

## CURRICULUM VITAE OF VITTORIO MURINO

- Personal data:** Date of birth: 20 September 1964, Lavagna (GE), Italy. Italian.
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- Formerly:** Dipartimento di Informatica, University of Verona  
Ca' Vignal 2, Strada Le Grazie 15, 37134 Verona, Italy  
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- Current position:** Director of the Pattern Analysis & Computer Vision (PAVIS) department,  
Istituto Italiano di Tecnologia (IIT), Genova, Italy  
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## 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 Department of Computer Science (Dipartimento di Informatica) of the University of Verona from 2001 (year of foundation) to 2007.
- Coordinator of the Ph.D. program in Computer Science (*Informatica*) of the University of Verona from 1999 to 2003.
- Director of the Pattern Analysis & Computer Vision (PAVIS) department, Istituto Italiano di Tecnologia (IIT), Genova, Italy, since 2009. <http://www.iit.it/pavis>
- 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 *eVS embedded Vision Systems S.r.l.*, the first start-up company of the University of Verona. <http://www.embeddedvisionsystems.it/>
- Appointed inventor for 4 patents.
- Evaluator, since 1996, of European RTD project proposals in the context of the IV, V, VI, VII and H2020 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, European Research Council. He was also appointed as evaluator of an ERC Starting Grant proposal in 2011.
- Reviewer of research projects. After the first job in 2002 for the review of a project in the EU programme *Quality of Life and Management of Living Resources*, he carried out the reviews of the following EU-funded projects:

- 2005-2007: Integrated Project AMI – Augmented Multimodal Interaction (6<sup>th</sup> Framework Programme).
- 2009-2011: Collaborative (STREP) projects PROMETHEUS (7<sup>th</sup> Framework Programme, Information & Communication Technology).
- 2009-2011: ADABTS – Automatic Detection of Abnormal Behaviour and Threats in crowded Spaces (7<sup>th</sup> Framework Programme, Security).
- Evaluator of project proposals for the *Israel Science Foundation*, *Swiss National Science Foundation*, american *National Science Foundation* (NSF), several University and Research Institutes grants (e.g., Fondazione Bruno Kessler FBK - Trento, Katholieke Universiteit Leuven, The Netherlands), and reviewer of several PhD theses (Italian and European).
- Member of the list of experts of the Italian Ministry of University and Research for the evaluation of project proposals.
- Associate Editor of the following journals:
  - Computer Vision and Image Understanding journal (since 2014);
  - Machine Vision and Applications (since 2006);
  - Pattern Analysis and Applications (since 2004);
  - IEEE Transactions on Cybernetics, formerly IEEE Transactions of Systems, Man, & Cybernetics, Part B: Cybernetics (1999-2016);
  - Pattern Recognition (1999-2016);
  - ELCVIA, an international electronic journal on research and applications in Computer Vision and Image Analysis (2001-2010).
- 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.
  - “Learning in Non-(geo)metric Spaces”. *IEEE Transactions on Neural Networks and Learning Systems*, Issue 6, June 2016.
  - “Image and Video Understanding in Big Data”, 2016. *Computer Vision and Image Understanding. Publication in March 2017*
  - “Language in Vision”, 2016. *Computer Vision and Image Understanding. On going*
- Organizer and Co-Editor of the following forthcoming books:
  - “Algorithmic Advances in Riemannian Geometry and Applications. For Machine Learning, Computer Vision, Statistics, and Optimization”. Minh Hà Quang and Vittorio Murino Eds. ISBN: 978-3-319-45025-4 (Print), 978-3-319-45026-1 (Online). Springer. <http://link.springer.com/book/10.1007/978-3-319-45026-1>
  - “Group and Crowd Behavior for Computer Vision”. Vittorio Murino, Marco Cristani, Shishir Shah, and Silvio Savarese Eds., Elsevier. *Publication in 2017.*
- Co-organizer, together with prof. Janaina Mourao-Miranda and Dr. Moritz Grosse-Wentrup, of the Cognitive Inference and Neuroimaging PASCAL2 Thematic Programme aimed at fostering interactions between neuroimaging and machine learning communities by supporting a series of workshops at neuroimaging as well as machine learning venues (2010-2012).
- Invited talks and tutorials:
  - Invited talk at the 6th Int’l Conference on Pattern Recognition Applications and Methods ICPRAM 2017, Porto, Portugal, February 2017.
  - Tutorial on “State of the Art and Recent Trends in Social Signal Processing”, together with Marco Cristani, Alessandro Vinciarelli, Bruno Lepri, held in conjunction with the IEEE Computer Vision and Pattern Recognition conference CVPR 2016, Las Vegas, USA, 26 June 2016.
  - Invited talk at the 11th Int’l Conference on Computer Vision Theory and Applications VISAPP 2016, Rome, Italy, February 2016.
  - Invited talk at OMRON company, Kyoto, Japan, December 2014.

- Invited talk at Czech Technical University Prague for the 33rd Pattern Recognition and Computer Vision Colloquium, November 2013.
  - Invited talk at the Xerox Research Center Europe, Grenoble, France, February 2013.
  - Tutorial on Similarity-based Pattern Recognition, by E. Hancock, V. Murino, M. Pelillo, R. Wilson, held in conjunction with the European Conference in Computer Vision, Florence, Italy, 7th October 2012.
  - Invited talk at the 8th IEEE Workshop on Embedded Vision, June 16, 2013, Providence, USA.
  - Invited talk at the 5th Int'l Computer Vision Summer School ICVSS 2011 – Registration, Recognition and Reconstruction in Images and Video, Scicli (Ragusa), July 2011.
  - Invited talk at Workshop on Emerging Surveillance Technologies and Requirements, Joint Research Center, Ispra (Varese), Italy, July 2011.
  - Invited talk at 1st Short Spring School on Surveillance (S4), Modena, Italy, May 2011.
- Referee for several 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, Journal of Field Robotics;
- 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.
  - Director of the VIPS Schools in Computer Vision, Pattern Recognition, and Image Processing, 2004-2010 (10 editions so far). For more information, <http://vips.sci.univr.it/html/events.html>.
  - Director of the PAVIS Schools in Computer Vision, Pattern Recognition, and Image Processing, 2010-2014 (5 editions so far). For more information: <http://www.iit.it/en/pavis-schools.html>.
  - Organisational roles for major events:
    - Tutorial Co-Chair (together with Tal Hassner) for Int'l Conference on Computer Vision ICCV 2017.
    - Area Chair for Int'l Conference on Image Analysis and Processing ICIAP 2017.
    - Area Chair for Int'l Conference on Pattern Recognition ICPR 2016.

- General Chair of the Int'l Conf. on Image Analysis and Processing ICIAP 2015, Genova, Italy, 7-11 Sept. 2015.
- Co-organizer of the Dagstuhl Seminar no. 15081 titled "Holistic Scene Understanding", together with Jirí Matas, Laura Leal-Taixé, and Bodo Rosenhahn, 15-20 February 2015.
- Co-organiser (together with Marco Cristani, Shishir Shah e Silvio Savarese) of the 1st Int'l Workshop on GRoup and crOWd behavior analysis and understanding GROW 2015, a satellite workshop held in conjunction with CVPR 2015, Boston, 11 June 2015.
- Co-organiser (together with Minh Hà Quang) of the NIPS 2014 Workshop on Riemannian Geometry in Machine Learning, Statistics and Computer Vision, Montreal, Canada, December 13, 2014.
- Area Co-Chair of the Int'l Conf. on Image Analysis and Processing ICIAP 2013, Naples, Italy, Sept. 2013.
- Member of the Steering Committee and Programme Committee of the 2nd and 3rd Int'l Workshop on Similarity-based Pattern Analysis and Recognition, SIMBAD 2013 (York, UK, July 2013) and SIMBAD 2015 (Copenhagen, Denmark, October 2015).
- Workshop co-chair (together Andrea Fusiello) of the European Conference on Computer Vision ECCV 2012, Florence, Italy, 7-13 October 2012.
- Program Co-Chair of the 2nd International Workshop on Pattern Recognition in NeuroImaging PRNI 2012, July 2-4, 2012, UCL, London, UK.
- Co-chair of the 3rd Intl. Workshop on Socially Intelligent Surveillance and Monitoring, SISM 2012, satellite workshop of the Int'l Conf. on Computer Vision and Pattern Recognition CVPR 2012, Providence, Rhode Island, USA, 21 June 2012.
- Co-chair of the Machine Learning & Interpretation in Neuroimaging MLINI 2011, a satellite workshop of the Int'l. Conf. on Neural Information Processing Systems NIPS 2011, Sierra Nevada, Spain, 16-17 Dec. 2011. URL: <https://sites.google.com/site/mlini2011/>
- Co-chair of the 2nd Intl. Workshop on Socially Intelligent Surveillance and Monitoring, SISM 2011, satellite workshop of the Int'l Conf. on Computer Vision, ICCV 2011, Barcelona, Spain, 12 November 2011.
- Member of the Advisory Committee of the 2011 Multimedia Signal Processing school.
- Member of the Steering Committee and Programme Committee of the 1st Int'l Workshop on Similarity-based Pattern Analysis and Recognition SIMBAD 2011, Venice, Italy, Sept. 2011.
- Co-chair of the Workshop on Multimodal Pervasive Video Analysis, MPVA 2010, satellite workshop of the ACM Multimedia conference 2010, Florence, Italy, 29 October 2010.
- Co-chair of the 1st Intl. Workshop on Socially Intelligent Surveillance and Monitoring, SISM 2010, satellite workshop of the IEEE Int'l Conf. on Computer Vision and Pattern Recognition CVPR 2010, San Francisco, CA, USA, 14 June 2010.
- 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.
- 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.
- Member of the:
  - Bio Imaging and Signal Processing (BISP) Technical Committee, IEEE Signal Processing Society (since 2015).
  - Biomedical Image & Signal Analytics Special Area Team (BISA SAT), EURASIP European Association for Signal Processing (since 2015).
- Senior Member of the IEEE, the Institute of Electrical and Electronics Engineers (since 2002). Fellow of the IAPR, International Association of Pattern Recognition (since 2006) and Italian representative of GIRPR (Italian Branch of IAPR) in the IAPR Governing Board.

### *Scientific and technical expertise*

- Computer vision and pattern recognition, machine learning, image and signal processing and neuroimaging. Particular interest in multi-modal *social signal processing* approaches for the analysis of human behavior, with main applications related to surveillance and security, human-human and human-machine interaction, ambient intelligence, and retailing. Also experience in classic applicative domains such as visual inspection and automation.
- Concerning the biomedical domain imaging, main work and interest lie in neuroimaging data analysis, mainly Magnetic Resonance Imaging, particularly in the study of neural correlates responsible of (social) behavior, with applications in behavioral neurological pathologies (e.g., schizophrenia, autism, etc.) and brain function understanding in general.
- Former experience in 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 about 400 papers in computer vision, pattern recognition, machine learning, image processing, and underwater acoustic imaging published in refereed international scientific journals or presented at the major conferences.
- H-number 41, by Google Scholar [http://scholar.google.com/citations?user=yV3\\_PTkAAAAJ](http://scholar.google.com/citations?user=yV3_PTkAAAAJ)  
H-number 27, by Scopus.

### *Team management*

- Director of the PAVIS (Pattern Analysis & Computer Vision) department, Istituto Italiano di Tecnologia (IIT), Genova, 2010-now. About 30 people in average, among senior researchers, postdocs, and PhD students.  
More information on: <http://www.iit.it/pavis>
- Founder and responsible of VIPS (Vision, Image Processing and Sound) laboratory, Dipartimento di Informatica, University of Verona, 1999. About 20 people in average, among associate and assistant professors, and PhD students.  
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:

- Industrial funded project titled “Feasibility Study for the Visual Inspection and Assessment of Refractory Tiles in Turbin Combustion Chambers”. Client: Ansaldo Energia S.p.A., 2017 (1 year), budget: 120 k€
- Industrial funded project titled “Automatic Visual Inspection and Assemblies”. Client: GE AVIO S.r.l., 2014-2017 (3 years), budget: 424 k€
- *RENVISION* – Retina inspired ENcoding For Advanced VISION Tasks, European Commission, Neuro-Bio Inspired System, Future & Emerging Technologies (FET) Proactive initiative, Information and Communication Technology (ICT), 7<sup>th</sup> Framework Programme, 2013-2016 (3 years), budget: 818 k€, coordinator of the entire project.
- Industrial funded project titled “Crowd behavior analysis”. Client: Selex Elsag S.p.A., 2012-2013 (1 year), budget: 100 k€
- *SAMURAI*, Suspicious and Abnormal behaviour Monitoring Using a netwoRk of cAmeras & sensors for situation awareness enhancement – EC funded project, SECURITY programme, 7<sup>th</sup> Framework Programme, 2008-2011 (3 years), budget: 451 k€
- *SIMBAD*, Beyond Features: Similarity-Based Pattern Analysis and Recognition – EC funded project, Future & Emerging Technology (FET) programme (Information and Communication Technology, ICT), 7<sup>th</sup> Framework Programme, 2008-2011 (3 years), budget: 378 k€
- 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. S. Bak, M. San Biagio, R. Kumar, V. Murino, F. Brémond, "Exploiting Feature Correlations by Brownian Statistics for People Detection and Recognition", *IEEE Transactions on Systems, Man and Cybernetics: Systems*, Issue 99, 2016.
2. P. Lovato, M. Bicego, M. Kesa, N. Jojic, V. Murino, A. Perina, "Traveling on discrete embeddings of gene expression", *Artificial Intelligence in Medicine*, Vol. 70, June 2016, pp. 1-11.
3. M. Crocco, M. Cristani, A. Trucco, V. Murino, "Audio Surveillance: A Systematic Review", *ACM Computing Survey*, Vol. 48, Issue 4, March 2016.
4. B. Zhang, A. Perina, Z. Li, V. Murino, J. Liu, R. Ji, "Bounding Multiple Gaussians Uncertainty with Application to Object Tracking", *International Journal on Computer Vision*, Vol. 118, No. 3, pp. 364-379, July 2016. DOI: 10.1007/s11263-016-0880-y.
5. Minh Hà Quang, L. Bazzani, V. Murino, "A Unifying Framework in Vector-Valued Reproducing Kernel Hilbert Spaces for Manifold Regularization and Co-Regularized Multi-View Learning", *Journal of Machine Learning Research*, 17(25):1-72, 2016.
6. M. Crocco, M. Cristani, A. Trucco, V. Murino, "Audio Surveillance: A Systematic Review", *ACM Computing Survey*, Vol. 48, Issue 4, March 2016.
7. S. Vascon, E.Z. Mequanint, M. Cristani, H. Hung, M. Pelillo, V. Murino, "Detecting conversational groups in images and sequences: a robust game-theoretic approach", *Computer Vision and Image Understanding*, Vol. 143, pp. 11-24, Feb. 2016.
8. M. Tamassia, A. Farinelli, V. Murino, A. Del Bue, "Directional Visual Descriptors and Multirobot Strategies for Large-Scale Coverage Problems", *Journal of Field Robotics*, DOI: 10.1002/rob.21612, 2015.
9. S. Ullo, V. Murino, A. Maccione, L. Berdondini, D. Sona, "Bridging the Gap in Connectomic Studies: A Particle Filtering Framework for Estimating Structural Connectivity at Network Scale Medical Image Analysis", *Medical Image Analysis*, Vol. 21, No. 1, pp. 1-14, April 2015.
10. P. Salvagnini, F. Pernici, M. Cristani, G. Lisanti, A. Del Bimbo, V. Murino, "Non-Myopic Information Theoretic Sensor Management of a Single Pan-Tilt-Zoom Camera for Multiple Object Detection and Tracking", *Computer Vision and Image Understanding*, Vol. 134, pp. 74-88, May 2015.
11. L. Bazzani, M. Zanotto, M. Cristani, V. Murino, "Joint Individual-Group Modeling for Tracking", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol 37(4), pp. 746-759, April 2015.

12. L. Dodero, S. Vascon, V. Murino, A. Bifone, A. Gozzi, D. Sona, "Automated Multi-Subject Fiber Clustering of Mouse Brain using Dominant Sets", *Frontiers in Neuroinformatics* 8:87, Dec. 2014. DOI: 10.3389/fninf.2014.00087. *Online*
13. S. Ullo, T.R. Nieuw, D. Sona, A. Maccione, L. Berdondini, V. Murino, "Functional Connectivity Estimation over Large Networks at Cellular Resolution based on Electrophysiological Recordings and Structural Prior", *Frontiers in Neuroanatomy* 8:137, Nov. 2014. DOI: 10.3389/fnana.2014.00137. *Online*
14. M. San Biagio, S. Martelli, M. Crocco, M. Cristani, V. Murino "Encoding Structural Similarity By Cross-covariance Tensors For Image Classification", *International Journal of Pattern Recognition and Artificial Intelligence*, Vol. 28, Issue 7, November 2014.
15. A. Tavano, A. Pesarin, V. Murino, M. Cristani. "Automatic conversational scene analysis in children with Asperger syndrome/High Functioning Autism and typically developing peers", *PLoS ONE*, 2014. DOI: 10.1371/journal.pone.0085819.
16. D.S. Cheng, H. Salamin, P. Salvagnini, M. Cristani, A. Vinciarelli, V. Murino. "Predicting Online Lecture Ratings Based on Gesturing and Vocal Behavior", *Journal on Multimodal User Interfaces*, *Journal on Multimodal User Interfaces*, Vol. 8, Issue 2, pp, 151-160, June 2014.
17. F. Papaleo, M.L. Scattoni, L. Giancardo, D. Sona, H. Huang, S. Sannino, F. Managò, D. Scheggia, V. Murino, "Chronic and Acute Intranasal Oxytocin Produce Divergent Social Effects in Mice", *Neuropsychopharmacology*, 39(5), pp. 1102-14, April 2014.
18. A.C. Carli, M.A.T. Figueiredo, M. Bicego, V. Murino: Generative embeddings based on Rician mixtures for kernel-based classification of magnetic resonance images. *Neurocomputing*, Vol. 123, pp. 49-59, 2014.
19. L. Giancardo, D. Sona, H. Huang, S. Sannino, F. Managò, D. Scheggia, F. Papaleo, V. Murino, "Automatic Visual Tracking and Social Behaviour Analysis with Multiple Mice", *PLoS ONE* 8(9): e74557, Sept. 2013. doi:10.1371/journal.pone.0074557 2013.
20. D. Tosato, M. Spera, M. Cristani, V. Murino, "Characterizing humans on Riemannian manifolds", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 35(8), pp. 1972-1984, August 2013.
21. L. Bazzani, M. Cristani, V. Murino. "Symmetry-driven accumulation of local features for human characterization and re-identification". *Computer Vision and Image Understanding*, Vol. 117(2), pp. 130-144, February 2013.
22. M. Bicego, A. Ulas, U. Castellani, A. Perina, V. Murino, A.F.T. Martins, P.M.Q. Aguiar, M.A.T. Figueiredo, "Combining Information Theoretic Kernels with Generative Embeddings for Classification", *Neurocomputing*, Vol. 101, pp. 161-169, Feb. 2013.
23. M. Cristani, R. Raghavendra, A. Del Bue, V. Murino, "Human Behavior Analysis in Video Surveillance: a Social Signal Processing Perspective", *Neurocomputing*, Vol. 100, pp. 86-97, Jan. 2013.
24. A. Perina, N. Jojic, M. Cristani, V. Murino, "Stel Component Analysis: Joint Segmentation, Modeling and Recognition of Objects Classes", *International Journal of Computer Vision*, Vol. 100, No. 3, pp. 241-260, 2012.
25. A. Perina, M. Cristani, U. Castellani, V. Murino, N. Jojic, "Free energy score spaces: using generative information in discriminative classifiers", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 34, No. 7, pp. 1249-1262, July 2012.
26. M. Bicego, P. Lovato, A. Perina, M. Fasoli, M. Delledonne, M. Pezzotti, A. Polverari, V. Murino, "Investigating topic models' capabilities in expression microarray data classification", *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 9, no. 6, pp. 1831-1836, 2012.
27. A. Pesarin, M. Cristani, V. Murino, A. Vinciarelli, "Conversation Analysis at Work: Detection of Conflict in Competitive Discussions through Semi-Automatic Turn-Organization Analysis", *Cognitive Processing*, Volume 13, Issue 2 Supplement, pp 533-540, October 2012.
28. A. Sedda, V. Manfredi, G. Bottini, M. Cristani, V. Murino. Automatic human interaction understanding: lessons from a multidisciplinary approach. *Frontiers in Human Neuroscience*, 2012. *Online*.

29. M.Crocco, A.Del Bue, V.Murino, "A Bilinear Approach to the Position Self-Calibration of Multiple Sensors", *IEEE Transactions on Signal Processing*, Vol. 60, No. 2, pp. 660-673, Feb. 2012.
30. U. Castellani, M.Cristani, V.Murino, "Statistical 3D shape analysis by local generative descriptors", *IEEE Transactions on Pattern Analysis and Machine Intelligence*, Vol. 33 no. 12, Dec. 2011, pp. 2555-2560.
31. Torre B., Lorenzoni M., Bicego M., Cristani M., Murino V. and Diaspro A., "PCA In Dynamic Force Spectroscopy", *Imaging & Microscopy*, 13(4), pp. 26-28, Nov. 2011.
32. M.Cristani, A.Pesarin, C.Drioli, A.Perina, A.Tavano, V.Murino, "Generative Modeling and Classification of Dialogs by a Low-level Turn-taking Feature", *Pattern Recognition*, Volume 44, Issue 8, August 2011, pp. 1785-1800.
33. A.Ulas, R.P.W.Duin, U.Castellani, M.Loog, P.Mirtuono, M.Bicego, V.Murino, M.Bellani, S.Cerruti, M.Tansella, P.Brambilla, "Dissimilarity-Based Detection of Schizophrenia", *International Journal of Imaging Systems & Technology*, Volume 21, Issue 2, June 2011, pp. 179-192.
34. 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*, Vol. 114, No. 11, Nov. 2010, pp. 1164-1179.
35. 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*, Vol. 73, Issue 10, Oct. 2010, pp. 973-981.
36. 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.
37. 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.
38. 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.
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