P.Foggia, C.Sansone, M. Vento Eds., Springer, pp. 199-208, 2009.

## INTERNATIONAL CONFERENCES

- [B1] V.Murino, B.Bianco, A.Oneto, T.Tommasi, A.Diaspro, "Three-dimensional reconstruction and lateral views in optical microscopy", *Proc. of SPIE Conf. on Visual Communications and Image Processing '90*, Vol. 1360, Lausanne, Switzerland, Oct. 1990, pp. 652-657.
- [B2] V.Murino, G.L.Foresti, C.Regazzoni, R.Zunino, "Map-driven image interpretation by associative model indexing", *IAPR Wks. on Machine Vision Applications, MVA '90*, Tokyo, Japan, Nov. 1990, pp. 385-388.
- [B3] V.Murino, F.Arduini, R.Cabri, G.L.Foresti, C.Regazzoni, "A numerical and symbolic fusion method for interpretation of image sequences", *Proc. IEEE Int. Conf. on Acoustic Speech and Signal Processing, ICASSP 1991*, Toronto, Canada, May 1991, pp. 2477-2480.
- [B4] V.Murino, "Perceptual Goal Integration for driving a KB Recognition System", *Proc. of the Symp. on Image Processing: Applications and Trends*, Genova, Italy, June 1991, pp. 219-228.
- [B5] V.Murino, C.S.Regazzoni, "A Distributed Algorithm for Adaptive Regulation of Image Processing Parameters", *Proc. IEEE Int. Conf. on System, Man, and Cybernetics*, Charlottesville, USA, Oct. 1991, pp. 259-264.
- [B6] V.Murino, C.S.Regazzoni, G.L.Foresti, R.Zunino, "Associative and Symbolic Algorithm for Viewpoint Independent Object Recognition" *IEEE Int. Conf. on System, Man, and Cybernetics*, Charlottesville, USA, Oct. 1991, pp.117-122.
- [B7] V.Murino, F.Brenta, A.Miano, "Selective Image Processing for Regulation of Acquisition Camera Parameters", *Proc. on ISSPA '92, Signal Processing and its Applications*, Gold Coast, Australia, August 1992, pp. 89-92.
- [B8] V.Murino, C.S.Regazzoni, "Multilevel GMRF-based Segmentation of Image Sequences". *Proc. IAPR Int. Conf. on Pattern Recognition*, Vol.II, The Hague, The Netherlands, Sept. 1992, pp. 713-716.
- [B9] V.Murino, S.Rebollini, G.L. Foresti, C.S.Regazzoni, "Multiple Geometrical Filters for 3D Scale Invariant Image Representation of Planar Surfaces", *Proc. of the IEEE-SP International Symposium on Time Frequency and Time-Scale Analysis*, Victoria, BC, Canada, Oct. 1992, pp. 531-534.
- [B10] V.Murino, C.S.Regazzoni, "Multistage Hough Transform for Recognition of Planar Objects", *Proc. 8th IEEE Workshop on Image and Multidimensional Signal Processing*, Cannes, France, Sept. 1993, pp. 198-199.
- [B11] V.Murino, C.S.Regazzoni, "Real-time Adaptive Regulation of a Visual Camera for Automatic Investigation of Changing Environments", *Proc. IEEE International Conference on Industrial Electronics (IECON 93)*, Hawaii (USA), Nov. 1993, pp. 1633-1638.
- [B12] V. Murino, A. Trucco, G. Tacconi, "Space-Varying Automatic Focalization in the Focused Beamforming Process," *Proceeding of the Second European Conference on Underwater Acoustics*, Copenhagen (DK), July 1994, pp. 697-702.
- [B13] V. Murino, A. Trucco, G. Tacconi, "Focused Beamforming for Underwater Imaging: Depth of Field and Range Resolution Optimization", *IEEE Int. Conf. Oceans 94 Osates*, Brest (F), Sept. 1994, pp. 352-357.

- [B14] V. Murino, J.A.S. Victor, G. Vernazza, J. Sentieiro, "Depth Estimation by an Adaptive Depth from Motion Algorithm", *IEEE Int. Conf. Oceans 94 Osates*, Brest (F), Sept. 1994, pp. 193-198.
- [B15] V. Murino, A. Trucco, G. Vernazza, "Underwater 3D Imaging by FFT Dynamic Beamforming", *1st IEEE Int. Conf. on Image Processing*, Austin, Texas (USA), Nov. 1994, pp. 890-894.
- [B16] V. Murino, C.S. Regazzoni, "Visual Surveillance By Depth From Focus", *IEEE Int. Conf. on Industrial Electronics*, Bologna, Sept. 1994, pp. 998-1003.
- [B17] V. Murino, A. Trucco, "Acoustic Image Improvement by Confidence Levels", *1994 IEEE Ultrasonics Symposium*, Cannes (Francia), Nov. 1994, Vol. 3, pp. 1367-1370.
- [B18] V. Murino, "A Stochastic Graph-based Technique for Grouping of Inhomogeneous Image Primitives", *1994 IEEE Int. Conf. on Multisensor Fusion and Integration for Intelligent Systems*, Las Vegas, Oct. 1994, pp. 675-682.
- [B19] V. Murino, "Simulated Annealing Approach for the Design of Unequally Spaced Arrays", *Int. Conf. on Acoustics, Speech, and Signal Processing '95, ICASSP 95*, Detroit, May 1995, pp. 3627-3630.
- [B20] V. Murino, A. Trucco, "The Nonlinear Effects of the Envelope Extraction in Beamforming Imaging Systems", *1995 IEEE Wks. on Nonlinear Signal and Image Processing*, Neos Marmaras, Greece, June 1995, Vol. I, pp. 222-225.
- [B21] V. Murino, C. Ottonello, S. Pagnan, "HOS feature selection for texture classification", *Int. Conf. on Quality Control by Artificial Vision*, Le Creusot, France, May 1995, pp. 300-307.
- [B22] V. Murino, C. Ottonello, A. Trucco, "A HOS-Based Approach for Underwater Acoustic Imaging Improvement", *9th Int. Symp. on Unmanned Untethered Submersible Technology*, Durham, USA, Sept. 1995, pp. 458-467.
- [B23] V. Murino, E. Frumento, F. Gabino, A. Trucco, "A Markov Random Fields Approach for Restoration of Underwater Acoustic Images", *OCEANS '95 MTS/IEEE*, San Diego, USA, Oct. 1995, pp. 1900-1906.
- [B24] V. Murino, A. Trucco, "Hybrid Approach for Accurate Echo Detection in the Formation of Acoustic Images", *OCEANS '95 MTS/IEEE*, San Diego, USA, Oct. 1995, pp. 1877-1882.
- [B25] V. Murino, A. Trucco, "Ultrasonic Image Improvement by a Cooperative Approach", *Int. Conf. on Sonar Signal processing*, Loughborough, UK, Dec. 1995, pp. 59-68.
- [B26] V. Murino, A. Trucco, "Beam Pattern Analysis under Generalised Conditions", *European Conf. on Underwater Acoustics*, Vol. I, Heraklio, Crete (GR), June 1996, pp. 525-530.
- [B27] V. Murino, A. Trucco, "Significance of Envelope Detection in Underwater Acoustic Imaging Systems", *IEEE Symp. on Autonomous Underwater Vehicle Technology AUV '96*, Monterey, CA, USA, June 1996, pp. 179-184.
- [B28] V. Murino, A. Trucco, C. Ottonello, "Spurious Effect Reduction by the Reconstruction of Acoustic Images from Bispectrum", *IEEE Int. Conf. on Image Processing ICIP '96*, Lausanne, CH, Sept. 1996, pp. 571-574.

- [B29] V.Murino, "Depth from Defocus with simple camera calibration", V Convegno AI\*IA "Cibernetica e Machine Learning", Napoli, Sept. 1996, pp. 149-153.
- [B30] V. Murino, G.L. Foresti, A.Trucco, "Object Pose Estimation in Underwater Acoustic Images", *IEEE Int. Conf. on Image Processing ICIP '97*, Santa Barbara, CA, USA, Vol. I, pp. 873-876, Oct. 1997 .
- [B31] V. Murino, A. Trucco, "Coupled Markov Random Fields for Edge and Region Extraction in Underwater Acoustic Images", *AI\*IA/IAPR Workshop on Artificial Intelligence and Pattern Recognition Techniques for Computer Vision*, Ferrara, April 1998, pp. 75-80.
- [B32] V. Murino, A. Trucco, "Edge/Region-based Segmentation and Reconstruction of Underwater Acoustic Images by Markov Random Fields", *IEEE Int. Conf. On Computer Vision and Pattern Recognition CVPR '98*, Santa Barbara, CA, USA, June 1998, pp. 408-413.
- [B33] V. Murino, A. Grion, S. Bianchini, "A Geometric Approach to the Segmentation and Reconstruction of Acoustic Three-Dimensional Data", *OCEANS '98 MTS/IEEE*, Nice, France, Sept. 1998, pp. 582-586.
- [B34] R. Giannitrapani, V. Murino, "Augmented Representation of Underwater Scenes by Segmentation and Reconstruction of 3D Acoustic Images", *IEEE Multimedia Systems '99, Int. Conf. on Multimedia Computing and Systems ICMCS '99*, Firenze, June 1999, pp. 1036-1037.
- [B35] R. Giannitrapani, V. Murino, A. Trucco, "Segmentation of Underwater 3D Acoustical Images for Augmented and Virtual Reality Applications," *Int. Conf. Oceans '99 MTS/IEEE*, Seattle, WA (USA), pp. 459-465, September 1999.
- [B36] V. Murino, A. Fusiello, R. Giannitrapani, V. Isaia, "Virtual Environment Modeling by Integrated Optical and Acoustic Sensing", *2nd Int. Conf. on 3-D Digital Imaging and Modeling 3DIM '99*, Ottawa, Canada, pp. 437-446, October 1999.
- [B37] V. Murino, R. Giannitrapani, "Three-Dimensional Skeleton Extraction by Point Set Contraction", *IEEE Int. Conf. on Image Processing ICIP '99*, Kobe, Japan, pp. 565-569, October 1999.
- [B38] A. Trucco, S. Di Serio, V. Murino, "Buried Object Detection by Auto-Regressive Pre-Whitening," *Int'l Conf. Oceans '99 MTS/IEEE*, Seattle, WA (USA), pp. 126-132, September 1999.
- [B39] V. Murino, A. Fusiello, N. Iuretigh, E. Puppo, "3D Mosaicing for Environment Reconstruction", *15th Int. Conf. on Pattern Recognition*, Barcelona, Spain, pp. 362-366, Sept. 2000.
- [B40] V. Murino, U. Castellani, L. Ronchetti, A. Fusiello, "Reconstruction of Complex Environments by Robust Pre-aligned ICP", *3rd Int. Conf. on 3-D Digital Imaging and Modeling 3DIM '01*, Quebec City, Canada, pp. 187-194, May 2001.
- [B41] M. Bicego, V. Murino, "2D Shape Recognition by Hidden Markov Models", *Int'l Conf. on Image Analysis and Processing ICIAP 2001*, Palermo, Italy, pp. 20-24, Sept. 2001.
- [B42] A. Valinetti, A. Fusiello, V. Murino, "Model tracking for video-based virtual reality", *Int'l Conf. on Image Analysis and Processing ICIAP 2001*, Palermo, Italy, pp. 372-376, Sept. 2001.

- [B43] L. Tao, V. Murino, G. Medioni, "A Tensor Voting Approach for the Hierarchical Segmentation of 3-D Acoustic Images", *1<sup>st</sup> Int. Symp. On 3D Data Processing, Visualization, and Transmission*, Padova, Italy, pp. 126-135, June 2002.
- [B44] V. Murino, U. Castellani, A. Fusiello, "Disparity map restoration by integration of confidence in Markov random fields models", *IEEE Int. Conf. on Image Processing ICIP 2001*, Vol. 2, pp. 29-32, 2001.
- [B45] V. Murino, U. Castellani, A. Etrari, A. Fusiello, "Registration of very time-distant aerial images", *IEEE Int. Conf. on Image Processing ICIP 2002*, Vol. III, pp. 989-992, Rochester, NY, September 22-25, 2002.
- [B46] A. Fusiello, A. Panuccio, V. Murino, F. Fontana, D. Rocchesso, "A multimodal electronic travel aid device", *IEEE International Conference on Multimodal Interfaces, ICMI '02*, Pittsburgh, PA, USA, October 2002, pp. 39-45.
- [B47] S. Calderer, S. Ceglie, A. Fusiello, V. Murino, "Parallax-based view synthesis from uncalibrated images", *7th International Fall Workshop Vision, Modeling, And Visualization 2002*, Erlangen, Germany, pp. 217-224, November 2002.
- [B48] M. Cristani, M. Bicego, V. Murino, "Integrated Region- and Pixel-based Approach to Background Modelling", *IEEE Wks. on Motion and Video Computing*, Orlando, FL, pp. 3-8, Dec. 2002.
- [B49] M. Bicego, S. Dalfini, V. Murino, "Extraction of geographical entities from aerial images", *Proc. of IEEE-ISPRS Workshop on Remote Sensing and Data fusion over Urban Areas URBAN '03*, Berlin, Germany, pp 125-128, June 2003.
- [B50] U. Castellani, V. Murino, "A versatile 3D modelling system based on skeleton extraction", *Proc. of the Conf. Model-based Imaging, Rendering, Image analysis, and Graphical special Effects MIRAGE 2003*, Rocquencourt, France, pp. 129-137, March 2003.
- [B51] A. Caiti, V. Murino, M. Palmese, A. Trucco, "Object Reconstruction and Feature Extraction from 3-D Underwater Acoustic Scattering Measurements," *10th Int. Congress on Sound and Vibration*, Stockholm (Sweden), pp. 2449-2456, July 2003.
- [B52] M. Bicego, S. Dalfini, G. Vernazza, V. Murino, "Automatic Road Extraction from Aerial Images by Probabilistic Contour Tracking", *IEEE Int. Conf. on Image Processing ICIP 2003*, Vol. 3, pp. 585-588, Sett. 2003.
- [B53] A. Fusiello, M. Aprile, R. Marzotto, V. Murino, "Mosaic of a Video Shot with Multiple Moving Objects", *IEEE Int. Conf. on Image Processing ICIP 2003*, Vol. 2, pp. 307-310, Sett. 2003.
- [B54] M. Bicego, U. Castellani, V. Murino, "Using Hidden Markov Models and Wavelets for face recognition", *Int'l. Conf. on Image Analysis and Processing ICIAP 2003*, Mantova, Italy, pp. 52-56, Sett. 2003.
- [B55] A. Fusiello, S. Calderer, S. Ceglie, N. Mattern, V. Murino, "View Synthesis from Uncalibrated Images using Parallax", *Int'l Conf. on Image Analysis and Processing ICIAP 2003*, Mantova, Italy, pp. 146-151, Sett. 2003.

- [B56] M. Cristani, M. Bicego, V. Murino, "Multi-level Background Initialization using Hidden Markov Models", *First ACM SIGMM International Workshop on Video Surveillance*, Berkeley, CA, USA, pp. 11-20, Nov. 2003.
- [B57] M. Bicego, G. Iacono, V. Murino, "Face Recognition with Multilevel B-Spline and Support Vector Machines", *ACM SIGMM 2003 Multimedia Biometrics Methods and Applications Workshop*, Berkeley, CA, USA, pp. 17-24, Nov. 2003.
- [B58] R. Marzotto, A. Fusiello, V. Murino, "High Resolution Video Mosaicing with Global Alignment", *Int'l Conf. on Computer Vision and Pattern Recognition CVPR 2004*, Washington D.C., USA, June 2004, Vol. 1, pp. 692-698.
- [B59] M. Cristani, M. Bicego, V. Murino, "On-line adaptive background modelling for audio surveillance", *Int'l Conf. on Pattern Recognition ICPR 2004*, Cambridge, UK, Vol. 2, pp. 399-402, August 2004.
- [B60] I.A. Rossi, M. Bicego, V. Murino, "Statistical classification of raw textile defects", *Int'l Conf. on Pattern Recognition ICPR 2004*, Cambridge, UK, Vol. 4, pp. 311-314, August 2004.
- [B61] M. Cristani, D.S. Cheng, V. Murino, D. Pannullo, "Distilling Information with Super-Resolution for Video Surveillance", *2<sup>nd</sup> ACM International Workshop on Video Surveillance and Sensor Networks*, New York, USA, October 2004, pp. 2-11.
- [B62] U. Castellani, A. Fusiello, V. Murino, L. Papaleo, E. Puppo, S. Repetto, M. Pittore, "Efficient On-line Mosaicing from 3D Acoustical Images", *Int. Conf. Oceans '04 MTS/IEEE*, Kobe, Japan, pp. 865-872, November 2004.
- [B63] M. Aprile, A. Colombari, A. Fusiello, V. Murino, "Segmentation and tracking of multiple objects in video sequences", *5th International Workshop on Image Analysis for Multimedia Interactive Services WIAMIS 2004*, Lisboa, Portugal, April 2004.
- [B64] A. Sanson, U. Castellani, A. Fusiello, V. Murino, "Fast model tracking with multiple cameras for augmented reality", *ACM Symposium on Virtual Reality Software and Technology VRST '04*, Hong Kong, November 2004.
- [B65] D.S. Cheng, V. D'Amato, V. Murino, "Wavelet-based Processing of EEG Data for Brain-Computer Interfaces", *Proceedings of IEEE Workshop on Vision for Human-Computer Interactions V4HCI*, San Diego, USA, June 2005.
- [B66] A. Colombari, M. Cristani, V. Murino, A. Fusiello, "Exemplar-based Background Model Initialization", *Proceedings of ACM Workshop on Video Surveillance and Sensor Networks VSSN 2005*, Singapore, pp. 29-36, November 2005.
- [B67] Colombari, A. Fusiello, V. Murino, "Uncalibrated Interpolation of Rigid Displacements for View Synthesis", *IEEE International Conference on Image Processing ICIP 2005*, Genova, Italy, Vol. I, pp. 1049-1052, September 2005.
- [B68] A. Colombari, A. Fusiello, V. Murino, "Continuous Parallax Adjustment for 3D-TV", *2<sup>nd</sup> IEE Int'l Conf. on Visual Media Production*, December 2005, London, UK, pp. 192-198.
- [B69] U. Castellani, M. Cristani, V. Murino, "3D Data Segmentation Using a Non-Parametric Density Estimation Approach", *Eurographics Italian Chapter Conference 2006*, pp. 99-103, 2006.

- [B70] M. Cristani, M.Bicego, V.Murino, "Audio-Visual Foreground Extraction for Event Characterization", *International Workshop on Semantic Learning Applications in Multimedia SLAM 2006* (in conjunction with *IEEE CVPR 2006*, New York, USA).
- [B71] A. Colombari, A. Fusiello, V. Murino, "Background Initialization in Cluttered Sequences", *5th Workshop on Perceptual Organization in Computer Vision POCV 2006* (in conjunction with *IEEE CVPR 2006*, New York, USA).
- [B72] M. Cristani, U. Castellani, V.Murino, "Adaptive Feature Integration for Segmentation of 3D Data by Unsupervised Density Estimation", *Int'l Conf. on Pattern Recognition ICPR 2006*, vol.4, pp. 21-24, Hong Kong, August 2006.
- [B73] U. Castellani, M. Cristani, V.Murino, "Acoustic Range Image Segmentation by Effective Mean Shift", *Int'l Conf. on Image Processing ICIP 2006*, Atlanta, USA, October 2006.
- [B74] M. Figueiredo, D.S. Cheng, and V. Murino, "Clustering under prior knowledge with application to image segmentation", *Neural Information Processing Systems NIPS 2006*, Vancouver, Canada, December 2006.
- [B75] M. Cristani, V.Murino, "A Spatial Sampling Mechanism for Effective Background Subtraction", *Int'l Conf. on Computer Vision Theory and Applications, VISAPP 2007*, Vol.2 (Image Understanding, Motion, Tracking and Stereo Vision), March 2007, pp. 403-410.
- [B76] A. Perina, M. Cristani, G. Malerba, L. Xumerle, V. Murino, P.F. Pignatti, "Unsupervised Haplotype Reconstruction and LD Blocks Discovery in a Hidden Markov Framework", *Proceedings of Computational Intelligence Methods for BioInformatics and Biostatistics workshop*, Portofino, Italy, pp. 659-665, June 2007.
- [B77] M.Cristani, V.Murino, "Time-dependent interactive graphical models for human activity analysis", *Int'l Workshop on Advances in Pattern Recognition, IWAPR 2007*, Plymouth, UK, July 2007, pp. 109-118.
- [B78] A.Perina, M.Cristani, V.Murino, "Natural scene categorization by hierarchical extraction of tipicality patterns", *IEEE Int'l Conf. on Image Analysis and Processing, ICIAP 2007*, Modena, September 2007, pp. 801-806.
- [B79] M.Bicego, M.Cristani, V.Murino, "Sparseness Achievement with Hidden Markov Models for 2D shape analysis", *IEEE Int'l Conf. on Image Analysis and Processing, ICIAP 2007*, Modena, September 2007, pp. 67-72. **Best poster award**.
- [B80] M.Cristani, A.Perina, U.Castellani and V.Murino, "Geo-located image categorization and location recognition", *Int'l Wks on Image Mining Theory and Applications, IMTA 2008*, Madeira, PT, 2008, pp. 93-102.
- [B81] M. Cristani, V.Murino, "Background subtraction with adaptive spatio-temporal neighborhood analysis", *Int'l Conf. on Computer Vision Theory and Applications, VISAPP 2008*, Madeira, PT, Vol. 2, pp. 484-489.
- [B82] M.Cristani, A.Perina, U. Castellani, V.Murino, "Geo-located image analysis using latent representations", *IEEE Computer Vision and Pattern Recognition CVPR 2008*, Anchorage, Alaska, USA.
- [B83] U. Castellani, M. Cristani, X. Gong, A.K. Jain, V.Murino, "Sparse point statistical characterization for 3D face analysis", *IEEE Computer Society Workshop on Biometrics* (in association with CVPR 2008), Anchorage, Alaska, USA.

- [B84] M.Cristani, A.Perina, U.Castellani, V.Murino, "Content Visualization and Management of Geo-located Image Databases", *ACM SIGCHI CHI 2008 (Work in Progress)*, Florence, Italy, pp. 2823-2828.
- [B85] A.Perina, M.Cristani and V.Murino, "Unsupervised Learning of saliency concepts for image classification and retrieval", *13th Ibero-american Congress on Pattern Recognition (CIARP 2008)*, Havana, Cuba, September 2008.
- [B86] A.Perina, M.Cristani, V.Murino, N. Jojic, "Capturing video structure with mixture of probabilistic index maps", *ECCV workshop on Machine Learning for Vision-based Motion Analysis*, Marseille, France, October 2008.
- [B87] A.Pesarin, M. Cristani, V.Murino, C.Drioli, A.Perina, "A statistical signature for automatic dialogue classification", *International Conference on Pattern Recognition ICPR 2008*, Tampa, FL, USA, Dec. 2008.
- [B88] D.Bagni, P.Zoratti, R.Marzotto, A.Colombari, V.Murino, "Automotive Driver Assistance System Development: Simplifying the Transition from Simulink to FPGA", *Embedded World Conference 2009*, Nuremberg, Germany, March 2009.
- [B89] N.Jojic, A.Perina, M.Cristani, V.Murino, B.Frey, "Stel component analysis: Modeling spatial correlations in image class structure", *IEEE Computer Vision and Pattern Recognition CVPR 2009*, Miami, FL, USA, June 2009.
- [B90] L.Bazzani, D.Bloisi, V.Murino, "A Comparison of Multi Hypothesis Kalman Filter and Particle Filter for Multi-target Tracking", *11th IEEE Int'l Workshop on Performance Evaluation of Tracking and Surveillance PETS 2009*, Miami, FL, USA, June 2009.
- [B91] M.Cristani, A.Pesarin, C.Drioli, A.Tavano, A.Perina, V.Murino, "Auditory Dialog Analysis and Understanding by Generative Modelling of Interactional Dynamics", *2nd IEEE Workshop on CVPR for Human communicative Behavior analysis (CVPR4HB)*, Miami, FL, USA, June 2009.
- [B92] D.S. Cheng, M. Bicego, U. Castellani, S. Cerruti, M. Bellani, G. Rambaldelli, M. Atzori, P. Brambilla, V. Murino, "Schizophrenia classification using regions of interest in brain MRI", *Intelligent Data Analysis in Biomedicine and Pharmacology IDAMAP 2009*, Verona, July 2009.
- [B93] D.S. Cheng, M. Bicego, U. Castellani, M. Cristani, S. Cerruti, M. Bellani, G. Rambaldelli, M. Aztori, P. Brambilla, V. Murino, "A Hybrid Generative/Discriminative Method for Classification of Regions of Interest in Schizophrenia Brain MRI", *MICCAI Workshop on Probabilistic Models for Medical Image Analysis (PMMIA 2009)*, London, UK, Sept. 2009.
- [B94] A.Perina, M.Cristani, U.Castellani, V.Murino, N.Jojic, "A hybrid generative/discriminative classification framework based on free-energy terms", *Int'l Conf. on Computer Vision ICCV 2009*, Kyoto, Japan, Oct. 2009.
- [B95] A.Carli, M.Bicego, S.Baldo, V.Murino, "Non-linear Generative Embeddings for Kernels on Latent Variable Models", *ICCV workshop Subspace 2009*, Kyoto, Japan, Sept. 2009.
- [B96] L.Bazzani, M.Cristani, M.Bicego, V.Murino, "Online Subjective Feature Selection for Occlusion Management in Tracking Applications", *Int'l Conf. on Image Processing ICIP '09*, Il Cairo, Egypt, Nov. 2009.

- [B97] A.Perina, M.Cristani, V.Murino, N.Jojic, "Free energy score space", *Neural Information Processing Systems NIPS 2009*, Vancouver, Canada, Dec. 2009.
- [B98] M. Farenzena, A. Tavano, L. Bazzani, D. Tosato, G.Paggetti, G. Menegaz, V. Murino, M.Cristani, "Social Interactions by Visual Focus of Attention in a Three-Dimensional Environment", *Wks on Pattern Recognition and Artificial Intelligence for Human Behaviour Analysis (PRAI\*HBA)*, Reggio Emilia, Italy, Dec. 2009.
- [B99] A. Carli, U. Castellani, M. Bicego, V. Murino, "Dissimilarity-based Representation for Local Parts", *Workshop on Cognitive Information Processing, CIP 2010*, June 2010.
- [B100] M. Farenzena, L. Bazzani, A. Perina, M. Cristani, V. Murino, "Person re-identification by symmetry-driven accumulation of local features", *IEEE Conference on Computer Vision and Pattern Recognition CVPR 2010*, San Francisco, USA, June 2010.
- [B101] M. Cristani, V.Murino, A. Vinciarelli, "Socially intelligent surveillance and monitoring: analysing social dimensions of physical space", *1<sup>st</sup> Int'l Workshop on Socially Intelligent Surveillance and Monitoring SISM 2010*, San Francisco, USA, June 2010.
- [B102] A. Pesarin, P. Calanca, V. Murino, M. Cristani, "A generative score space for statistical dialog characterization in social signaling", *Int'l Workshop on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition S+SSPR 2010*, Cesme, Turkey, August 2010.
- [B103] A. Martins, M. Bicego, V. Murino, P. Aguiar, M. Figueiredo, "Information theoretical kernels for generative embeddings based on Hidden Markov Models", *Int'l Workshop on Structural and Syntactic Pattern Recognition and Statistical Techniques in Pattern Recognition S+SSPR 2010*, Cesme, Turkey, August 2010.
- [B104] L. Bazzani, M. Cristani, M. Farenzena, A. Perina, V.Murino, "Multiple-shot person re-identification by HPE signature", *Int'l Conf. on Pattern Recognition ICPR 2010*, Istanbul, Turkey, August 2010. **IBM Best Student Paper Award (Track: Computer Vision)**
- [B105] D. Tosato, M. Farenzena, M. Cristani, V. Murino, "A re-evaluation of pedestrian detection on Riemannian manifolds", *Int'l Conf. on Pattern Recognition ICPR 2010*, Istanbul, Turkey, August 2010.
- [B106] A. Perina, M. Cristani, V. Murino, "2LDA: segmentation for recognition", *Int'l Conf. on Pattern Recognition ICPR 2010*, Istanbul, Turkey, August 2010.
- [B107] M. Bicego, A. Martins, V. Murino, P. Aguiar, M. Figueiredo, "2D shape recognition using information theoretic kernels", *Int'l Conf. on Pattern Recognition ICPR 2010*, Istanbul, Turkey, August 2010.
- [B108] A. Carli, M. Bicego, S. Baldo, V. Murino, "Nonlinear mappings for generative kernels on latent variable models", *Int'l Conf. on Pattern Recognition ICPR 2010*, Istanbul, Turkey, August 2010.
- [B109] S. Martelli, D. Tosato, M. Farenzena, M. Cristani, V. Murino, "An FPGA-based Classification Architecture on Riemannian Manifolds", *DEXA Workshop on Interactive Multimodal Pattern Recognition in Embedded SystemS*, Bilbao, Sept. 2010. **Best conference paper**
- [B110] A.Perina, N.Jojic, U.Castellani, M.Cristani, V.Murino, "Hierarchical Stel Model and the Hierarchical Stel Kernel", *11th European Conf. on Computer Vision ECCV 2010*,

Hersonissos (Heraklion), Crete, Greece, Sept. 2010. *Oral presentation (3,2% acceptance rate for orals)*

- [B111] D.Tosato, M. Farenzena, M. Spera, V.Murino, M.Cristani, "Multi-class Classification on Riemannian Manifolds for Video Surveillance", *11th European Conf. on Computer Vision ECCV 2010*, Hersonissos (Heraklion), Crete, Greece, Sept. 2010. *Oral presentation (3,2% acceptance rate for orals)*
- [B112] U.Castellani, A.Perina, V.Murino, M.Bellani, G.Rambaldelli, M.Tansella, P.Brambilla, "Brain morphometry by probabilistic Latent Semantic Analysis", *13th International Conference on Medical Image Computing and Computer Assisted Intervention MICCAI 2010*, Beijing, China, Sept. 2010.
- [B113] A.Perina, P.Lovato, V. Murino, M. Bicego, "Biologically-aware Latent Dirichlet Allocation (BaLDA) for the classification of expression Microarray", *5th IAPR Int'l Conf on Pattern Recognition in Bioinformatics PRIB 2010*, Nijmegen, The Netherlands, Sept. 2010.
- [B114] D. Tosato, M. Farenzena, M.Cristani, V. Murino "Part-based human detection on Riemannian manifolds", *IEEE Int'l Conf. on Image Processing ICIP 2010*, Hong Kong, Sept. 2010.
- [B115] L. Bazzani, M. Cristani, V. Murino, "Collaborative particle filters for group tracking", *IEEE Int'l Conf. on Image Processing ICIP 2010*, Hong Kong, Sept. 2010.
- [B116] M.Cristani, A.Pesarin, C.Drioli, A.Rodà, M. Grapulin, V.Murino, N.Sebe. "Toward an Automatically Generated Soundtrack from Low-level Cross-modal Correlations for Automotive Scenarios", *ACM Multimedia conference 2010*, Florence, Oct. 2010 (*full paper*).

## CONTRIBUTIONS ON BOOKS (in Italian)

V. Murino, "Classificazione con funzioni discriminanti lineari", in *Teoria e Tecniche del Riconoscimento*, Sebastiano Serpico, Gianni Vernazza, CUSL "Il Gabbiano", 1997.

V. Murino, "Funzioni discriminanti non lineari", in *Teoria e Tecniche del Riconoscimento*, Sebastiano Serpico, Gianni Vernazza, CUSL "Il Gabbiano", 1997.

V. Murino, "Metodi non supervisionati", in *Teoria e Tecniche del Riconoscimento*, Sebastiano Serpico, Gianni Vernazza, CUSL "Il Gabbiano", 1997.

## TECHNICAL REPORTS

- [RT1] V. Murino, A. Trucco, and C.S. Regazzoni, "A Probabilistic Approach to the Coupled Reconstruction and Restoration of Underwater Acoustic Images", Technical Report n. UDMI/19/96/RR, University of Udine (cfr. [A24]).
- [RT2] V.Murino, G.L.Foresti, C.S.Regazzoni, "2D into 3D Hough-Space Mapping for Planar Object Pose Estimation", Technical Report n. DIBE-SPUG-TR-70, University of Genova (cfr. [A17]).
- [RT3] V.Murino, G.L.Foresti, C.S.Regazzoni, "A Belief-based Approach for Adaptive Image Processing", Technical Report n. DIBE-SPUG-TR-66, University of Genova (cfr. [A19]).
- [RT4] V.Murino and A.Trucco, "A Confidence-Based Technique for Enhanced Echo Detection in Underwater Acoustic Imaging", Technical Report n. DIBE-SPUG-TR-69, University of Genova (cfr. [A26]).
- [RT5] V.Murino, A.Tesei, A.Trucco, "Beam Pattern Formulation and Analysis for Wide-Band Beamforming Systems using Sparse Arrays", Technical Report n. DIBE-SPUG-TR-65, University of Genova (cfr. [A15]).
- [RT6] V.Murino and A.Trucco, "A Co-operative Approach to Feature Extraction from Acoustic Images", Technical Report n. DIBE-SPUG-TR-64, University of Genova (cfr. [A21]).
- [RT7] V.Murino, A.Trucco, "On Nonlinear Effects of Envelope Detection in Beamforming Systems", Technical Report n. DIBE-SPUG-TR-77, University of Genova (cfr. [A20]).
- [RT8] V.Murino, G.L.Foresti, C.S.Regazzoni, A.Trucco, "A voting-based approach for fast object recognition in underwater acoustic imaging", Technical Report n. DIBE-SPUG-TR-78, University of Genova (cfr. [A16]).
- [RT9] V.Murino, C.Ottonello, S.Pagnan, "Noisy Texture Classification: A Higher Order Statistics Approach", Technical Report n. DIBE-SPUG-TR-68, University of Genova (cfr. [A23]).
- [RT10] V.Murino, "Integration of Confidence Information by Markov Random Fields for Reconstruction of Underwater 3D Acoustic Images", Technical Report n. UDMI/47/96/RR, University of Udine (cfr. [L16]).
- [RT11] V. Murino, "Visual Surveillance by Voting-based Change-Detection", Technical Report n. DST/TR-01/99, University of Verona.

- [RT12] V. Murino, A. Fusiello, R. Giannitrapani, "Object Recognition and Pose Estimation by Optical-Acoustic Sensory Integration for Synthetic Reconstruction of Underwater Environments", Rapporto Tecnico n. DST/IMM/TR-02/99, Università di Verona.
- [RT13] V. Murino, A. Trucco, "Three-Dimensional Image Generation and Processing in Underwater Acoustic Vision", Rapporto Tecnico n. DST/IMM/TR-03/99, Università di Verona.
- [RT14] V. Murino, A. Fusiello, "Augmented Reality by Optical-guided Reconstruction of Acoustic Data for Underwater Scene Understanding", Rapporto Tecnico n. DST/IMM/TR-04/99, Università di Verona.
- [RT15] V. Murino, "Range Image Segmentation: Edge-based Region Extraction using Differential Geometry Models", Rapporto Tecnico n. DST/IMM/TR-05/99, Università di Verona.

15 September 2010

Vittorio Murino