

# UMBERTO CASTELLANI

## *Curriculum vitae et studiorum*

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### GENERAL DATA:

- Date and place of birth: 28 May 1973, Verona - Italy.
- Citizen: italian.
- Address: Via Delle Fonti 7L, 37030 Mezzane di Sotto - Verona.
- Phone: +39 0458027988
- Mobile: +39 3331816901
- e-mail: [umberto.castellani@univr.it](mailto:umberto.castellani@univr.it)
- web page: <http://profs.sci.univr.it/~castella>

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### MEMBERSHIP:

- VIPS lab, University of Verona (<http://vips.scienze.univr.it>)
- IEEE (<http://www.ieee.org>)
- Eurographics (European Association for Computer Graphics) (<http://www.eg.org>)
- IAPR (International Association of Pattern Recognition): GIRP (<http://www.girp.org>)
- MICCAI (Medical Image Computing and Computer Assisted Intervention Society) (<http://www.miccai.org>)

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### EDUCATION:

- March 2003: Dottorato di Ricerca in Informatica (PhD) from University of Verona. Title of PhD thesis: *“Image Based Modelling: from sensory data to 3D models”*. Supervisor: Prof. Vittorio Murino. Co-Supervisor: Prof. Andrea Fusiello
- October 1999: Laurea degree in Computer Science from University of Verona. Title of master thesis: *“Image processing based on probabilistic approach: Markov Random Field for the restoration of stereo images”*. Supervisor: Prof. Vittorio Murino. Co-supervisor: Prof. Andrea Fusiello

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### POSITIONS:

- from July 2017: Associate Professor at University of Verona (SSD INF-01).
- January 2005 - June 2017: Assistant Professor at University of Verona (SSD INF-01).
- July - December 2004: Post-doc at the Computer Science Department of University of Verona.
- November 2002 - June 2004: research contract at the Computer Science Department of University of Verona, working for the EU-Project ARROV.
- October - December 2001: Research Associate at University of Edinburgh, working for the EU-Project CAMERA under the supervision of Prof. Bob Fisher.
- November 1999 - October 2002: grant to attend the PhD course at the Computer Science Department - University of Verona.

## GRANTS:

### Academic grants

- from Jan 2018-today, “*Smart Autonomous Robotic Assistant Surgeon (SARAS)*”, EU contract No. 779813. Co-investigator.
- from Oct 2013, “*Personalised Prognostic Tools for Early Psychosis Management (PRONIA)*”, EU contract No. 602152. External-investigator.
- September 2014, “*Partially supervised learning: background and application*”, CooperInt project. Principal Investigator.
- March-April 2013, “*3D scene completion and understanding from partial-views (3DCUP)*”, CooperInt project. Principal Investigator.
- September 2012, “*Probabilistic Local Multiple Kernel Learning (PROLOKE)*”, CooperInt project. Principal Investigator.
- September 2011-2013, “*Brain Diffusion Imaging and Fiber Tracking for Radiotherapy and Surgical Planning*”(BRAINFIT), MIUR Project. Co-investigator.
- January 2008 - September 2011, “*Similarity-Based Pattern Analysis and Recognition*”(SIMBAD), EU contract No. 213250. Co-investigator.
- January 2008 - March 2010, “*2D and 3D image registration of rigid and non-rigid scenes*”, CooperInt project. Principal Investigator.
- February 2007 - January 2009, “*Three-Dimensional Shape Indexing and Retrieval Techniques*” (3-SHIRT). MIUR project. Co-investigator.
- January - December 2007, “*Medical image analysis for mental health research*”, Project of Interuniversity Consortium. Principal Investigator.
- January- December 2007 “*3D Registration of deformable models*”, Young Research Project of University of Verona. Principal Investigator.
- March 2003 - November 2005, “*Low cost 3D imaging and modelling automatic system*” (LIMA3D), MIUR Project. Co-investigator.
- December 2000 - February 2005, “*Augmented Reality for Remotely Operated Vehicles based on 3D acoustical and optical sensors for underwater inspection and survey*”(ARROW), EU contract No. GRD1-2000-25409. Co-investigator.
- May 2001 - April 2002, “*Simulations for Audio and Video Augmented Reality*”(SAVAR), Young Research Project of University of Verona. Principal investigator.
- August 2001 - December 2001, “*CAD Modelling of Built Environments from Range Analysis*”(CAMERA), EU contract No. FMRX-CT970127. Co-investigator.

### Industrial grants

- Feb 2016 - April 2017: “*3D image acquisition by photometric stereo (3DPhoto)*”, 3Dflow. Principal investigator.
- Jan-Dec 2016 “*3D reconstruction from stereo images using linear cameras(STSL)*”, eVS. Principal investigator.
- March 2014 - Feb 2015 “*Content based image retrieval for fashion archives*”, Openinnovation. Principal investigator.
- Dec 2013 - April 2015 “*Efficient tracking from challenging images: B-Quant*”, eVS. Co-investigator.
- Jan-Dec 2013 “*Advanced medical image acquisition and analysis*”, MEDEA-IRCS. Principal investigator.
- April-Dec 2013 “*3D Shoot*”. 3Dflow. Principal investigator.

- April 2010 - September 2012 “*Leveraging on Intensity images for Reverse Engineering, Laser scanner Improvement for Reverse Engineering*”(LIRE). Joint Project UNIVR-Gexcel. Co-investigator.
- February 2007 - February 2009, “*INtelligent Vision system for Industrial Automation*” (INVIA). Joint Project UNIVR-Automazioni Industriali. Co-investigator.
- January 2005 a December 2007, “*Analysis of high resolution 3D acoustic data*”, Sonsub-Saipem. Co-investigator.
- January 2004 - August 2006, “*Intelligent system for visual inspection of pharmaceutical vials*”, GlaxoSmithKline. Co-investigator.
- March - November 2006, “*Automatic detection and localization of gas leakage in underwater environment*”, Tecnomare. Co-investigator.

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## ACADEMIC ACTIVITIES:

### Teaching activities

- Computer Vision (AA 2012-13 – AA 2017-18).
- Mathematical methods in image processing and shape analysis - seminar course (AA 2013-14).
- Multimedia production (AA 2010-11 – AA 2017-18).
- Human Computer Interaction (AA 2009-10).
- Computer Science for Cultural Heritage (AA 2008-09).
- Multimedia production (AA 2008-09, AA 2007-08, AA 2006-07, AA 2005-06).
- Multimedia (AA 2007-08, AA 2006-07, AA 2005-06, AA 2004-05).
- Image processing in medicine - post graduate school (AA 2006-07, AA 2005-06, AA 2004-05).
- Interaction design - post graduate school (AA 2009-10 , AA 2010-11, AA 2011-12, AA 2012-13, AA 2013-14)

### University services

- Director of the Master in *Computer Game Development* (2012-today).
- Researcher representative of Computer science department (2010-2012).
- Member of Computer Science PhD Committee.
- Member of Teaching commission of the course on Editoria e Comunicazione Multimediale.
- Member of scientific committee of the Master in *Computer Game Development*.
- Member of scientific committee of the University web-radio.

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## 1 Supervision

- Riccardo Marin, Phd student (Oct 2017- today).
- Simone Melzi, Phd student (Nov 2014-Oct 2017).
- Marco Schivi, Post-laurea, (Nov 2016 - Dec 2017).
- Luca Magri, Post Doc, (Dicembre 2015-Aprile 2017).
- Letizia Squarcina, Post Doc, (Feb 2014- Jan 2017).

- Federico Recchia, Post-laurea, (Feb 2016- Jan 2017).
- Tewrodos Dagnew, Post-laurea, (April 2014-Sept 2015).
- Denis Peruzzo, Post Doc, (Nov 2012 - Oct 2013).
- Dott. Aydin Ulas, Post Doc, (July 2011, June 2012).

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**PROFESSIONAL SERVICE:**

- Member of the editorial board of the Pattern Recognition journal (2016-today).
- Member of the Executive Board of Eurographics Italian Chapter (2012-2015).
- Program Chair of International conference on 3D Vision (3DV) 2018.
- Co-Chair of the ICCV Workshop on Multiview Relationships in 3D Data (MVR3D) 2017.
- Publicity/Web Chair of Image Analysis and Processing Image (ICIAP) 2015.
- Co-Chair of the ECCV Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA) 2014.
- General Chair of the Eurographics Workshop on 3D Object Retrieval (3DOR) 2013.
- Co-Chair of the ECCV Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA) 2012.
- Co-Chair of 3D Shape Retrieval Contest SHREC 2010.
- Co-Chair of Eurographics Italian Chapter 2009.
- Area-chair of the British Machine Vision Conference (BMVC) 2016.
- In 2015 and 2016 he participated as invited member at the PC-meeting for the Medical Image Computing and Computer Assisted Intervention Conference (MICCAI).
- Member of Program Committee of 3DOR 18-17-16-15-14-13-12-11; MICCAI 16-15, SIMBAD 15-13-11; 3DV 16-15-14; Web3D 15; ACCV 16-14-13-12-10; 3DIMPVT 13-12-11; Eurographics Short Paper 12; QU3ST 12; PCP 12; SCIA 11; ACIVS 08-09-10; NORDIA 09-10-11-12-14.
- Reviewer of the following international journals:
  - IEEE Transaction on Pattern Analysis and Machine Intelligence;
  - International Journal of Computer Vision;
  - Computer Graphics Forum;
  - Computer and Graphics;
  - Artificial Intelligence in Medicine;
  - IEEE Journal on Oceanic Engineering;
  - IEEE Transaction on System, Man, and Cybernetics;
  - IEEE Transaction on Robotics;
  - IEEE Transaction on Image Processing;
  - IEEE Multimedia;
  - IET Computer Vision;
  - Computer Vision and Image Understanding;
  - Image and Vision Computing Journal;
  - Pattern Recognition Letters;
  - Pattern Recognition;
  - International Journal of Pattern Recognition and Artificial Intelligence;
  - Pattern Analysis and Applications;
  - Journal of Electronic Imaging;
  - Electronic Letters on Computer Vision and Image Analysis;
  - The Visual Computer;

– Numerical Mathematics: Theory, Methods and Applications.

- Reviewer of the following international conferences: CVPR 18, 17, 16, 15, 13, 12, 11, 10, 09, 08, 07, 06, 05; Eurographics 16, 15, 14; ICCV 17, 15, 11, 09, 07, 05; ICIP 16, 15, 14, 13, 12, 11, 10, 09, 08, 07, 06, 05; Pacific Graphics 15; MICCAI 14; ECCV 16, 12, 10, 08, 06, 04; BMVC 08, 07, 06; ICPR 12, 10, 08, 06; 3DIM 11, 09, 07; MIRAGE 09, 07, 05; AMDO 08, 06; ICIAP 11, 09, 07, 05; VISAPP 07; AIME 09, 05.

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## INVITED TALKS

- *3D shape analysis for matching, modelling and classification*. University of Milan, 14 March 2017. Invited by Prof. Alessandro Rizzi.
- *Heterogeneous data integration and normalization for psychosis characterization*. Italian Institute of Technology (IIT), 22 September 2016. Invited by Prof. Vittorio Murino.
- *Brain classification with heterogeneous data for psychosis characterization*. Relazione invitata nell'ambito del MICCAI Programme Committee Workshop, 27 Maggio 2016. Invited by Prof. Sebastien Ourselin.
- *3D shape matching by bag-of-features descriptors*. University of Padova, 30 October 2014. Invited by Dott.ssa Ombretta Gaggi.
- *Machine learning techniques embodying imaging, psychopathological and clinical features for classification of pathologies*. Minisymposium on Neuroimaging in psychiatry, Engineering in Medicine and Biology (EMBC), 26 Agosto 2015. Invited by Prof. Paolo Brambilla.
- *Metodi automatici di decisione per il supporto alla diagnosi di pazienti con psicosi*. University of Udine, 25 November 2013. Invited by Prof. Paolo Brambilla.
- *3D analysis and classification*. University of applied sciences Western Switzerland (CH), 23 July 2013. Invited by Prof. Henning Muller.
- *Exploiting geometry in Counting Grids*. University of Lugano (CH), 13 June 2013. Invited by Prof. Michael Bronstein.
- *Statistical 3D Shape Analysis by Local Generative Descriptors*. University College London (UK), 15 March 2013. Invited by Prof. Niloy Mitra.
- *Brain Morphometry by Probabilistic Latent Semantic Analysis*. University d'Auvergne (France), 25 January 2011. Invited by Prof. Adrien Bartoli.
- *Brain Morphometry by Probabilistic Latent Semantic Analysis*. Fondazione Bruno Kessler (FBK) Trento, 26 October 2010. Invited by Paolo Avesani.
- *Exploiting BoW paradigm for 3D Shape Description and Matching*. Siam Conference on Imaging Science (IS10), Chicago 15 March 2010. Invited by Alex and Micheal Bronstain.
- *Pattern recognition techniques for shape modelling and matching*. CNR Pisa, 1 July 2009. Invited by Roberto Scopigno.
- *Medical image classification: the cases of cancer area characterization and brains in Schizophrenia research*. Technischen Universitat of Munchen, 31 March 2009. Invited by Prof. Nassir Navab.
- *Robust deformation capture from temporal range data for surface rendering*. DIKU Copenhagen, 24 March 2009. Invited by Prof. Soren Olsen.
- *3D shape modeling and matching: vision in underwater environment and shape matching using a statistical learning approach*. Purdue University, 4 August 2008. Invited by Johnny Park.
- *Some activities at the VIPS lab: 3D shape matching using Hidden Markov Models and Geo-located image analysis*. Carnegie Mellon University, 23 July 2008. Invited by Alyosha Efros.
- *Recent advances on 3D shape modelling: an overview with a focus on 3D face recognition systems*. Michigan State University, 12 July 2008. Invited by Prof. Anil K. Jain.
- *3D acoustic image processing for underwater visual inspection and navigation*, Università Blaise Pascal, Clermont Ferrand, 07 Feb 2007. Invited by Adrien Bartoli.

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## JOURNEYS

- Oct - Nov 2015 (15 days): *Invited Professor* University d’Auvergne (France), with Prof. Adrien Bartoli.
- Feb - March 2013 at the University College London (UCL) - with Prof. Niloy Mitra.
- June-July 2012 at the Istituto Italiano di Tecnologia (IIT) - with Prof. Vittorio Murino.
- November 2010 at the ISIT - University d’Auvergne (France) with Prof. Adrien Bartoli.
- June-July 2008 at the Michigan State University (USA) with Prof. Anil K. Jain.
- Feb and April 2007 at the Universit’a Blaise Pascal in Clermont Ferrand (France) with Prof. Adrien Bartoli.
- Aug-Dec 2001 at the University of Edinburgh with Prof. Bob Fisher.

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## PUBLICATIONS:

### Special issues edited

- S.1 The Visual Computer, Special Issue on 3D Object Retrieval 2013, with Silvia Biasotti, Iannis Prelikakis and Tobias Schreck (guest editors).

### Edited Proceedings

- E.1 Proceedings of the Workshop Multiple View Relation in 3D data 2017 (MVR3D), with Tolga Birdal, Emanuele Rodola, Andrea Torsello, Slobodan Ilic, Gul Varol - Publisher: Springer.
- E.2 Proceedings of the Workshop Non-Rigid Shape Analysis and Deformable Image Alignment 2014 (NORDIA), with Alex Bronstein and Maks Ovsjanikov - Publisher: Springer.
- E.3 Eurographics Symposium Proceedings of 3D Object Retrieval 2013 (3DOR), with Silvia Biasotti, Iannis Prelikakis, Tobias Schreck, Afzal Godir, and Remco Vetkamp- Publisher: Eurographics.
- E.4 Proceedings of the Workshop Non-Rigid Shape Analysis and Deformable Image Alignment 2012 (NORDIA), with Alex Bronstein, Micheal Bronstein and Stefano Beretti - Publisher: Springer.

## 1.1 Tutorial

- T.1 A. Bronstein, M. Bronstein, e U. Castellani. Diffusion Geometry in Shape Analysis. Eurographics 2012 tutorial.

## 1.2 Journals

- J.1 D. Nogneng, S. Melzi, E. Rodola, U. Castellani, M. Bronstein, M. Ovsjanikov. Improved Functional Mappings via Product Preservation. Computer Graphics Forum (Proc. Eurographics), 2018
- J.2 S. Melzi, M. Ovsjanikov, G. Roffo, M. Cristani, U. Castellani. Discrete Time Evolution Process Descriptor for Shape Analysis and Matching. ACM Transaction on Graphics. Vol 37 n. 1, 2018
- J.3 S. Melzi, E. Rodola, U. Castellani, M. M. Bronstein. Localized Manifold Harmonics for Spectral Shape Analysis. Computer Graphics Forum. 2017.

- J.4 L. Squarcina, U. Castellani, M. Bellani, C. Perlini, A. Lasalvia, N. Dusi, C. Bonetto, D. Cristofalo, S. Tosato, G. Rambaldelli, F. Alessandrini, G. Zoccatelli, R. Pozzi-Mucelli, D. Lamonaca, E. Ceccato, F. Pileggi, F. Mazzik, P. Santonastaso, M. Ruggeri, P. Brambilla, The GET UP Group. Classification of first-episode psychosis in a large cohort of patients using support vector machine and multiple kernel learning techniques. *Neuroimage*. Vol 145 Part B, 2017, pp. 238245.
- J.5 Pickup, D.; Sun, X.; Rosin, P. L.; Martin, R. R.; Cheng, Z.; Lian, Z.; Aono, M.; Hamza, A. Ben; Bronstein, A.; Bronstein, M.; Bu, S.; Castellani, U.; Cheng, S.; Garro, V.; Giachetti, A.; Godil, A.; Isaia, L.; Han, J.; Johan, H.; Lai, L.; Li, B.; Li, C.; Li, H.; Litman, R.; Liu, X.; Liu, Z.; Lu, Y.; Sun, L.; Tam, G.; Tatsuma, A.; Ye, J. Shape Retrieval of Non-rigid 3D Human Models. *International Journal of Computer Vision*. Vol. 120, n. 2, 2016, pp. 169-193.
- J.6 D. Peruzzo, F. Arrigoni, F. Triulzi, A. Righini, C. Parazzini, U. Castellani. A framework for the automatic detection and characterization of brain malformations: Validation on the corpus callosum. *Medical Image Analysis*. Vol. 32, 2016, pp. 233242.
- J.7 D. Boscaini, J. Masci, S. Melzi, M. Bronstein, U. Castellani, P. Vanderghyest. Learning class-specific descriptors for deformable shapes using localized spectral convolutional networks. *Computer Graphics Forum*. Vol. 35, No. 5, 2015, pp. 13-23.
- J.8 L. Squarcina, C. Perlini, D. Peruzzo, U. Castellani, V. Marinelli, M. Bellani, G. Rambaldelli, A. Lasalvia, S. Tosato, K. De Santi, F. Spagnolli, R. Cerini, M. Ruggeri, P. Brambilla. The use of dynamic susceptibility contrast (DSC) MRI to automatically classify patients with first episode psychosis. *Schizophrenia research*. Vol. 165, No. 1, 2015, pp 38-44.
- J.9 D. Peruzzo, U. Castellani, C. Perlini, M. Bellani, V. Marinelli, G. Rambaldelli, A. Lasalvia, S. Tosato, K. De Santi, V. Murino, M. Ruggeri, P. Brambilla. Classification of Patients with first episode psychosis: a multi-modal multi-feature study. *Journal of Neural Transmission*. Vol. 122, No. 6, 2015, pp 897-905.
- J.10 R. Litman, A. Bronstein, M. Bronstein, U. Castellani. Supervised learning of bag-of-features shape descriptors using sparse coding. *Computer Graphics Forum*. Vol. 33, No. 4, 2014, pp 127-136.
- J.11 C. Lovato, U. Castellani, C. Zancanaro, A. Giachetti. Automatic labelling of anatomical landmarks on 3D body scans. *Graphical Models*. Vol. 76, No 6, 2014, pp. 648-657.
- J.12 D. Boscaini, U. Castellani. A sparse coding approach for local-to-global 3D shape description. *The Visual Computer*. Vol. 30, No. 11, 2014, pp 1233-1245.
- J.13 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, 2013, pp. 161-169.
- J.14 E. Veronese, U. Castellani, D. Peruzzo, M. Bellani, P. Brambilla, Machine Learning Approaches: From Theory to Application in Schizophrenia. *Computational and mathematical methods in medicine*. Vol. 2013, 2013, pp 1-12.
- J.15 A. Perina, M. Cristani, U. Castellani, V. Murino, N. Jovic. Free energy score spaces: using generative information in discriminative classifiers. *IEEE Transactions on Pattern Analysis and Machine Intelligence*. Vol. 34, No. 7, 2012, pp. 1249-1262.
- J.16 U. Castellani, E. Rossato, V. Murino, M. Bellani, G. Rambaldelli, C. Perlini, L. Tomelleri, M. Tansella, and P. Brambilla. Classification of schizophrenia using feature-based morphometry. *Journal of Neural Transmission*. Vol. 119, 2012 pp. 395-404.
- J.17 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, 2011.
- J.18 A. Ulas, R.P.W. Duin, U. Castellani, M. Loog, P. Mirtuono, M. Bicego, V. Murino, M. Bellani, S. Cerruti, M. Tansella and P. Brambilla. Dissimilarity-based detection of schizophrenia. *International Journal of Imaging Systems and Technology*. Vol. 21, No. 2, 2011, pp. 179192.
- J.19 R. Toldo, U. Castellani, A. Fusiello. The bag of words approach for retrieval and categorization of 3D objects. *The Visual Computer*. Vol. 26, No. 10, 2010, pp. 1257-1268
- J.20 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, 2009, pp. 248-253.

- J.21 M.Cristani, A.Perina, U.Castellani, V.Murino. Geo-located image categorization and location recognition. *Pattern Recognition and Image Analysis*. Vol. 19, No. 2, 2009, pp. 245-252.
- J.22 U. Castellani, M. Cristani, C. Combi, V. Murino, P. Marzola, A. Sbarbati. Visual MRI: Merging Information Visualization and non-parametric clustering techniques for MRI data set analysis. *Artificial Intelligence in Medicine*. Vol. 44, No. 3, Novembre 2008, pp. 171-282.
- J.23 U. Castellani, V. G. Bellile, A. Bartoli. Robust Deformation Capture from Temporal Range Data for Surface Rendering. *Computer Animation and Virtual Worlds*. Vol. 19, No. 5, December 2008, pp. 591-603
- J.24 U. Castellani, M. Cristani, S. Fantoni, V. Murino. Sparse points matching by combining 3D mesh saliency with statistical descriptors. *Computer Graphics Forum*. Vol. 27, No. 2, 2008.
- J.25 U. Castellani, R. Gherardi, A. Fusiello, and V. Murino. Automatic selection of MRF control parameters by reactive tabu search. *Image and Vision Computing*. Vol. 25, No. 11, April 2007, pp. 1824-1832.
- J.26 U. Castellani, A. Fusiello, V. Murino, L. Papaleo, E. Puppo, M. Pittore. A complete system for on-line modelling of acoustic images. *Image Communication Journal*. Vol. 20, No. 9-10, December 2005, pp. 832-852.
- J.27 M. Bicego, U. Castellani, V. Murino. A Hidden Markov Model approach for appearance-based 3D object recognition, *Pattern Recognition Letters*. Vol. 26, No. 16, 2005, pp. 2588-2599
- J.28 U. Castellani, V. Murino, L. Tao. Efficient Scene Modeling for Underwater ROV Driving. *Sea Technology*, Vol. 45, No. 12, December 2004, pp. 47-52 (Invited paper).
- J.29 U. Castellani, A. Fusiello and V. Murino. Registration of Multiple Acoustic Range Views for Underwater Scene Reconstruction. *Computer Vision and Image Understanding*. Academic Press. September 2002, pages 78-89.

### 1.3 Book Chapters

- B.1 A. Ulas, U. Castellani, M. Bicego, V. Murino, M. Bellani, M. Tansella, P. Brambilla. Analysis of Brain Magnetic Resonance (MR) Scans for the Diagnosis of Mental Illness. *Similarity-Based Pattern Analysis and Recognition*, Marcello Pelillo (Eds.), Springer, 2013.
- B.2 P. M. Q. Aguiar, M. Bicego, U. Castellani, M. A. T. Figueiredo, A. T. Martins, V. Murino, A. Perina, A. Ulas, On the Combination of Information-Theoretic Kernels with Generative Embeddings. *Similarity-Based Pattern Analysis and Recognition*, Marcello Pelillo (Eds.), Springer 2013.
- B.3 U. Castellani and A. Bartoli. 3D Shape Registration. *3D Imaging, Analysis, and Applications*, Nick Pears, Younghuai Liu, Peter Bunting (Eds.), Springer, 2012.

### 1.4 Collections LNCS, LNAI

- L.1 L. Magri, R. Toldo, U. Castellani, A.Fusiello. A Matrix Decomposition Perspective on Calibrated Photometric Stereo. *International Conference on Image Analysis and Processing (ICIAP)*, LNCS 10484, pp. 507-517, Springer 2017.
- L.2 S. Melzi, A. Mella, L. Squarcina, M. Ruggeri, P. Brambilla. Functional Maps for Brain Classification on Spectral Domain. In *Spectral and Shape Analysis in Medical Imaging (SeSAMI)*, LNCS 10126, pp. 25-37, Springer 2016.
- L.3 L. Squarcina, C. Perlini, M. Bellani, A. Lasalvia, M. Ruggeri, P. Brambilla, U. Castellani. Learning with heterogeneous data for longitudinal studies. In *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*, LNCS 9351, pp. 535-542, Springer-Verlag Berlin Heidelberg 2015.
- L.4 T. M. Dagnew, U. Castellani. Supervised learning of diffusion distance to improve histogram matching. In *Similarity-Based Pattern Recognition (SIMBAD)*, LNCS 9370, pp. 28-37, Springer-Verlag 2015.



- L.5 T. M. Dagneu, U. Castellani. Advanced Content Based Image Retrieval For Fashion. International Conference on Image Analysis and Processing (ICIAP), LNCS 9279, pp. 705-7015, Springer-Verlag 2015.
- L.6 D. Peruzzo, F. Arrigoni, F. Triulzi, C. Parazzini, U. Castellani. Detection of corpus callosum malformations in pediatric population using the discriminative direction in multiple kernel learning. In Medical Image Computing and Computer-Assisted Intervention (MICCAI), LNCS 8673 pp. 300-307, Springer-Verlag Berlin Heidelberg 2014.
- L.7 A. Perina, D. Peruzzo, M. Kesa, N. Jojic, V. Murino, M. Bellani, P. Brambilla, U. Castellani. Mapping Brains on Grids of Features for Schizophrenia Analysis. In Medical Image Computing and Computer-Assisted Intervention (MICCAI), LNCS 8673, pp. 807-814, Springer-Verlag Berlin Heidelberg 2014.
- L.8 M. Bicego, S. Danese, S. Melzi, U. Castellani. A bioinformatics approach to 3D shape matching. In ECCV Workshop on Non-Rigid Shape Analysis and Deformable Image Alignment (NORDIA), LNCS 8928, pp. 313-325, Springer-Verlag Berlin Heidelberg 2014.
- L.9 A. Perina, M. Bicego, U. Castellani and V. Murino. Exploiting Geometry in Counting Grids. In Similarity-Based Pattern Recognition (SIMBAD), LNCS 7953, pp. 250-264, Springer-Verlag Berlin Heidelberg 2013.
- L.10 S. Khoualed, T. Chateau, U. Castellani, Semantic-Context-Based Augmented Descriptor for image feature matching, Proc. Asian Conference on Computer Vision (ACCV), LNCS 7725, pp 353-367, Springer-Berlin Heidelberg 2013
- L.11 A. Ulas, M. Gonen, U. Castellani, V. Murino, M. Bellani, M. Tansella, P. Brambilla. A Localized MKL method for brain classification with known intra-class variability. International Workshop on Machine Learning in Medical Imaging. LNCS 7588, pp 152-159, Springer Berlin Heidelberg 2012.
- L.12 P. Schuffler, A. Ulas, U. Castellani and V. Murino. A Multiple Kernel Learning Algorithm for Cell Nucleus Classification of Renal Cell Carcinoma. In Image Analysis and Processing (ICIAP), LNCS 6978/2011, pp. 413-422, Springer-Verlag Berlin Heidelberg 2011
- L.13 A. Ulas, P. J. Schffler, M. Bicego, U. Castellani and V. Murino. Hybrid Generative-Discriminative Nucleus Classification of Renal Cell Carcinoma. In Similarity-Based Pattern Recognition, LNCS 7005, pp. 77-89, Springer-Verlag Berlin Heidelberg 2011
- L.14 M. Gonen, A. Ulas,, P. Schuffler, U. Castellani and V. Murino. Combining Data Sources Nonlinearly for Cell Nucleus Classification of Renal Cell Carcinoma. In Similarity-Based Pattern Recognition, LNCS 7005, pp. 250-260, Springer-Verlag Berlin Heidelberg 2011
- L.15 U. Castellani, P. Mirtuono, V. Murino, M. Bellani, G. Rambaldelli, M. Tansella, and P. Brambilla. A New Shape Diffusion Descriptor for Brain Classification. In G. Fichtinger, A. Martel, and T. Peters (Eds.), Medical Image Computing and Computer-Assisted Intervention (MICCAI), LNCS 6892, pp. 426-433, Springer-Verlag Berlin Heidelberg 2011
- L.16 U. Castellani, A. Perina, V. Murino, M. Bellani, G. Rambaldelli, M. Tansella, P. Brambilla. Brain Morphometry by Probabilistic Latent Semantic Analysis. In T. Jiang et al. (Eds.): Medical Image Computing and Computer-Assisted Intervention (MICCAI), LNCS 6362, pp. 177-184 Springer Berlin/Heidelberg 2010
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Verona, March 26, 2018

In Fede

Umberto Castellani