

ANDREA FUSIELLO

Curriculum vitae et studiorum

PERSONAL DATA:

- Born in Palmanova (Italy), on May 17, 1968
- Nationality: Italian; marital status: married.
- Home address: Udine (I).

EDUCATION:

- *Dottorato* (PhD) in Computer Engineering, University of Trieste (I), February 2, 1999. Title: “*Three-dimensional Vision for Structure and Motion Estimation*”. Supervisor: Prof. V. Roberto. External supervisor Dr. E. Trucco (Heriot-Watt University, UK).
- *Laurea* (Master) degree in Computer Science, University of Udine (I), March 2, 1994. Mark: 110/110. Dissertation title: “*Autonomous navigation and indoor map synthesis with uncertain sensory data*”. Supervisor: Dr. Bruno Caprile (IRST). Advisor: Prof. Vito Roberto.

RESEARCH EXPERIENCE:

Appointments

- **Associate Professor** (*Professore associato*). Computer Science. Dipartimento Politecnico di Ingegneria ed Architettura, University of Udine, Udine. December 2011 - present.
- **Associate Professor** (*Professore associato*). Computer Science. Dipartimento di Informatica, University of Verona, Verona. January 2005 - December 2011.
- **Visiting professor** at IUT Le Creusot - Université de Bourgogne (Francia), 1-30/10/2008.
- **Assistant Professor** (*Ricercatore*). Computer Science. Dipartimento di Informatica, University of Verona, Verona. October 2001 - December 2004.
- **Research Associate**. Computer Vision techniques applied to Visualization and Human Computer Interaction. Prof. Vittorio Murino. Dipartimento Scientifico e Tecnologico, University of Verona, Verona, IT. September 1999 - September 2001.
- **EPSRC Visiting Research Fellow**. Video mosaicing and uncalibrated reconstruction. Dr. Emanuele Trucco. Department of Computing and Electrical Engineering, Heriot-Watt University, Edinburgh, UK. April 1999 - September 1999.
- **Research Fellow**. Model-based vision (pose estimation, registration) and integration of optical and acoustic data, within the BRITE-EURAM project “VENICE” (Virtual Environment Interface by Sensory Integration for Inspection and Manipulation Control in Multifunctional Underwater Vehicles). Prof. V. Murino. University of Udine. November 1999 - March 1999.
- **Doctoral student**. Computer Vision: 3D reconstruction from stereo and uncalibrated motion. Prof. V. Roberto, Dr. E. Trucco. Dipartimento di Matematica e Informatica, University of Udine. February 1996 - October 1998.

PROJECTS:

• Principal investigator

- *Automatic profilometry system for monitoring transportation in port areas*. POR FESR 2014-2020. €45.421.
- *Leveraging on Intensity images for Reverse Engineering*. “Joint Project” program of the University of Verona, 2009. €65.000.
- *Three-Dimensional Shape Indexing and Retrieval Techniques*. Italian Ministry of Education, University and Research, PRIN 2006. €73.000.
- *CooperInt 2004*. A program of the University of Verona, for developing international liaisons. €9.600 euro.
- *Industry funded projects* for a total amount of €144.000.

• Co-investigator

- *Suspicious and Abnormal behavior Monitoring Using a network of cameras for situation awareness*, FP7-SEC-2007-01 Grant No. 217899, European Union.
- *Low cost automatic system for 3D imaging and modelling*, Ministry of Education, University and Research, COFIN 2003.
- *Augmented Reality for Remotely Operated Vehicles based on 3D acoustical and optical sensors for underwater inspection and survey*, GROWTH project no. GRD1-2000-25409, European Union.
- *Augmented Reality for Teleoperation of Free Flying Robots*, ASI (Italian Space Agency), Scientific Research Grant n. 391, 2000.
- *Representation and Processing of Spatial Data in Geographic Information Systems*, Ministry of University and Scientific and Technological Research, COFIN 2000.

PUBLICATIONS:

Journal papers

1. Tommaso Banelli et al. Automation of peak-tracking analysis of stepwise perturbed NMR spectra. *Journal of Biomolecular NMR* (2017), 1–14.
2. Luca Magri and Andrea Fusiello. Multiple structure recovery via robust preference analysis. *Image and Vision Computing* **67** (2017), 1–15.
3. Luca Magri and Andrea Fusiello. Multiple structure recovery with T-linkage. *Journal of Visual Communication and Image Representation* **49** (2017), 57–77.
4. E. Maset, F. Crosilla, and A. Fusiello. Errors-in-Variables Anisotropic Extended Orthogonal Procrustes Analysis. *IEEE Geoscience and Remote Sensing Letters* **14**(1) (2017), 57–61.
5. Federica Arrigoni, Beatrice Rossi, and Andrea Fusiello. Spectral Synchronization of Multiple Views in SE(3). *SIAM Journal on Imaging Sciences* **9**(4) (2016), 1963–1990.
6. Francesco Malapelle et al. A data-fusion approach to motion-stereo. *Signal Processing: Image Communication* **43** (April 2016), 42–53.
7. Andrea Fusiello and Fabio Crosilla. Solving Bundle Block Adjustment by Generalized Anisotropic Procrustes Analysis. *ISPRS Journal of Photogrammetry and Remote Sensing* **102** (April 2015), 209–221.
8. Roberto Toldo et al. Hierarchical structure-and-motion recovery from uncalibrated images. *Computer Vision and Image Understanding* **140** (November 2015), 127–143.
9. M. Corsini et al. Fully Automatic Registration of Image Sets on Approximate Geometry. *International Journal of Computer Vision* **102**(1-3) (March 2013), 91–111.
10. Said Pertuz et al. Generation of All-in-Focus Images by Noise-Robust Selective Fusion of Limited Depth-of-Field Images. *IEEE Transactions on Image Processing* **22**(3) (March 2013), 1242–1251.

11. Roberto Toldo and Andrea Fusiello. Image-consistent patches from unstructured points with J-linkage. *Image and Vision Computing* **31**(10) (2013), 756–770.
12. A. Fusiello and L. Irsara. Quasi-Euclidean epipolar rectification of uncalibrated images. *Machine Vision and Applications* **22**(4) (2011), 663–670.
13. A. Colombari and A. Fusiello. Patch-Based Background Initialization in Heavily Cluttered Video. *IEEE Transactions on Image Processing* **19**(4) (April 2010), 926–933.
14. R. Toldo, U. Castellani, and A. Fusiello. The bag of words approach for retrieval and categorization of 3D objects. *The Visual Computer* **26**(10) (October 2010), 1257–1268.
15. Michela Farenzena and Andrea Fusiello. Stabilizing 3D modeling with geometric constraints propagation. *Computer Vision and Image Understanding* **113**(11) (2009), 1147–1157.
16. U. Castellani et al. Automatic selection of MRF control parameters by Reactive Tabu Search. *Image and Vision Computing* **25**(11) (2007), 1824–1832.
17. A. Colombari, A. Fusiello, and V. Murino. Segmentation and Tracking of Multiple Video Objects. *Pattern Recognition* **40**(4) (2007), 1307–1317.
18. A. Fusiello. A matter of notation: Several uses of the Kronecker product in 3-D computer vision. *Pattern Recognition Letters* **28**(15) (2007), 2127–2132.
19. A. Fusiello. Specifying Virtual Cameras in Uncalibrated View Synthesis. *IEEE Transactions on Circuits and Systems for Video Technology* **17**(5) (2007), 604–611.
20. U. Castellani et al. A complete system for on-line 3D modelling from acoustic images. *Signal Processing - Image Communication* **20**(9-10) (2005), 832–852.
21. A. Fusiello et al. Computing Rigorous Bounds to the Accuracy of Calibrated Stereo Reconstruction. *IEE Proceedings. Vision, Image and Signal Processing* **152**(6) (December 2005), 695–701.
22. A. Fusiello and V. Murino. Augmented Scene Modeling and Visualization by Optical and Acoustic Sensor Integration. *IEEE Transactions on Visualization and Computer Graphics* **10**(6) (December 2004), 625–636.
23. A. Fusiello et al. Globally Convergent Autocalibration using Interval Analysis. *IEEE Transactions on Pattern Analysis and Machine Intelligence* **26**(12) (December 2004), 1633–1638.
24. U. Castellani, A. Fusiello, and V. Murino. Registration of Multiple Acoustic Range Views for Underwater Scene Reconstruction. *Computer Vision and Image Understanding* **87**(3) (2002), 78–89.
25. F. Odone, A. Fusiello, and E. Trucco. Layered Representation of a Video Shot with Mosaicing. *Pattern Analysis and Applications* **5**(3) (2002), 296–305.
26. A. Fusiello. Uncalibrated Euclidean Reconstruction: A Review. *Image and Vision Computing* **18**(6-7) (May 2000), 555–563.
27. A. Fusiello, V. Roberto, and E. Trucco. Symmetric Stereo with Multiple Windowing. *International Journal of Pattern Recognition and Artificial Intelligence* **14**(8) (2000), 1053–1066.
28. A. Fusiello, E. Trucco, and A. Verri. A Compact Algorithm for Rectification of Stereo Pairs. *Machine Vision and Applications* **12**(1) (2000), 16–22.
29. A. Fusiello et al. Improving Feature Tracking with Robust Statistics. *Pattern Analysis and Applications* **2**(4) (1999), 312–320.
30. E. Trucco, A. Fusiello, and V. Roberto. Robust Motion and Correspondence of Noisy 3-D Point Sets with Missing Data. *Pattern Recognition Letters* **20**(9) (September 1999), 889–898.
31. A. A. Bertossi and A. Fusiello. Rate-Monotonic scheduling for hard-real-time systems. *European Journal of Operational Research* **96**(3) (February 1997), 429–443.
32. A. Fusiello and B. Caprile. Synthesis of Indoor Maps in Presence of Uncertainty. *Robotics and Autonomous Systems* **22**(2) (November 1997), 103–114.

Editorships

33. A. Fusiello, V. Murino, and R. Cucchiara, eds. *ECCV 2012 Workshops and Demonstrations papers*. Lecture Notes in Computer Science 7583-7585. Springer, October 2012.
34. Andrea Fusiello and Michael Wimmer, eds. *Eugraphics 2012 - Posters*. Eurographics Association, 2012. <http://diglib.eg.org/handle/10.2312/297>.

35. Hongbin Zha et al., eds. *IEEE Transactions on Systems, Man and Cybernetics, Part B*. Vol. 33. 4. Special issue on 3-D image analysis and modeling. August 2003, pp. 550–553. DOI: 10.1109/TSMCB.2003.814779.

Book chapters

36. Fabio Crosilla, Eleonora Maset, and Andrea Fusiello. “Procrustean Photogrammetry: From Exterior Orientation to Bundle Adjustment”. In: *New Advanced GNSS and 3D Spatial Techniques: Applications to Civil and Environmental Engineering, Geophysics, Architecture, Archeology and Cultural Heritage*. Ed. by R. Cefalo, J.B. Zieliński, and M. Barbarella. Lecture Notes in Geoinformation and Cartography. Springer International Publishing, 2017, pp.157–165. ISBN: 9783319562179. DOI: 10.1007/978-3-319-56218-6_12. http://dx.doi.org/10.1007/978-3-319-56218-6_12.
37. Andrea Fusiello. “Lemmi sulla grafica al calcolatore”. In: *Dizionario di Informatica ICT e media digitali*. Ed. by Edoardo Fleischner. La Piccola Treccani, Scienza e Tecnica. (31 lemmi). Treccani, Roma, 2012.
38. S. Ivekovic, A. Fusiello, and E. Trucco. “Fundamentals of Multiple-View Geometry”. In: *3D Videocommunication. Algorithms, concepts and real-time systems in human centered communication*. Ed. by O. Schreer, P. Kauff, and T. Sikora. John Wiley & Sons, 2005. Chap. 6. ISBN: 9780470022719. DOI: 10.1002/0470022736.ch6.
39. A. Trucco et al. “Three-dimensional underwater acoustical imaging and processing”. In: *Underwater Acoustic Digital Signal Processing and Communication Systems*. Ed. by R.S.H. Istepanian and M. Stojanovic. Kluwer Academic, 2002, pp.247–274. ISBN: ISBN: 978-0-7923-7304-9.

Selected conferences

40. Eleonora Maset, Federica Arrigoni, and Andrea Fusiello. Practical and Efficient Multi-View Matching. In: *The IEEE International Conference on Computer Vision (ICCV)*. October 2017.
41. Federica Arrigoni, Andrea Fusiello, and Beatrice Rossi. Camera Motion from Group Synchronization. In: *Proceedings of the International Conference on 3D Vision (3DV)*. (October 25–28, 2016). (Acceptance rate: 44.4%). IEEE, 2016, pp.546–555. DOI: 10.1109/3DV.2016.64.
42. Federica Arrigoni, Andrea Fusiello, and Beatrice Rossi. Global Registration of 3D Point Sets via LRS decomposition. In: *Proceedings of the 14th European Conference on Computer Vision (ECCV)*. (October 8–16, 2016). (Acceptance rate: 26.6%). 2016, pp.489–504. DOI: 10.1007/978-3-319-46493-0_30.
43. A. Fusiello and F. Crosilla. Fast and Resistant Procrustean Bundle Adjustment. In: *Proceedings of the XXIII ISPRS Congress*. (July 12–19, 2016). Vol. III. ISPRS Annals of Photogrammetry, Remote Sensing and Spatial Information Sciences. (Acceptance rate: 54%). International Society for Photogrammetry and Remote Sensing. 2016, pp.35–41. DOI: doi:10.5194/isprs-annals-III-3-35-2016.
44. Luca Magri and Andrea Fusiello. Multiple Models Fitting as a Set Coverage Problem. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 27–July 1, 2016). (Acceptance rate: 30%). June 2016, pp.3318–3326. DOI: 10.1109/CVPR.2016.361.
45. Federica Arrigoni, Andrea Fusiello, and Beatrice Rossi. On Computing the Translations Norm in the Epipolar Graph. In: *Proceedings of the International Conference on 3D Vision (3DV)*. (October 19–22, 2015). (Acceptance rate: 46%). IEEE, 2015, pp.300–308. DOI: 10.1109/3DV.2015.41.
46. Andrea Fusiello, Fabio Crosilla, and Francesco Malapelle. Procrustean point-line registration and the NPnP problem. In: *Proceedings of the International Conference on 3D Vision (3DV)*. (October 19–22, 2015). (Oral acceptance rate: 15%). IEEE, 2015, pp.250–255. DOI: 10.1109/3DV.2015.35.
47. Luca Magri and Andrea Fusiello. Robust Multiple Model Fitting with Preference Analysis and Low-rank Approximation. In: *Proceedings of the British Machine Vision Conference (BMVC)*. (September 7–10, 2015). Ed. by Xianghua Xie, Mark W. Jones, and Gary K. L. Tam. (Acceptance rate: 33%). BMVA Press, 2015, pp.20.1–20.12. ISBN: 1-901725-53-7. DOI: 10.5244/C.29.20.
48. F. Arrigoni et al. Robust Absolute Rotation Estimation via Low-rank and Sparse Matrix Decomposition. In: *Proceedings of the International Conference on 3D Vision (3DV)*. (December 8–11, 2014). (Oral acceptance rate: 15.5%). 2014, pp.491–498. DOI: 10.1109/3DV.2014.48.
49. Luca Magri and Andrea Fusiello. T-Linkage: A Continuous Relaxation of J-Linkage for Multi-Model Fitting. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 24–27, 2014). (Acceptance rate: 29.88%). June 2014, pp.3954–3961. DOI: 10.1109/CVPR.2014.505.

50. S. Fantoni, U. Castellani, and A. Fusiello. Accurate and automatic alignment of range surfaces. In: *Proceedings of the 2nd Joint 3DIM/3DPVT Conference: 3D Imaging, Modeling, Processing, Visualization and Transmission (3DIMPVT)*. (October 13–15, 2012). (Oral acceptance rate: 18%). 2012, pp.73–80. DOI: 10.1109/3DIMPVT.2012.63.
51. P. Fragneto et al. Uncalibrated View Synthesis with Homography Interpolation. In: *Proceedings of the 2nd Joint 3DIM/3DPVT Conference: 3D Imaging, Modeling, Processing, Visualization and Transmission (3DIMPVT)*. (October 13–15, 2012). (Acceptance rate: 70%). 2012, pp.270–277. DOI: 10.1109/3DIMPVT.2012.39.
52. V. Garro, F. Crosilla, and A. Fusiello. Solving the PnP Problem with Anisotropic Orthogonal Procrustes Analysis. In: *Proceedings of the 2nd Joint 3DIM/3DPVT Conference: 3D Imaging, Modeling, Processing, Visualization and Transmission (3DIMPVT)*. (October 13–15, 2012). (Acceptance rate: 70%). 2012, pp.262–269. DOI: 10.1109/3DIMPVT.2012.40.
53. Riccardo Gherardi, Michela Farenzena, and Andrea Fusiello. Improving the Efficiency of Hierarchical Structure-and-Motion. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 13–18, 2010). (Acceptance rate: 27%). 2010, pp.1594–1600. DOI: 10.1109/CVPR.2010.5539782.
54. Riccardo Gherardi and Andrea Fusiello. Practical Autocalibration. In: *Proceedings of the European Conference on Computer Vision (ECCV)*. (September 5–11, 2010). Lecture Notes in Computer Science. (Acceptance rate: 28%). Springer, 2010, pp.790–801. DOI: 10.1007/978-3-642-15549-9_57.
55. Roberto Toldo and Andrea Fusiello. Photo-consistent Planar Patches from Unstructured Cloud of Points. In: *Proceedings of the European Conference on Computer Vision (ECCV)*. (September 5–11, 2010). Lecture Notes in Computer Science. (Acceptance rate: 28%). Springer, 2010, pp.589–602. DOI: 10.1007/978-3-642-15555-0_43.
56. M. Farenzena, A. Fusiello, and R. Gherardi. Structure-and-motion Pipeline on a Hierarchical Cluster Tree. In: *Proceedings of the IEEE International Workshop on 3-D Digital Imaging and Modeling (3DIM)*. (October 3–4, 2009). ICCV Workshops. 2009, pp.1489–1496. ISBN: 978-1-4244-4441-0. DOI: 10.1109/ICCVW.2009.5457435.
57. Roberto Toldo and Andrea Fusiello. Automatic Estimation of the Inlier Threshold in Robust Multiple Structures Fitting. In: *Proceedings of the 15th International Conference on Image Analysis and Processing (ICIAP)*. (September 8–11, 2009). Vol. 5716. Lecture Notes in Computer Science. (Oral acceptance rate: 21%). Best student paper. Springer, 2009, pp.123–131. ISBN: 978-3-642-04145-7. DOI: 10.1007/978-3-642-04146-4_15.
58. M. Farenzena and A. Fusiello. 3D Surface Models by Geometric Constraints Propagation. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 24–26, 2008). (Acceptance rate: 32%). IEEE Computer Society, 2008, pp.1–8. DOI: 10.1109/CVPR.2008.4587776.
59. A. Fusiello and L. Irsara. Quasi-Euclidean Uncalibrated Epipolar Rectification. In: *Proceedings of the 19th International Conference on Pattern Recognition (ICPR)*. (December 8–11, 2008). (Acceptance rate: 62%). 2008, pp.1–4. DOI: 10.1109/ICPR.2008.4761561.
60. R. Toldo and A. Fusiello. Robust Multiple Structures Estimation with J-Linkage. In: *Proceedings of the European Conference on Computer Vision (ECCV)*. (October 12–18, 2008). Vol. 5302. Lecture Notes in Computer Science. (Acceptance rate: 29%). Springer, 2008, pp.537–547. DOI: 10.1007/978-3-540-88682-2_41.
61. A. Colombari, A. Fusiello, and V. Murino. Video Objects Segmentation by Robust Background Modeling. In: *Proceedings of the International Conference on Image Analysis and Processing (ICIAP)*. (September 10–14, 2007). (Oral acceptance rate: 20%). IEEE Computer Society, 2007, pp.155–164. DOI: 10.1109/ICIAP.2007.4362773.
62. M. Farenzena and A. Fusiello. Recovering Intrinsic Images using an Illumination Invariant Image. In: *Proceedings of the IEEE International Conference on Image Processing (ICIP)*. (September 16–19, 2007). Vol. 3. (Acceptance rate: 49%). 2007, pp.485–488. DOI: 10.1109/ICIP.2007.4379352.
63. A. Fusiello and L. Irsara. An Uncalibrated View-Synthesis Pipeline. In: *Proceedings of the International Conference on Image Analysis and Processing (ICIAP)*. (September 10–14, 2007). (Oral acceptance rate: 20%). IEEE Computer Society, 2007, pp.609–614. DOI: 10.1109/ICIAP.2007.4362844.
64. M. Farenzena, A. Fusiello, and A. Dovier. Reconstruction with Interval Constraints Propagation. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 17–22, 2006). (Acceptance rate: 28%). IEEE Computer Society, 2006, pp.1185–1190. DOI: 10.1109/CVPR.2006.246.
65. A. Colombari, A. Fusiello, and V. Murino. Uncalibrated Interpolation of Rigid Displacements for View Synthesis. In: *Proceedings of the IEEE International Conference on Image processing (ICIP)*. (September 11–14, 2005). (Acceptance rate: 46%). 2005, pp.1049–1052. DOI: 10.1109/ICIP.2005.1529934.

66. M. Farenzena et al. Rigorous accuracy bounds for calibrated stereo reconstruction. In: *Proceedings of the 17th International Conference on Pattern Recognition (ICPR)*. (August 23–26, 2004). Vol. 4. (Oral acceptance rate: 18%). IEEE Computer Society, 2004, pp.288–292. DOI: 10.1109/ICPR.2004.1333760.
67. R. Marzotto, A. Fusiello, and V. Murino. High Resolution Video Mosaicing with Global Alignment. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 27–July 2, 2004). Vol. I. (Acceptance rate: 30%). IEEE Computer Society, 2004, pp.692–698. DOI: 10.1109/CVPR.2004.1315099.
68. A. Sanson et al. Fast Model Tracking with Multiple Cameras for Augmented Reality. In: *Proceedings of the ACM Symposium on Virtual Reality Software and Technology (VRST)*. (November 10–12, 2004). (Acceptance rate: 39%). 2004, pp.170–173. DOI: 10.1145/1077534.1077569.
69. A. Benedetti et al. Globally Convergent Autocalibration. In: *Proceedings of the 9th IEEE International Conference on Computer Vision (ICCV)*. (October 14–17, 2003). Vol. II. (Acceptance rate: 21%). IEEE Computer Society, 2003, pp.1426–1432. DOI: 10.1109/ICCV.2003.1238657.
70. A. Fusiello et al. Mosaic of a video shot with multiple moving objects. In: *Proceedings of IEEE International Conference on Image Processing (ICIP)*. (September 14–18, 2003). Vol. II. (Acceptance rate: 43%). IEEE Signal Processing Society, 2003, pp.307–310. DOI: 10.1109/ICIP.2003.1246678.
71. A. Fusiello et al. View Synthesis from Uncalibrated Images Using Parallax. In: *Proceedings of the 12th International Conference on Image Analysis and Processing (ICIAP)*. (September 17–19, 2003). (Oral acceptance rate: 26%). IAPR. IEEE Computer Society, 2003, pp.146–151. DOI: 10.1109/ICIAP.2003.1234041.
72. A. Fusiello et al. A Multimodal Electronic Travel Aid Device. In: *Proceedings of the Fourth IEEE International Conference on Multimodal Interfaces (ICMI)*. (October 14–16, 2002). (Acceptance rate: 43%). IEEE Computer Society, 2002, pp.39–44. DOI: 10.1109/ICMI.2002.1166966.
73. A. Fusiello et al. Model Acquisition by Registration of Multiple Acoustic Range Views. In: *Proceedings of the 7th European Conference on Computer Vision (ECCV)*. Ed. by A. Heyden et al. Vol. 2351. Lecture Notes in Computer Science. (Acceptance rate: 38%). Springer, 2002, pp.805–819. DOI: 10.1007/3-540-47967-8_54.
74. V. Murino et al. Reconstruction of Complex Environments by Robust Pre-aligned ICP. In: *Proceedings of the International Conference on 3-D Digital Imaging and Modeling (3DIM)*. (May 28–June 1, 2001). IEEE Computer Society Press, 2001, pp.187–194. DOI: 10.1109/IM.2001.924432.
75. A. Valinetti, A. Fusiello, and V. Murino. Model tracking for Video-based Virtual Reality. In: *Proceedings of the 11th International Conference on Image Analysis and Processing (ICIAP)*. (September 26–28, 2001). (Oral acceptance rate: 28%). IAPR. IEEE Computer Society Press, 2001, pp.372–377. DOI: 10.1109/ICIAP.2001.957038.
76. V. Murino et al. 3D Mosaicing for Environment Reconstruction. In: *Proceedings of the International Conference on Pattern Recognition (ICPR)*. (September 3–8, 2000). Vol. 3. (Acceptance rate: 68%). IAPR. IEEE Computer Society Press, 2000, pp.362–366. DOI: 10.1109/ICPR.2000.903559.
77. A. Censi, A. Fusiello, and V. Roberto. Image Stabilization by Features Tracking. In: *Proceedings of the 10th International Conference on Image Analysis and Processing (ICIAP)*. (September 27–29, 1999). (Acceptance rate: 57%). IAPR. IEEE Computer Society Press, 1999, pp.665–667. DOI: 10.1109/ICIAP.1999.797671.
78. A. Fusiello et al. Virtual Environment Modeling by Integrated Optical and Acoustic Sensing. In: *Proceedings of the 2nd International Conference on 3-D Digital Imaging and Modeling (3DIM)*. (October 4–8, 1999). IEEE Computer Society Press, 1999, pp.437–446. DOI: 10.1109/IM.1999.805375.
79. T. Tommasini et al. Making Good Features Track Better. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 23–25, 1998). (Acceptance rate: 30%). IEEE Computer Society Press, 1998, pp.178–183. DOI: 10.1109/CVPR.1998.698606.
80. A.A. Bertossi, A. Fusiello, and L.V. Mancini. Fault-Tolerant Deadline-Monotonic Algorithm for Scheduling Hard-Real-Time Tasks. In: *Proceedings of the 11th International Parallel Processing Symposium*. (April 1–5, 1997). (Acceptance rate: 38%). IEEE Computer Society Press, 1997, pp.133–138. DOI: 10.1109/IPPS.1997.580868.
81. A. Fusiello, V. Roberto, and E. Trucco. Efficient Stereo with Multiple Windowing. In: *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*. (June 17–19, 1997). (Acceptance rate: 32%). IEEE Computer Society Press, 1997, pp.858–863. DOI: 10.1109/CVPR.1997.609428.
82. A. Fusiello, E. Trucco, and A. Verri. Rectification with Unconstrained Stereo Geometry. In: *Proceedings of the British Machine Vision Conference (BMVC)*. (September 8–11, 1997). Ed. by A. F. Clark. (Acceptance rate: 62%). BMVA Press, GB, 1997, pp.400–409.

The full list of papers with links to electronic copies is available at:
<http://www.diegmi.uniud.it/fusiello/index.php/Publications>.

INVITED SEMINARS:

Invited talks

Invited talks

- *Synchronization problems*. Università di Modena e Reggio Emilia - Dipartimento di Ingegneria "Enzo Ferrari", October 21, 2016.
- *Synchronization problems*. European Centre for Living Technology (ECLT), Venice, October 14, 2016.
- *Structure from motion: historical overview and recent trends*. Dipartimento di Ingegneria dell'Informazione dell'Università di Firenze, May 25, 2015.
- *Synchronization problems*. IUT Le Creusot - Université de Bourgogne, France, December 10, 2015.
- *Structure from motion: state of the art, examples and open issues*. Uppsala (Sweden), May 27, 2014.
- *Structure and motion with Samantha*. Escola Técnica Superior d'Enginyeria, Universitat Rovira i Virgili, Tarragona (Spain), November 11, 2011.
- *Structure and motion with Samantha*. Istituto Italiano di Tecnologia, Genova, October 17, 2011.
- *Recupero di struttura e di moto da immagini non calibrate*. IASF/INAF, Palermo, December 18, 2009.
- *Robust Multiple Structures Estimation and Architectural Modelling*. Dipartimento di Sistemi e Informatica dell'Università di Firenze, May 29, 2009.
- *Robust Multiple Structures Estimation with J-linkage*. LASMEA (CNRS) laboratory in Clermont-Ferrand (France), October 24, 2008.
- *Robust Multiple Structures Estimation with J-linkage*. IUT Le Creusot - Université de Bourgogne (France), October 7, 2008.
- *Propagation of geometric constraints in 3D modelling*. CRS4, Pula (Cagliari), April 17, 2007.
- *3-D Reconstruction from Images*. University of California, Santa Barbara (USA), June 9, 2006.
- *Reconstruction with Interval Constraints Propagation*. University of California, Los Angeles (USA), June 12, 2006.
- *Collineations and image mosaics*. Heriot-Watt University, Edinburgh (UK), May 9, 2003.
- *Image-based Rendering*. Heriot-Watt University, Edinburgh (UK), May 15, 2003.
- *Il progetto VENICE: realtà aumentata per veicoli subacquei telecomandati*. Dipartimento di Matematica, Università di Bologna, April 5, 2000.
- *Prospettive di ricerca tra Visione e Grafica*. DISI, Università di Genova, November 24, 2000.
- *L'algoritmo SMW per il calcolo della disparità stereo*. DISI, Università di Genova, April 30, 1998.
- *Robust Feature Tracking*. California Institute of Technology, Pasadena (USA), July 2, 1998.
- *Rectification of Stereo Pairs*. Heriot-Watt University, Edinburgh (UK), November 17, 1997.
- *Un algoritmo per il calcolo della disparità stereo*.IRST, Trento, February 15, 1997.
- *A Symmetry Based Stereo Algorithm*. Heriot-Watt University, Edinburgh (UK), December 18, 1996.

TEACHING EXPERIENCE:

Undergraduate and graduate teaching

- Graduate module on Computer Vision, University of Udine (I), degree course in Electronic Engineering, since 2012.
- Undergraduate module on Fundamentals of Computer Science, University of Udine (I), degree course in Civil/Mechanical Engineering, since 2012.
- Graduate module on Computer Vision, University of Verona (I), degree course in Computer Science, 2001 - 2011.
- Undergraduate module on Computer Graphics, University of Verona (I), degree course in Computer Science, 2002 - 2011.
- Module on Human-Computer Interaction, University of Verona (I), degree course in Communication Science, 2003 - 2006.
- Undergraduate module on Programming (in Java), University of Verona (I), degree course in Computer Science, 1998 - 2001.

Invited lectures

- *The devil is in the details: anatomy of a structure-from-motion pipeline*. Tutorial at the *International Computer Vision Summer School*, 14-20 July 2013, Calabria, IT.
- *Introduction to image-based modeling*. Tutorial at the VISMAC IAPR Summer school, 23 October 2012, Genova, IT.
- *Scuola di fotogrammetria, computer vision e scansione laser*. International Centre For Mechanical Sciences (CISM), Udine, 14-16/4/2010.
- *Recenti sviluppi nella ricostruzione tridimensionale da immagini*. Tutorial at the VISMAC IAPR Summer school, 11 November 2010, Catania, IT.
- *Elements of Geometric Computer Vision* (Short course). Master VIBOT (Erasmus Mundus) at IUT Le Creusot - Université de Bourgogne, 8-29/10/2008.
- *Image-based rendering methods*. Summer school in Information Engineering, University of Padova, Brixen, July 2007.
- *Elements of Geometric Computer Vision*. Tutorial. 28th Annual Symposium of the German Association for Pattern Recognition, Berlin, September 2006.
- *Problemi ed algoritmi di calibrazione delle telecamere*. Tutorial at the VISMAC IAPR Summer school, 29 September 2006, Palermo, IT.
- *Introduction to Computer Graphics*. Doctoral School in Information Engineering, University of Padova (I), July 2006.
- *Elements of Geometric Computer Vision*. University of California, Santa Barbara, Department of Electrical and Computer Engineering. Interactive Digital Multimedia IGERT Programme. June 2006.
- *Elements of Multiple View Geometry for Computer Vision*. Doctoral School in Information Engineering, University of Padova (I), June-July 2005.
- *Regularization Machines for Learning* Doctoral course “Modelli per l’Analisi e l’Elaborazione dei Dati”, University of Verona, 2003.

PhD thesis supervised

- Eleonora Maset. "Analysis and classification of full-waveform LiDAR data". Dottorato di ricerca in Ingegneria Industriale e dell'Informazione. Università degli Studi di Udine, XXXI ciclo.
- Federica Arrigoni. "Synchronization Problems in Computer Vision". Dottorato di ricerca in Ingegneria Industriale e dell'Informazione. Università degli Studi di Udine, XXX ciclo.
- Luca Magri. "Stima di modelli ibridi per dati eterogenei". Dottorato di Ricerca in Matematica e Statistica per le Scienze Computazionali. Università degli Studi di Milano, 2015.
- Francesco Malapelle. "Towards a Complete Pipeline for 3DS Conversion of Monocular Uncalibrated Images". Dottorato di ricerca in Ingegneria Industriale e dell'Informazione. Università degli Studi di Udine, 2015.
- Valeria Garro. "Image localization and parsing using 3D structure". TDottorato di Ricerca in Informatica. Dipartimento di Informatica, Università di Verona, 2013.
- Roberto Toldo. "Towards automatic acquisition of high-level 3D models from images". Dottorato di Ricerca in Informatica. Dipartimento di Informatica, Università di Verona, 2013.
- Riccardo Gherardi. "Advances in 3D reconstruction". Dottorato di Ricerca in Informatica. Dipartimento di Informatica, Università di Verona, 2010.
- Davide Moschini. "Tracking human motion with multiple cameras using articulated ICP with hard constraints". Tesi di Dottorato di Ricerca. Dipartimento di Informatica, Università di Verona, 2009.
- Michela Farenzena. "Geometry and Appearance Modelling from Images". Tesi di Dottorato di Ricerca. Dipartimento di Informatica, Università di Verona, 2007.
- Andrea Colombari. "Image-Based Techniques for View Synthesis and Video Editing". Dottorato di Ricerca in Informatica. Dipartimento di Informatica, Università di Verona, 2006.
- Umberto Castellani. "Image-based modeling: from sensory data to 3D models". Dottorato di Ricerca in Informatica. Dipartimento di Informatica, Università di Verona, 2003. con V. Murino.

Laurea Thesis, Advisor:

- more than 50 thesis supervised.

PROFESSIONAL SERVICE:

• Scientific boards

- **Co-chair** of ISPRS WG II/1 (International Society for Photogrammetry and Remote Sensing), since 2016.
- **Member** of the Executive Board of the Italian chapter of Eurographics, from 2006 to 2009.

• Editorial board:

- **Associate editor** of *IET Computer Vision*, from 2013 to 2016.
- **Associate editor** of *Pattern Recognition*, from 2006 to 2009.
- **Guest editor** (with Hong Bin Zha, Hideo Saito e Vittorio Murino), of the "Special issue on 3-D Image Analysis and Modelling", IEEE Transactions on System, Man, and Cybernetics, August 2003.

• Conference organization:

- **Area chair** of the 19th *International Conference on Image Analysis and Processing*, 11-15 September 2017, Catania, IT (with D. Fofi)
- **Area chair** at the 18th *International Conference on Image Analysis and Processing*, 7-11 September 2015, Genova, IT (with M. Goesele)

- **Workshop Chair** at the 12th *European Conference on Computer Vision*, 7-13 October 2012, Firenze, IT (con V. Murino)
- **Poster Chair** at the 33rd *Annual Conference of the European Association for Computer Graphics (Eurographics)*, 13-18 May 2012, Cagliari, IT (with M. Wimmer)
- **General chair** of the 7th *Eurographics Italian Chapter Conference*, 22-23 October 2009, Verona, IT. (with U. Castellani, A. Giachetti and V. Murino).
- **Chair** of the special session *Computer Vision for Augmented Reality and Computer Augmented Environments*, within the 13th *International Conference on Image Analysis and Processing*, 6-8 September 2005, Cagliari, IT (with V. Murino)
- **Program chair** of the first “Convegno del Gruppo Italiano Ricercatori in Pattern Recognition” (GIRPR), 17-18 June 2002, Verona, IT.
- **Chair** of the *Young Scientist Forum*, special session within the 10th *International Conference on Image Analysis and Processing*, 21-29 September 1999, Venezia, IT.
- **Program committee / Reviewer:**
 - *IEEE International Conference on Computer Vision and Pattern Recognition (CVPR)* since 2005 (no 2017).
 - *IEEE International Conference on Computer Vision (ICCV)* since 2005 (no 2017).
 - *European Conference on Computer Vision (ECCV)* since 2006.
 - *3D Vision Conference (3DV)* since 2014.
 - *International Conference on Image Analysis and Processing (ICIAP)* 2007, 2009, 2013.
 - *British Machine Vision Conference (BMVC)* 2006, 2007, 2017.
 - *International Conference on Image Processing (ICIP)* 2008, 2009, 2010.
 - *International Conference on Computer Vision/Computer Graphics Collaboration Techniques and Applications (MIRAGE)* 2007, 2009.
- **Keynotes and tutorials:**
 - Keynote speech “Structure from motion: state of the art, examples and open issues.” *ISPRS Technical Commission V Symposium*, 23-25 June 2014, Riva del Garda, IT.
 - Tutorial “Structure from motion: historical overview and recent trends.” 18th *International Conference on Image Analysis and Processing*, 7-11 September 2015, Genova, IT.
 - Tutorial “Elements of Geometric Computer Vision.” 28th *Annual Symposium of the German Association for Pattern Recognition*, 12 September 2006, Berlin, DE.
- **Other events:**
 - “*VISMAC international summer school*”, Grado (GO) 13-17/6/2016 (organizing committee).
 - “*Scuola di fotogrammetria, computer vision e scansione laser: paradigmi ed algoritmi.*” International Centre for Mechanical Sciences (CISM), Udine, 14-16/4/2010 (organizer with F. Crosilla)
 - Serie “*VIPS Advanced School on Computer Vision, Pattern Recognition and Image Processing*” at the Dipartimento di Informatica, Università di Verona, from 2004 to 2010 (organizer with V. Murino)
- **Journal Reviewer:**
 - Among the others: *IEEE Transaction on Pattern Analysis and Machine Intelligence*, *IEEE Transaction on Circuits And Systems For Video Technology*, *IEEE Transactions on Multimedia*, *IEEE Transaction on System, Man, and Cybernetics*, *IEEE Journal on Oceanic Engineering*, *IEEE Transaction on Image Processing*, *IEEE Transaction on Medical Imaging*, *Machine Vision and Applications*, *Computer Vision and Image Understanding*, *Image and Vision Computing Journal*, *Pattern Recognition Letters*, *ISPRS Journal on Photogrammetry and Remote Sensing*
- **Doctoral Thesis, Examining Committee Member:**
 - Danda Pani Paudel (Université de Bourgogne, 2015)
 - Luca Cosmo (Università Ca' Foscari Venezia, 2015)

- Dong Han (Politecnico di Milano, 2014),
- Hoi Sim Wong (University of Adelaide, 2013)
- Fabio Bellavia (Università di Palermo, 2011),
- Andrea Albarelli (Università Ca' Foscari Venezia, 2010),
- Thierry Molinier (Université de Bourgogne, 2009)
- Luca Ballan (Università di Padova, 2009),
- Stefano Arca (Università di Milano, 2007),
- Simone Gasparini (Politecnico di Milano, 2007),
- Pietro Zanuttigh (Università di Padova, 2007),
- Elisabetta Del Ponte (Università di Genova, 2007),
- Marco Zuliani (University of California Santa Barbara, 2006),
- Miguel Arredondo (Heriot-Watt Univ. Edinburgh, 2004).

UNIVERSITY SERVICE:

- **Rectors's Delegate** for the University Languages Centre (CLAV), University of Udine, since 2015.
- **Director** of the Master program in Computer Game Development, University of Verona, 2009-2011.
- **Vice-President** of the Computer Science and Engineering Graduate Studies Board, University of Verona, 2010-2011.
- **Member** (elected) of the Faculty Hiring and Promotion Committee, University of Verona, from 2006 to 2009.
- **Member** (elected) of the Graduate School of Sciences Engineering Medicine board, University of Verona, from 2006 to 2009.

September 29, 2017

Andrea Fusiello