List of Publications

Margrit Gelautz

December 2020

Book (ed.) and Book Chapters

[1] M. Barreda-Àngeles, F. Battisti, G. Boato, M. Carli, E. Dumic, M. Gelautz, C. Hewage, D. Kukolj, P. Le-Callet, A. Liotta, C. Pasquini, A. Pereda-Baños, C. Politis, D. Sandic, M. Tekalp, M. Torres-Vega, and V. Zlokolica: Quality of experience and quality of service metrics for 3D content. In: P. Assunção, A. Gotchev (eds.), 3D Visual Content Creation, Coding and Delivery. Signals and Communication Technology, pp. 267-297. Cham: Springer, 2019. doi: https://doi.org/10.1007/978-3-319-77842-6_10.

[2] K. Fliegel, F. Battisti, M. Carli, M. Gelautz, L. Krasula, P. Le-Callet, and V. Zklokolica: 3D visual content datasets. In: P. Assunção, A. Gotchev (eds.), 3D Visual Content Creation, Coding and Delivery. Signals and Communication Technology, pp. 299-325. Cham: Springer, 2019. doi: https://doi.org/10.1007/978-3-319-77842-6_11.

[3] B. Kisacanin and M. Gelautz (eds.): Advances in Embedded Computer Vision. In Series "Advances in Computer Vision and Pattern Recognition", 287 pages, Cham Heidelberg New York Dordrecht London: Springer, 2014. doi: https://doi.org/10.1007/978-3-319-09387-1.

[4] H. Ganster, M. Gelautz, A. Pinz, M. Binder, H. Pehamberger, M. Bammer, and J. Krocza: Initial results of automated melanoma recognition. In: G. Borgefors (ed.), Theory and Application of Image Analysis II - Selected Papers from the 9th Scandinavian Conference on Image Analysis, World Scientific, pp. 343-354, 1995. doi: https://doi.org/10.1142/9789812830579_0027.

Guest Editorial

[5] S. Mattoccia, B. Kisačanin, M. Gelautz, S. Chai, A.-N. Belbachir, G. Dedeoglu, and F. Stein: Guest editorial: special issue on embedded computer vision. Journal of Signal Processing Systems, vol. 90, pp. 873–876, 2018. doi: https://doi.org/10.1007/s11265-018-1365-8.

Journals

[6] T. Rittler, F. Seitner, and M. Gelautz: Structured-light-based depth reconstruction using low-light pico projector, Journal of Mobile Multimedia, vol. 12, no. 1&2, pp. 125-137, 2016. ISSN: 1550-4646 (Print Version), ISSN: 1550-4654 (Online Version). doi: https://doi.org/10.1145/2837126.2837154.

[7] E. Piatkowska, A. Belbachir, and M. Gelautz: Cooperative and asynchronous stereo vision for dynamic vision sensors, Measurement Science & Technology, vol. 25, no. 5, pp. 1-8, 2014. doi: https://doi.org/10.1088/0957-0233/25/5/055108.

[8] J. Kogler, F. Eibensteiner, M. Humenberger, C. Sulzbachner, M. Gelautz, and J. Scharinger: Enhancement of sparse silicon retina-based stereo matching using belief propagation and two-stage post-filtering; Journal of Electronic Imaging, vol. 23, no. 4, pp. 1-15, 2014. doi: https://doi.org/10.1117/1.JEI.23.4.043011.

[9] S. Ghuffar, N. Brosch, N. Pfeifer, and M. Gelautz: Motion estimation and segmentation in depth and intensity videos, Integrated Computer-Aided Engineering, vol. 21, no. 3, pp. 203-218, 2014. doi: https://doi.org/10.3233/ICA-130456.

[10] A. Hosni, M. Bleyer, and M. Gelautz: Secrets of adaptive support weight techniques for local stereo matching, Computer Vision and Image Understanding, vol. 117 no. 6, pp. 620-632, 2013. doi: https://doi.org/10.1016/j.cviu.2013.01.007.

[11] A. Hosni, C. Rhemann, M. Bleyer, C. Rother, and M. Gelautz: Fast cost-volume filtering for visual correspondence and beyond, IEEE Transactions on Pattern Analysis and Machine Intelligence, vol. 35, no. 2, pp. 504-511, 2013. doi: https://doi.org/10.1109/TPAMI.2012.156.

[12] N. Brosch, A. Hosni, G. Ramachandran, L. He, and M. Gelautz: Content generation for 3D video/TV, Journal e&i: Elektrotechnik und Informationstechnik, vol. 128, no. 10, pp. 359-365, 2011. doi: https://doi.org/10.1007/s00502-011-0046-0.

[13] F. Seitner, M. Bleyer, M. Gelautz, and R. Beuschel: Evaluation of data-parallel H.264 decoding approaches for strongly resource-restricted architectures, Multimedia Tools and Applications, vol. 53, no. 2, pp. 431-457, 2011. doi: https://doi.org/10.1007/s11042-010-0501-7.

[14] F. Seitner, M. Bleyer, R. Beuschel, and M. Gelautz: Development of a multi-core HD decoder using a high-level simulation approach, IEEE Transactions on Circuits and Systems for Video Technology (TCSVT), vol. 19, no. 11, pp. 1667-1679, 2009. doi: https://doi.org/10.1109/TCSVT.2009.2031523.

[15] D. Markovic, M. Gelautz: Experimental combination of intensity and stereo edges for improved snake segmentation, Pattern Recognition and Image Analysis, vol. 17, no. 1, pp. 131-135, 2007. doi: https://doi.org/10.1134/S1054661807010154.

[16] M. Bleyer and M. Gelautz: Graph-cut based stereo matching using image segmentation with symmetrical treatment of occlusions, Signal Processing: Image Communication

(Special Issue on Three-dimensional Video and Television), vol. 22, no. 2, pp. 127-143, 2007. doi: https://doi.org/10.1016/j.image.2006.11.012.

[17] M. Bleyer, M. Gelautz, and C. Rhemann: Colour segmentation-based computation of dense optical flow with application to video object segmentation, ÖGAI Journal, vol. 24, no. 1, pp. 11 – 15, 2005.

[18] M. Bleyer, M. Gelautz: A layered stereo matching algorithm using image segmentation and global visibility constraints, ISPRS Journal of Photogrammetry and Remote Sensing, vol. 59, no. 3, pp. 128-150, 2005. doi: https://doi.org/10.1016/j.isprsjprs.2005.02.008. **U.V. Heleva Award – Best Paper of the Year 2004**

[19] E. Stavrakis and M. Gelautz: Stereo painting: pleasing the third eye, Journal of 3-D Imaging, vol. 168, pp. 20-23, 2005.

[20] M. Gelautz, W. Vogl, and M. Schmutz, Applications of digital high-speed video cameras (in German), Österreichische Zeitschrift für Vermessung und Geoinformation, vol. 92, no. 1, pp. 3-12, 2004.

[21] M. Gelautz, P. Paillou, C. Chen, and H. Zebker, Radar stereo- and interferometry-derived digital elevation models: comparison and combination using Radarsat and ERS-2 imagery, International Journal of Remote Sensing, vol. 24, no. 24, pp. 5243-5264, 2003. doi: https://doi.org/10.1080/0143116031000115139.

[22] A. Goller, M. Gelautz, and F. Leberl, Parallel image processing applied to radar shape-from-shading, Photogrammetric Engineering and Remote Sensing, vol. 65, no. 3, pp. 259-267, 1999.

[23] P. Paillou and M. Gelautz, Relief reconstruction from SAR stereo pairs: The "Optimal Gradient" matching method, IEEE Transactions on Geoscience and Remote Sensing, vol. 37, no. 4, pp. 2099-2107, 1999.

[24] M. Gelautz, H. Frick, H. Raggam, J. Burgstaller, and F. Leberl, SAR image simulation and analysis of alpine terrain, ISPRS Journal of Photogrammetry and Remote Sensing, vol. 53, no. 1, pp. 17-38, 1998. doi: https://doi.org/10.1016/S0924-2716(97)00028-2.

[25] M. Gelautz, F. Leberl, and W. Kellerer-Pirklbauer, Image enhancement and evaluation: SAR layover and shadows, International Journal of Electronics and Communications, AEÜ, vol. 50, no. 2, pp. 100-105, 1996.

Conference Proceedings

[26] C. Kapeller, B. Sespede, M. Nezveda, M. Labschütz, S. Flöry, F. Seitner, M. Gelautz: Objective and subjective evaluation of a multi-stereo 3D reconstruction system, IS&T International Symposium on Electronic Imaging - Stereoscopic Displays and Applications, pp. 138-1-138-7, 2020. doi: http://dx.doi.org/10.2352/ISSN.2470-1173.2020.2.SDA-138.

[27] D. Stoeva and M. Gelautz: Body language in affective human-robot interaction, Companion of the ACM/IEEE International Conference on Human-Robot Interaction, pp. 606-608, 2020. doi: https://doi.org/10.1145/3371382.3377432.

[28] A. Unger, M. Gelautz, F. Seitner, and M. Hödlmoser: A study on training data selection for object detection in nighttime traffic scenes, IS&T International Symposium on Electronic Imaging - Autonomous Vehicles and Machines Conference, pp. 203-1-203-6, 2020. doi: https://doi.org/10.2352/ISSN.2470-1173.2020.16.AVM-203.

[29] F. Groh, D. Schörkhuber, and M. Gelautz: A tool for semi-automatic ground truth annotation of traffic videos, IS&T International Symposium on Electronic Imaging - Autonomous Vehicles and Machines Conference, pp. 200-1-200-6, 2020. doi: https://doi.org/10.2352/ISSN.2470-1173.2020.16.AVM-200.

[30] M. Schörghuber, D. Steininger, Y. Cabon, M. Humenberger, and M. Gelautz: SLAMANTIC – leveraging semantics to improve VSLAM in dynamic environments, International Conference on Computer Vision (ICCV) - Workshop on Deep Learning for Visual SLAM, pp. 1-8, 2019. doi: https://doi.org/10.1109/ICCVW.2019.00468.

[31] B. Sespede, F. Seitner, and M. Gelautz: Semi-automatic post-processing of multi-view 2D-plus-depth video, IS&T International Symposium on Electronic Imaging - Stereoscopic Displays and Applications XXX, pp. 657-1-657-5, 2019. https://doi.org/10.2352/ISSN.2470-1173.2019.3.SDA-657.

[32] A. Wittmann, M. Gelautz, and F. Seitner: Evaluation study on semantic object labelling in street scenes, ARW&OAGM Workshop, pp. 201-202, 2019. doi: https://doi.org/10.3217/978-3-85125-663-5-45.

[33] H. Hofer, F. Seitner, and M. Gelautz: An end-to-end system for real-time point cloud visualization, International Conference on 3D Immersion (IC3D), pp. 1-8, 2018. doi: https://doi.org/10.1109/IC3D.2018.8657915.

[34] M. Schörghuber, M. Wallner, R. Jung, M. Humenberger, and M. Gelautz: Vision-based autonomous feeding robot, OAGM Workshop - Medical Image Analysis, pp. 111-115, 2018, doi: https://doi.org/10.3217/978-3-85125-603-1.

[35] C. Kapeller, B. Sespede, M. Nezveda, M. Labschütz, S. Flöry, F. Seitner, and M. Gelautz: A workflow for 3D model reconstruction from multi-view depth acquisitions of dynamic scenes, OAGM Workshop - Medical Image Analysis, pp. 116-119, 2018, doi: https://doi.org/10.3217/978-3-85125-603-1-24.

[36] E. Piatkowska, J. Kogler, A. Belbachir, and M. Gelautz: Improved cooperative stereo matching for dynamic vision sensors with ground truth evaluation, IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), pp. 370-377, 2017. doi: https://doi.org/10.1109/CVPRW.2017.51.

[37] F. Schörkhuber, Seitner, B. Salzbrunn, M. Gelautz, and G. Braun: Intelligent film assistant for personalized video creation on mobile devices, International Conference on

Advances in Mobile Computing & Multimedia (MoMM), pp. 210-215, 2017. doi: https://doi.org/10.1145/3151848.3151881.

[38] T. Rittler, M. Nezveda, F. Seitner, and M. Gelautz: Depth-guided disocclusion inpainting for novel view synthesis, OAGM&ARW Joint Workshop on Vision, Automation & Robotics, pp. 160-164, 2017. doi: https://doi.org/10.3217/978-3-85125-524-9-34.

[39] M. Vorstandlechner, M. Gelautz, and C. Putz: Digital playbook - a teaching tool for American Football, IS&T International Symposium on Electronic Imaging - Computer Vision Applications in Sports, pp. 38-44, 2017, doi: https://doi.org/10.2352/ISSN.2470-1173.2017.16.CVAS-347.

[40] W. Zellinger, B. Moser, A. Chouikhi, F. Seitner, M. Nezveda, and M. Gelautz: Linear optimization approach for depth range adaption of stereoscopic videos, IS&T International Symposium on Electronic Imaging - Stereoscopic Displays and Applications XXVII, pp. 1-6, 2016. doi: https://doi.org/10.2352/ISSN.2470-1173.2016.5.SDA-431.

[41] N. Brosch, T. Schausberger, and M. Gelautz: Towards perceptually coherent depth maps in 2D-to-3D conversion, IS&T International Symposium on Electronic Imaging - Stereoscopic Displays and Applications XXVII, pp. 1-11, 2016. doi: https://doi.org/10.2352/ISSN.2470-1173.2016.5.SDA-433.

[42] M. Nezveda and M. Gelautz: 3D scene reconstruction via hierarchical stereo matching, Vienna Young Scientists Symposium, pp. 72 – 73, 2016.

[43] T. Rittler, F. Seitner, and M. Gelautz: Structured-light-based depth reconstruction using low-light pico projector, International Conference on Advances in Mobile Computing and Multimedia (MoMM 2015), pp. 334-337, 2015. doi: https://doi.org/10.1145/2837126.2837154.

[44] F. Seitner, M. Nezveda, M. Gelautz, G. Braun, C. Kapeller, W. Zellinger, and B. Moser: Trifocal system for high-quality inter-camera mapping and virtual view synthesis, International Conference on 3D Imaging (IC3D), pp. 1-8, 2015. doi: https://doi.org/10.1109/IC3D.2015.7391819.

[45] M. Ivancsics, N. Brosch, and M. Gelautz: Efficient depth propagation in videos with GPU-acceleration, IEEE Visual Communications and Image Processing (IEEE VCIP), pp. 1-4, 2014. doi: https://doi.org/10.1109/VCIP.2014.7051557.

[46] T. Akhavan, H. Yoo, and M. Gelautz: Evaluation of LDR, tone mapped and HDR stereo matching using cost-volume filtering approach, EURASIP, pp. 1-6, 2014.

[47] T. Akhavan, C. Kapeller, J. Cho, and M. Gelautz: Stereo HDR disparity map computation using structured light, HDRi2014 - Second International Conference and SME Workshop on HDR imaging, pp. 1-4, 2014.

[48] M. Nezveda, N. Brosch, F. Seitner, and M. Gelautz: Depth map post-processing for depth-image-based rendering: A user study, SPIE Electronic Imaging Conference, vol. 9011, pp. 170-178, 2014. doi: https://doi.org/10.1117/12.2039771.

[49] N. Brosch, M. Nezveda, M. Gelautz, and F. Seitner: Efficient quality enhancement of disparity maps based on alpha matting, SPIE Electronic Imaging, pp. 185-194, 2014. doi: https://doi.org/10.1117/12.2035361 .

[50] E. Piatkowska, A. Belbachir, and M. Gelautz: Asynchronous stereo vision for event-driven dynamic stereo sensor using an adaptive cooperative approach, IEEE International Conference on Computer Vision (ICCV) Workshops, pp. 1-5, 2013. doi: https://doi.org/10.1109/ICCVW.2013.13.

[51] J. Kogler, F. Eibensteiner, M. Humenberger, M. Gelautz, and J. Scharinger: Ground truth evaluation for event-based silicon retina stereo data, IEEE Conference on Computer Vision and Pattern Recognition Workshops, pp. 1-8, 2013. doi: https://doi.org/10.1109/CVPRW.2013.98.

[52] M. Hornacek, C. Rhemann, M. Gelautz, and C. Rother: Depth super resolution by rigid body self-similarity in 3D, IEEE Computer Vision and Pattern Recognition, pp. 1123-1130, 2013. doi: https://doi.org/10.1109/CVPR.2013.149.

[53] J. Cho, S. Ikehata, H. Yoo, M. Gelautz, and K. Aizawa: Depth map upsampling using cost-volume filtering, 11th IEEE IVMSP Workshop, pp. 1-4, 2013.

[54] T. Akhavan, H. Yoo, M. Gelautz: A framework for HDR stereo matching using multi-exposed images, HDRi2013 - First International Conference and SME Workshop on HDR imaging, pp. 1-4, 2013.

[55] Hosni, M. Gelautz, and M. Bleyer: Accuracy-efficiency evaluation of adaptive support weight techniques for local stereo matching, Joint 34th DAGM and 36th OAGM Symposium, pp. 337-346, 2012. doi: https://doi.org/10.1007/978-3-642-32717-9_34.

[56] N. Brosch, A. Hosni, C. Rhemann, and M. Gelautz: Spatio-temporally coherent interactive video object segmentation via efficient filtering, Joint 34th DAGM and 36th OAGM Symposium, pp. 418-427, 2012. doi: https://doi.org/10.1007/978-3-642-32717-9_42.

[57] E. Piatkowska, A. Belbachir, S. Schraml, and M. Gelautz: Spatiotemporal multiple persons tracking using dynamic vision sensor, The Eighth IEEE Workshop on Embedded Vision (in conjunction with CVPR 2012), pp. 35-40, 2012. doi: https://doi.org/10.1109/CVPRW.2012.6238892.

[58] M. Eisenbarth, F. Seitner, and M. Gelautz: Quality analysis of virtual views on stereoscopic video content, 9th International Conference on Systems, Signals and Image Processings, pp. 333-336, 2012.

[59] S. Ghuffar, N. Brosch, N. Pfeifer, M. Gelautz: Motion segmentation in videos from time of flight cameras, 9th International Conference on Systems, Signals and Image Processing (IWSSIP 2012), pp. 342-346, 2012.

[60] A. Hosni, C. Rhemann, M. Bleyer, and M. Gelautz: Temporally consistent disparity and optical flow via efficient spatio-temporal filtering, The Fifth Pacific-Rim Symposium on Image and Video Technology; in: Advances in Image and Video Technology, pp. 165-177, 2011. doi: https://doi.org/10.1007/978-3-642-25367-6_15.

[61] A. Hosni, M. Bleyer, C. Rhemann, M. Gelautz, and C. Rother: Real-time local stereo matching using guided image filtering, IEEE International Conference on Multimedia and Expo (ICME 2011), pp. 1-6, 2011. doi: https://doi.org/10.1109/ICME.2011.6012131.

[62] C. Rhemann, A. Hosni, M. Bleyer, C. Rother, M. Gelautz: Fast cost-volume filtering for visual correspondence and beyond, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 3017-3024, 2011. doi: https://doi.org/10.1109/CVPR.2011.5995372.

[63] L. He, M. Bleyer, and M. Gelautz: Object removal by depth-guided inpainting, OEAGM/AAPR Workshop, pp. 1-8, 2011.

[64] N. Brosch, C. Rhemann, and M. Gelautz: Segmentation-based depth propagation in videos, OEAGM/AAPR Workshop 2011, pp. 1-8, 2011. **Best Paper Award**

[65] Hosni, C. Rhemann, M. Bleyer, and M. Gelautz: Temporally consistent disparity and optical flow via efficient spatio-temporal filtering, The Fifth Pacific-Rim Symposium on Image and Video Technology; in: Advances in Image and Video Technology, pp. 165-177, 2011. doi: https://doi.org/10.1007/978-3-642-25367-6_15.

[66] C. Rhemann, C. Rother, P. Kohli, and M. Gelautz: A spatially varying PSF-based prior for alpha matting, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 2149-2156, 2010. doi: https://doi.org/10.1109/CVPR.2010.5539894.

[67] A. Hosni, M. Bleyer, and M. Gelautz: Near real-time stereo with adaptive support weight approaches, International Symposium 3D Data Processing, Visualization and Transmission (3DPVT), pp. 1-8, 2010.

[68] A. Hosni, M. Bleyer, M. Gelautz, and C. Rhemann: Geodesic adaptive support weight approach for local stereo matching, Computer Vision Winter Workshop (CVWW), pp. 60-65, 2010. doi: https://doi.org/10.1109/ICIP.2009.5414478.

[69] A. Hosni, M. Bleyer, M. Gelautz, and C. Rhemann: Local stereo matching using geodesic support weights, IEEE International Conference on Image Processing (ICIP), pp. 1-4, 2009. doi: https://doi.org/10.1109/ICIP.2009.5414478.

[70] A. Hosni, M. Bleyer, M. Gelautz: Image segmentation via iterative geodesic averaging, International Conference on Image and Graphics, pp. 250-255, 2009. doi: https://doi.org/10.1109/ICIG.2009.116.

[71] M. Bleyer and M. Gelautz: Temporally consistent disparity maps from uncalibrated stereo videos, International Symposium on Image and Signal Processing and Analysis (ISPA), pp. 383-387, 2009. doi: https://doi.org/10.1109/ISPA.2009.5297701.

[72] H. Jordan, F. Seitner, M. Bleyer, M. Gelautz: Runtime-optimised intra-4x4 mode-decision for H.264/AVC video encoding, International Symposium on Image and Signal Processing and Analysis (ISPA), pp. 227 – 232, 2009. doi: https://doi.org/10.1109/ISPA.2009.5297753.

[73] M. Bleyer, M. Gelautz, C. Rother, and C. Rhemann: A stereo approach that handles the matting problem via image warping, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 501-508, 2009. doi: https://doi.org/10.1109/CVPR.2009.5206656.

[74] C. Rhemann, C. Rother, J. Wang, M. Gelautz, P. Kohli, and P. Rott: A perceptually motivated online benchmark for image matting, IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 1826-1833, 2009. doi: https://doi.org/10.1109/CVPR.2009.5206503.

[75] C. Rhemann, M. Gelautz, and B. Foelsner: An evaluation of interactive matting techniques supported by eye-tracking, SPIE Electronic Imaging 2009 - Image Quality and System Performance VI, pp. 310-318, 2009. doi: https://doi.org/10.1117/12.805379.

[76] F. Seitner, M. Bleyer, R. Schreier, and M. Gelautz: Evaluation of data-parallel splitting approaches for H.264 decoding, International Conference on Advances in Mobile Computing and Multimedia, pp. 40-49, 2008. doi: https://doi.org/10.1145/1497185.1497198.

[77] F. Seitner, M. Bleyer, and M. Gelautz: Development of multi-core video decoding platforms based on high-level architecture simulations, Junior Scientist Conference 2008, pp. 71-72, 2008. ISBN: 978-3-200-01612-5.

[78] C. Rhemann, C. Rother, and M. Gelautz: Improving color modeling for alpha matting, British Machine Vision Conference (BMVC), pp. 1155-1164, 2008. doi: https://doi.org/10.5244/C.22.115.

[79] M. Bleyer, S. Chambon, U. Poppe, and M. Gelautz: Evaluation of different methods for using colour information in global stereo matching approaches, The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, vol. XXXVII, part B3a, pp. 63-68, 2008.

[80] F. Seitner, R. Schreier, M. Bleyer, and M. Gelautz: A high-level simulator for the H.264/AVC decoding process in multi-core systems, SPIE IS&T Electronic Imaging Conference, pp. 5-16, 2008. doi: https://doi.org/10.1117/12.766423.

[81] M. Bleyer and M. Gelautz: Simple but effective tree structures for dynamic programming-based stereo matching, International Conference on Computer Vision Theory and Applications (VISAPP), pp. 415-422, 2008.

[82] E. Stavrakis and M. Gelautz: Interactive tools for image-based stereoscopic artwork, SPIE IS&T Electronic Imaging Conference - Stereoscopic Displays and Applications, pp. 575-585, 2008. doi: https://doi.org/10.1117/12.766474.

[83] F. Seitner, R. Schreier, M. Bleyer, and M. Gelautz: A macroblock-level analysis on the dynamic behaviour of an H.264 decoder, International Symposium on Consumer Electronics, pp. 1-5, 2007. doi: https://doi.org/10.1109/ISCE.2007.4382224.

[84] M. Bleyer, M. Gelautz, and C. Rhemann: Segmentation-based motion with occlusions using graph-cut optimization, DAGM Symposium, pp. 465-474, 2006. doi: https://doi.org/10.1007/11861898_47.

[85] D. Markovic and M. Gelautz: Comics-like motion depiction from stereo, International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision, pp. 155-160, 2006.

[86] C. Rhemann, M. Bleyer, and M. Gelautz: A graph-based approach to optical flow estimation, Junior Scientist Conference, pp. 61-63, 2006.

[87] M. Bleyer and M. Gelautz: Graph-based surface reconstruction from stereo pairs using image segmentation, SPIE Electronic Imaging Conference - Videometrics VIII, pp. 288-299, 2005. doi: https://doi.org/10.1117/12.586502.

[88] M. Bleyer, M. Gelautz, and C. Rhemann: Region-based optical flow estimation with treatment of occlusions, Joint Hungarian-Austrian Conference on Image Processing and Pattern Recognition (HACIPPR), pp. 235-242, 2005.

[89] E. Stavrakis, M. Bleyer, D. Markovic, and M. Gelautz: Image-based stereoscopic stylization, IEEE International Conference on Image Processing (ICIP), pp. 5-8, 2005. doi: https://doi.org/10.1109/ICIP.2005.1530314.

[90] E. Stavrakis and M. Gelautz: Computer generated stereoscopic artwork, Eurographics Workshop on Computational Aesthetics in Graphics, Visualization and Imaging, pp. 143-149, 2005. doi: https://doi.org/10.2312/COMPAESTH/COMPAESTH05/143-149.

[91] D. Markovic, M. Gelautz: Drawing the real, International Conference on Computer Graphics and Interactive Techniques in Australasia and Southeast Asia (GRAPHITE'05), pp. 237-243, 2005. doi: https://doi.org/10.1145/1101389.1101436.

[92] D. Markovic, E. Stavrakis, and M. Gelautz: Parameterized sketches from stereo images, SPIE Symposium on Electronic Imaging - Stereoscopic Displays and Applications XVI, vol. 5685, pp. 783-791, 2005. doi: https://doi.org/10.1117/12.585858.

[93] E. Stavrakis and M. Gelautz: Stereoscopic painting with varying levels of detail, SPIE Symposium on Electronic Imaging 2005 - Stereoscopic Displays and Virtual Reality Systems, pp. 450-459, 2005. doi: https://doi.org/10.1117/12.586702.

[94] D. Markovic and M. Gelautz: Experimental combination of intensity and stereo edges for improved snake segmentation, 7th International Conference on Pattern Recognition and Image Analysis: New Information Technologies, pp. 310–313, 2004.

[95] M. Gelautz, and D. Markovic: Recognition of object contours from stereo images: an edge combination approach, International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT'04), pp. 774–780, 2004. doi: https://doi.org/10.1109/TDPVT.2004.1335394.

[96] M. Bleyer and M. Gelautz: A layered stereo algorithm using image segmentation and global visibility constraints, International Conference on Image Processing (ICIP), pp. 2997 – 3000, 2004. doi: https://doi.org/10.1109/ICIP.2004.1421743. **Semi-Final IBM Best Student Paper Award - rated among the 10% of most valuable contributions.**

[97] E. Stavrakis and M. Gelautz: Image-based stereoscopic painterly rendering, Eurographics Workshop on Rendering, pp. 53-60, 2004. doi: https://doi.org/10.2312/EGWR/EGSR04/053-060.

[98] M. Gelautz, M. Brandejsky, F. Kilzer, and F. Amelung: Web-based visualization and animation of geospatial data using X3D, International Geoscience and Remote Sensing Symposium (IGARSS'04), pp. 4773-4775, 2004. doi: https://doi.org/10.1109/IGARSS.2004.1370226.

[99] M. Gelautz, E. Stavrakis, and M. Bleyer: Stereo-based image and video analysis for multimedia applications, XXth ISPRS Congress, pp. 998-1004, 2004.

[100] M. Gelautz, P. Paillou, C. Chen, and H. Zebker: A comparative study of radar stereo and interferometry for DEM generation, Fringe'03 Workshop, pp. 1-5, 2003.

[101] D. Markovic and M. Gelautz: Video object segmentation using stereo-derived depth maps, 27th Workshop of the Austrian Association for Pattern Recognition - Vision in a Dynamic World, pp. 197-204, 2003.

[102] M. Bleyer and M. Gelautz: Video-based 3D reconstruction of moving scenes using multiple stationary cameras, 27th Workshop of the Austrian Association for Pattern Recognition - Vision in a Dynamic World, pp. 181-187, 2003.

[103] S. Zillner, M. Gelautz, and M. Kallinger: "The Right Move"– A concept for a video-based choreography tool, ISPRS Commission III Symposium (Photogrammetric Computer Vision), part B, pp. 313-317, 2002.

[104] M. Gelautz, P. Paillou, and C. Chen: Topographic surface reconstruction using interferometric and stereo techniques, International Geoscience and Remote Sensing Symposium (IGARSS'99), pp. 1927-1930, 1999. doi: https://doi.org/10.1109/IGARSS.1999.774989.

[105] P. Paillou and M. Gelautz: The Optimal Gradient matching method: application to X-SAR and Magellan stereo images, International Geoscience and Remote Sensing Symposium (IGARSS'98), pp. 2357-2359, 1998. doi: https://doi.org/10.1109/IGARSS.1998.702212.

[106] R. Bolter, M. Gelautz, and F. Leberl: Simulation-based SAR stereo analysis in layover areas, International Geoscience and Remote Sensing Symposium (IGARSS'98), pp. 345-347, 1998. doi: https://doi.org/10.1109/IGARSS.1998.702900.

[107] R. Bolter, M. Gelautz, and F. Leberl: Geocoding in SAR layover areas, European Conference on Synthetic Aperture Radar (EUSAR'98), pp. 481-484, 1998.

[108] P. Paillou, M. Gelautz, and G. Kienast: Relief reconstruction from Radarsat stereo pairs: the Optimal Gradient matching method, RADARSAT ADRO Symposium, 1998.

[109] M. Gelautz, E. Mitteregger, and F. Leberl: Automated acquisition of ground control using SAR layover and shadows, International Geoscience and Remote Sensing Symposium (IGARSS'97), pp. 468-470, 1997. doi: https://doi.org/10.1109/IGARSS.1997.615917.

[110] M. Gelautz, G. Jakob, G. Paar, S. Hensley, and F. Leberl: Automated matching experiments with different kinds of SAR imagery, International Geoscience and Remote Sensing Symposium (IGARSS'96), pp. 31-33, 1996. doi: https://doi.org/10.1109/IGARSS.1996.516235.

[111] R. Bolter, M. Gelautz, and F. Leberl: SAR speckle simulation, Int. Archives of Photogrammetry and Remote Sensing (ISPRS Symposium), vol. 31, no. II, pp. 20-25, 1996.

[112] M. Gelautz, F. Weinbergmair, and F. Leberl: On the detection and exploitation of layover in Magellan SAR imagery, Int. Archives of Photogrammetry and Remote Sensing (ISPRS Symposium), vol. 31, no. 4, pp. 283-287, 1996.

[113] H. Ganster, M. Gelautz, A. Pinz, M. Binder, H. Pehamberger, M. Bammer, and J. Krocza: Initial results of automated melanoma recognition, 9th Scandinavian Conference on Image Analysis (SCIA), pp. 209-218, 1995.

[114] A. Goller, A., M. Gelautz, and F. Leberl: Parallelization experiments for radar image shape-from-shading, 19th ÖAGM/SRDV Workshop, pp. 41-49, 1995.

[115] M. Gelautz: Position and orientation of a linear array camera using automatically detected lines. ÖAGM Workshop, In: W. Pölzleitner and E. Wenger (eds.), Image Analysis and Synthesis, pp. 355-360, Vienna/Munich: Oldenbourg, 1993.

Academic Theses

[116] M. Gelautz: Selected papers on3D computer vision in application to optical and radar images, Habilitation thesis, Vienna University of Technology (TU Wien), Austria, 2005.

[117] M. Gelautz: Integration of layover information into SAR image analysis, Ph.D. thesis, Graz University of Technology, Austria, 1997.