

SHORT CURRICULUM VITAE OF VITTORIO MURINO

- Personal data:** Date of birth: 20 September 1964, Lavagna (GE), Italy. Italian.
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- Current position:** Full professor.
From Nov. 1, 2009 to October 2010, he is in sabbatical leave working on Istituto Italiano di Tecnologia (IIT), Genova, Italy.

QUALIFICATIONS

- *Laurea* degree in Electronic Engineering, University of Genova, Italy, 1989 (*summa cum laude*).
- *Dottorato di Ricerca (Ph.D.)* in Electronic Engineering & Computer Science, University of Genoa, 1992 (topics in Signal and Image Processing, Computer Vision, Pattern Recognition).
- *Post-Doctoral Fellowship* in signal/image processing and computer science, Department of Biophysical & Electronic Engineering (DIBE), University of Genoa, 1994 - 1995.
- *Assistant professor* from 1995 to 1998 at the University of Udine, *associate professor* from 1998 to 2000 at University of Verona, *full professor* from 2000 at the University of Verona.
- Chairman of the Dipartimento di Informatica of the University of Verona from 2001 (year of foundation) to 2007.
- Registered Professional Engineer in Italy from 1991 (no. 6353). From 1990 to 1995, Dr. Murino also worked as professional scientific consultant mainly involved in research projects performed by DIBE, University of Genoa.
- Promoter and founder in 2005 of the *eVS embedded Vision Systems S.r.l.*, the first start-up company of the University of Verona.
- Since 1996, he has been evaluator of RTD project proposals in the context of the IV, V, VI and VII Framework Programmes, in particular for the following actions: MAST, BRITE-EURAM, ESPRIT Long Term Research, Competitive and Sustainable Growth, Information Society Technology, Improving Human Potential, New and Emerging Science and technology (NEST), Information and Communication Technology. In 2002, he has been external reviewer of a project in the *Quality of Life and Management of Living Resources* programme. In 2005-2007, he was reviewer of the Integrated Project AMI (Augmented Multimodal Interaction). In 2009 and 2010, he was reviewer of the Collaborative (STREP) Project PROMETHEUS.
- He was also evaluator of project proposals for the *Israel Science Foundation*, *Swiss National Science Foundation*, and several PhD theses (italian and abroad).
- It is also member of the expert list of the Italian Ministry of University and Research for projects' evaluation.
- Associate Editor of:
 - IEEE Transactions of Systems, Man, & Cybernetics, Part B: Cybernetics;
 - Pattern Recognition;
 - Pattern Analysis and Applications;
 - Machine Vision and Applications;
 - ELCVIA, an international electronic journal on research and applications in Computer Vision and Image Analysis.
- Organizer and Guest Co-Editor of the following special issues:

- Underwater Computer Vision and Pattern Recognition, *Computer Vision and Image Understanding*, Vol. 79, No. 1, July 2000.
- Artificial Neural Networks for Image Analysis and Computer Vision, *Image and Vision Computing*, Vol. 19, No. 9-10, August 2001.
- 3-D Image Analysis and Modeling, *IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics*, August 2003.
- Similarity-based Pattern Recognition, *Pattern Recognition*, Vol. 39, No. 10, October 2006.
- Founder and co-director of the *Advanced VIPS School on Computer Vision and Pattern Recognition* (see <http://vips.sci.univr.it/html/events.html> for past editions and more information in general).
- Referee for several international scientific journals:
 - Proceedings of the IEEE, IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Image Processing, IEEE Transactions on Systems, Man, and Cybernetics, IEEE Transactions on Information Theory, Journal on Oceanic Engineering, Journal of Integrative Neuroscience, Optical Engineering, International Journal on Pattern Recognition and Artificial Intelligence, Pattern Recognition Letters, International Journal on Computer Vision, Journal of Real-Time Image Processing, Signal Processing, Electronics Letters, Real-Time Imaging, IEEE Transactions on Automation Science and Engineering, IEEE Trans. on Robotics, IEE Proc. Vision, Image & Signal Processing, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, Computational Statistics & Data Analysis, Autonomous Robots, Information Fusion, Geoinformatica, Integrated Computer-Aided Engineering, IET Computer Vision, IET Image Processing, Journal of Real-Time Image Processing;

and international conferences (and also member of the program committee):

European Conf. on Computer Vision ECCV, Int'l Conf. on Computer Vision ICCV, IAPR/IEEE Int. Conf. on Pattern Recognition, IEEE Computer Vision and Pattern Recognition conf. CVPR, IEEE Int. Conf. on Image Processing, Int. Conf. on Systems, Man, and Cybernetics, International Conference on Computer Vision Theory and Applications VISAPP, IEEE Int'l Conf. on Advanced Video and Signal based Surveillance, Int. Conf. on Image Processing: Theory and Applications, British Machine Vision Conference BMVC, Int. Conf. on Image Analysis & Processing ICIAP, Int'l Wks. on Energy Minimization Methods in Computer Vision and Pattern Recognition EMMCVPR, Int'l Wks. on Advances in Pattern Recognition, Int'l Wks. on Combinatorial Image Analysis, Advanced Concepts for Intelligent Vision Systems ACIVS, Int'l Conf. on Articulated Motion and Deformable Objects, Advanced Video and Signal Based Surveillance AVSS, Int'l. Conf. on Biometrics ICB, Visualization, Imaging, and Image Processing, Computer Vision / Computer Graphics Collaboration Techniques and Applications MIRAGE, Int'l. Conf. on Quality Control by Artificial Vision, IEEE Int. Conf. on Industrial Electronics, Control and Instrumentation IECON, IEEE OCEANS, 7th IEEE International Conference on Tools with Artificial Intelligence ICTAI '95) as well as session chair in some of the above conferences.

- Director of the PhD school in Computer Science with international co-tutoring (Interlink 2002 Call for the internationalization of the research, MIUR), with specialization in computer vision, pattern recognition and image processing. The cooperating agreement includes the following partners:
 - 1) Institute of Robotics and Intelligent Systems (IRIS), University of Southern California, Los Angeles, USA;
 - 2) Department of Computer Science, Queen Mary and Westfield College, University of London, UK;
 - 3) Department of Electrical and Computer Engineering, Instituto Superior Tecnico, Lisbon, Portugal;
 - 4) Department of Computing and Electrical Engineering, Heriot Watt University, Edinburgh, UK.
- Co-director of the VIPS Advanced Schools Computer Vision, Pattern Recognition, and Image Processing, 8 editions so far (see <http://vips.sci.univr.it/html/events.html>).
- Promoter e responsible of the *Acceleratore di Ricerca Informatica Applicata (ARIA)*, bi-annual project (July 2003-2005) co-funded by Regione Veneto devoted to favor the collaboration between university and industry.
- Member of the scientific committee of the Master of 1st level in "Elaborazione informatica di dati biomedici e telecontrollo in medicina" (Processing of digital biomedical data and tele-control in Medicine), University of Verona.

- Teacher of several graduate courses in the context of the laurea degree in Computer and Information Sciences (Informatica):
 - Image Processing
 - Pattern Recognition
 - Human-Computer Interaction and Multimedia
 - Computer Vision.

EXPERTISE & RESEARCH INTERESTS

Scientific and technical expertise

- 3D computer vision and pattern recognition, image and signal processing, with applications on surveillance, automotive, visual inspection, biomedical imaging, robotics and automation.
- Underwater vision (acoustical and optical), data fusion and sensory integration with applications on object detection and recognition, object and scene reconstruction.
- Author/co-author of more than 180 papers in image processing, computer vision, pattern recognition, and underwater acoustic imaging published in refereed international scientific journals or presented at the major conferences.

Team management

- Founder and director of the PLUS (Pattern analysis, Learning, and image Understanding Systems) laboratory, Istituto Italiano di Tecnologia (IIT), Genova, 2009. More information on: <http://www.iit.it/en/nanobiotech-facility/computer-imaging.html>.
- Founder of the VIPS (Vision, Image Processing and Sound) laboratory, Dipartimento di Informatica, University of Verona, 1999. More information on: <http://vips.sci.univr.it>.
- Supervision and management of activities (research and project activities) of a small academic team inside the Signal Processing and Understanding group (SPUG) of DIBE with several engagements, 1992-1995.

Technical and project management

- Notable experience in technical coordination, management and preparation of several research projects in the context of different National and European programmes:
- *SAMURAI*, Suspicious and Abnormal behaviour Monitoring Using a network of cAmeras & sensors for situation awareness enhancement, EC funded project, SECURITY programme, 2008-2011.
- *SIMBAD*, Beyond Features: Similarity-Based Pattern Analysis and Recognition, EC funded project, Future & Emerging Technology (FET) programme (ICT), 2008-2011.
- Similarity-based Methods for Computer Vision and Pattern Recognition: Theory, Algorithms, Applications, MUR (Ministry of University And Research) funded project, 2007-2009.
- *ARROV*, Augmented Reality for Remotely Operated Vehicles, EC funded project, Competitive Growth programme, 2001-2004.
- *LIMA3D*, Low-Cost 3D Imaging and Modeling Automatic system, MIUR (Ministry of Research and University) funded project, 2004-2005.
- *Augmented Reality for Teleoperation of Free Flying Robots*, Italian Space Agency (ASI) funded project, 2000-2004.
- *Spatial Data in Geographical Information Systems*, MIUR (Ministry of Research and University) funded project, 2001-2002.
- Scientific and technical preparation, coordination, and management of the EC-BRITE-EURAM 3 project *VENICE (Virtual ENvironment interface by sensory integration for Inspection and manipulation Control in multifunctional underwater vehicles)*, no. BE-2013), 1996-1999.
- Scientific and technical preparation of EC-MAST III project *HOLOMAR*, 1997 (*High resolution in situ HOLOgraphic recording and analysis of MARine organisms and particles*, EC funded).

- Technical coordination and management of EC-MAST project MOBIUS (*Multisensor High Resolution Intelligent Marine Observation of Ocean Floor in Continental Shelves*, no. MAST-0028-C), 1990-1992.
- Several industrial funded projects.

SELECTED PUBLICATIONS

A complete list of publications can be retrieved on <http://profs.sci.univr.it/~swan/Publications/publications.html>.

Journals

1. A. Perina, M. Cristani, V. Murino, "Learning natural scene categories by selective multi-level feature extraction", *Image and Vision Computing*, 2009. *Accepted for publication*.
2. 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.
3. 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.
4. 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.
5. 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. 29(2), 2008.
6. R. Gherardi, A. Fusiello, U. Castellani, V. Murino, "Automatic selection of MRF control parameters by Reactive Tabu Search", *Image and Vision Computing*, Vol. 25(11), Nov. 2007, pp. 1824-1832.
7. 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.
8. A.Colombari, A.Fusiello, V.Murino, "Segmentation and Tracking of Multiple Video Objects", *Pattern Recognition*, Vol. 40, No. 4, April 2007, pp. 1307-1317.
9. 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. M.Bicego, 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.

20. 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.
21. 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.
22. 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.
23. 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.
24. V.Murino, C.Ottonello, S.Pagnan, "Noisy Texture Classification: A Higher Order Statistics Approach", *Pattern Recognition*, Vol. 31, No. 4, pp. 383-393, 1998.
25. 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.
26. 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.
27. 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.
28. 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.
29. 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.

Conferences/Workshops/Contributions on books

1. A.Perina, M.Cristani, V.Murino, N.Jojic, "Free energy score space", Neural Information Processing Systems NIPS 2009, Vancouver, Canada, Dec. 2009.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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 Minization Methods in Computer Vision and Pattern Recognition EMMCVPR 2009*, Bonn, Germany, pp. 466-479, Sept. 2009.
7. 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.

8. A. Daducci, U. Castellani, M. Cristani, P. Farace, P. Marzola, A. Sbarbati, V. Murino, “Learning Approach to Analyze Tumour Heterogeneity in DCE-MRI Data During Anti-cancer Treatment”, *Artificial Intelligence in Medicine AIME 2009, Lecture Notes in Artificial Intelligence*, Vol. 5651/2009, July 2009, pp. 385-389.
9. 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*, July 2009.
10. 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.
11. 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).
12. 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.
13. 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.
20. M. Figueiredo, D.S.Cheng, V.Murino, "Clustering under prior knowledge with application to image segmentation", *Neural Information Processing Systems NIPS 2006*, Vancouver, Canada, December 2006.
21. 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).
22. 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.
23. 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.

24. 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.
25. U. Castellani, M. Bicego, G. Iacono, V. Murino, "3D Face Recognition Using Stereoscopic Vision", in *Lecture Notes in Computer Science Vol. 3161*, M. Tistarelli, J. Bigun, E. Grosso, Eds., pp. 126-137, Springer, 2005.
26. 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.
27. A.Colombari, A.Fusiello, V.Murino, "Uncalibrated Interpolation of Rigid Displacements for View Synthesis", *IEEE International Conference on Image Processing ICIP 2005*, Genova, Italy, Vol. 1, pp. 1049-1052, September 2005.
28. 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.
29. M.Cristani, D.S.Cheng, V.Murino, D.Pannullo, "Distilling Information with Super-Resolution for Video Surveillance", *2nd ACM International Workshop on Video Surveillance and Sensor Networks*, New York, USA, October 2004, pp. 2-11.
30. 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.
31. 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.
32. 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.
33. 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.
34. 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.
35. 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, Sept. 2003.
36. A.Trucco, M.Palmese, A.Fusiello, 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.
37. 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.
38. 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.
39. 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.
40. 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.

41. 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.
42. 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.
43. V.Murino, A.Fusiello, N.luretigh, E.Puppo, "3D Mosaicing for Environment Reconstruction", *15th Int. Conf. on Pattern Recognition*, Barcelona, Spain, pp. 362-366, Sept. 2000.
44. 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.
45. 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.
46. 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.
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