My Publication Strategy

Papers in conference proceedings of major computer vision and machine learning conferences (CVPR, ICCV, ECCV, ICPR, ICLR, NIPS, ICML) are as valuable as articles in top journals. IEEE TPAMI (17.73) and Springer IJCV (11.541) are the top journals in computer vision. Impact factors are from 2018 and 2017 respectively, provided by the publishers. I follow a strategy as common in my community, i.e. publish first at open publishing platforms such as arXiv. Important results need then to be published at the major conferences, whereas basic results in visual learning and representation are published at the machine learning conferences. Minor results are published at satellite workshops (ECCVW, ICCVW, CVPRW) or at national conferences such as CVWW/OEAGM for Austria, GCPR/DAGM for Germany, BMVC, DICTA. Results of applied research are usually published at dedicated top conferences such as AVSS for surveillance and security, ICDSC for camera networks, WACV for general vision applications. Project results are published as journal articles, major results in top journals. Papers for peer-reviewed vision conferences and journals are usually assessed by 2-3 peers. A rebuttal phase is usual for the top conferences. The whole review process is here organised by area chairs and on top programme chairs to sustain quality of the conference.

Four Publication Highlights

Work on benchmarking standards for short-term single-object one-shot visual tracking and the VOT Visual Object Tracking challenges: **Nov. 2016** Matej Kristan et al. "A Novel Performance Evaluation Methodology for Single-Target Trackers". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 38.11, pp. 2137–2155. Link.

Longterm one-shot object tracking method for articulated motion by using initial and adaptive keypoints and their consensus during motion: **June 2015** Georg Nebehay. "Clustering of Static-Adaptive Correspondences for Deformable Object Tracking". In: *Proceedings of the Conference on Computer Vision and Pattern Recognition (CVPR)*. Link.

Work on reconstructing trajectories in 3-D in multiple cameras with disjoint fields of view by formulating the reconstruction problem with the re-projection error under infinity norm as a SOCP problem: **June 2010** Branislav Micusik. "Localizing non-overlapping surveillance cameras under the L-Infinity norm". In: *Proceedings of the Conference on Computer Vision and Pattern Recognition (CVPR)*. Link.

Work on simultaneous object tracking, trajectory reconstruction and camera self-calibration with walking humans and security cameras having disjoint fields of view: **Apr. 2010** Horst Bischof. "Localization and Trajectory Reconstruction in Surveillance Cameras with Nonoverlapping Views". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 32.4, pp. 709–721. Link.

Peer-Reviewed Journals

[1] **Nov. 2016** (with Matej Kristan et al.). "A Novel Performance Evaluation Methodology for Single-Target Trackers". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 38.11, pp. 2137–2155. Link.

[2] **July 2015** (with Bernhard Rinner et al.). "Self-Aware and Self-Expressive Camera Networks". In: *IEEE Computer* 48.7, pp. 21–28. Link.

[3] **Apr. 2010** (with Horst Bischof). "Localization and Trajectory Reconstruction in Surveillance Cameras with Nonoverlapping Views". In: *IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)* 32.4, pp. 709–721. Link.

[4] **Apr. 2004** (with Bernhard Rinner et al.). "Eine intelligente Kamera zur Verkehrsüberwachung". In: *Bulletin SEV/VSE* 95.11, pp. 19–23. Link.

[5] **Dec. 2000**. "A comparison of visual feature tracking methods for traffic monitoring". In: *ÖGAI Journal* 19.4, pp. 15–22. Link.

Peer-Reviewed Books

[6] **2016a** (with Lukas Esterle et al.). "Self-aware Object Tracking in Multi-Camera Networks". In: *Self-aware Computing Systems: An Engineering Approach.* Ed. by Peter Lewis et al. Springer, pp. 261–277. Link.

[7] **2012b** (with Cristina Picus and Branislav Micusik). "Video Analytics for Business Intelligence". In: *Video Analytics for Business Intelligence.* Ed. by Caifeng Shan, Fatih Porikli, Tao Xiang, and Shaogang Gong. Vol. 409. Studies in Computational Intelligence. Springer. Chap. Auto-calibration of Non-overlapping Multi-camera CCTV Systems, pp. 43–67. Link.

[8] **2010e** (with Branislav Micusik). "Self-Calibrating Cameras in Video Surveillance". In: *Smart Cameras.* Ed. by Ahmed Nabil Belbachir. Springer, pp. 161–179. Link.

Patents

[9] **Oct. 2012** (with Branislav Micusik). *EP 12791682 Method for determining the position of cameras.* Link.

[10] **Dec. 2011** (with Ahmed Nabil Belbachir and Manfred Mayerhofer). *DE 102011120718.3 Vorrichtung zur Aufnahme von 360° Stereo Panoramabildern.* Link.

[11] **Oct. 2011** (with Branislav Micusik). *AT 511968 Verfahren zur Bestimmung der Position von Kameras.* Link.

[12] **July 2010** (with Ahmed Nabil Belbachir, Norbert Brändle, and Csaba Beleznai). *AT 507764 Verfahren zur Detektion von Objekten.* Link.

[13] **Oct. 2009** (with Ahmed Nabil Belbachir). *EP 2182720 Method and device for taking pictures.* Link.

[14] **Oct. 2008** (with Ahmed Nabil Belbachir). *AT 507543 Verfahren und Vorrichtung zur Aufnahme von Bildern.* Link.

[15] **Sept. 2005** (with Horst Bischof). *AT 502356 Verfahren zur automatischen Ermittlung der Kalibrierung und Projektion einer Überwachungs-Kamera.* Link.

Unreviewed Publications

[16] **Aug. 2018** (with R. Pflugfelder). "An In-Depth Analysis of Visual Tracking with Siamese Neural Networks". arXiv. Link.

[17] **July 2017** (with R. Pflugfelder). "Siamese Learning Visual Tracking: A Survey". arXiv. Link.

[18] **Mar. 2011** (with Georg Nebehay, Branislav Micusik, and Cristina Picus). "Evaluation of an online learning approach for robust object tracking". Technical Report, AIT Austrian Institute of Technology. Link.

[19] **May 2008**. "Self-calibrating Cameras in Video Surveillance". Ph.D. thesis, Graz University of Technology. Link.

[20] **Feb. 2007** (with Nikolaus Viertl). "Automatic Calibration of the Velocity in Tunnels". Project Report. Link.

[21] **Jan. 2002**. "Visual Traffic Surveillance Using Real-time Tracking". MS.c thesis, Vienna University of Technology. Link.

[22] **May 2002**. "Visual Traffic Surveillance Using Real-time Tracking". Technical Report 71, Vienna University of Technology. Link.

[23] **June 2002**. "Visuelle Verkehrsüberwachung in intelligenten Transportsystemen". Technical Report 73, Vienna University of Technology. Link.

[24] **May 2000** (with Remi Megret et al.). "Motion Estimation with combined Mesh/Region Motion Models". Erasmus Intensive Programme Report INSA Lyon. Link.

[25] **Nov. 1999**. "An Introduction to GA Theory". Seminarwork, Vienna University of Technology Vienna. Link.

Peer-Reviewed Conferences

[26] **Feb. 2020** (with Julian Wagner Roman Pflugfelder). "On Learning Vehicle Detection in Satellite Video". In: *Computer Vision Winter Workshop (CVWW).* Link.

[27] **Oct. 2019** (with Matej Kristan et al.). "The seventh Visual Object Tracking VOT2019 challenge results". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW).* The Visual Object Tracking VOT2019 Challenge Results. Link.

[28] **Sept. 2018** (with Matej Kristan et al.). "The sixth Visual Object Tracking VOT2018 challenge results". In: *Proceedings of the European Computer Vision Workshops (EC-CVW).* The Visual Object Tracking VOT2018 Challenge Results. Link.

[29] **Oct. 2017** (with Matej Kristan et al.). "The Visual Object Tracking VOT2017 Challenge Results". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW).* Link.

[30] **Oct. 2016** (with Michael Felsberg et al.). "The Thermal Infrared Visual Object Tracking VOT-TIR2016 Challenge Results". In: *Proceedings of the European Computer Vision Workshops (ECCVW).* Link.

[31] **Oct. 2016** (with Matej Kristan et al.). "The Visual Object Tracking VOT2016 Challenge Results". In: *Proceedings of the European Conference on Computer Vision Workshops (ECCVW)*. Link.

[32] **Sept. 2016** (with Axel Weissenfeld, Andreas Opitz, and Gustavo Fernandez Dominguez). "Architecture for Dynamic Allocation of Computer Vision Tasks". In: *Proceedings of the International Conference on Distributed Smart Camera (ICDSC)*. Link.

[33] **Dec. 2015** (with Michael Felsberg et al.). "The Thermal Infrared Visual Object Tracking VOT-TIR2015 Challenge Results". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW)*. Link.

[34] **Dec. 2015** (with Matej Kristan et al.). "The Visual Object Tracking VOT2015 Challenge Results". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW)*. Link.

[35] **June 2015** (with Georg Nebehay). "Clustering of Static-Adaptive Correspondences for Deformable Object Tracking". In: *Proceedings of the Conference on Computer Vision and Pattern Recognition (CVPR)*. Link.

[36] **Sept. 2014** (with Peter Gemeiner and Branislav Micusik). "Calibration Methodology for Distant Surveillance Cameras". In: *Proceedings of the European Conference on Computer Vision Workshops (ECCVW)*. Link.

[37] **Sept. 2014** (with Matej Kristan et al.). "The Visual Object Tracking VOT2014 Challenge Results". In: *Proceedings of the European Conference on Computer Vision Workshops (ECCVW)*. Link.

[38] **Feb. 2014** (with Matej Kristan et al.). "The VOT2013 challenge: overview and additional results". In: *Proceedings of the Computer Vision Winter Workshop (CVWW)*. Link.

[39] **Mar. 2014** (with Georg Nebehay). "Consensus-based Matching and Tracking of Keypoints for Object Tracking". In: *Proceedings on the Winter Conference on Applications of Computer Vision (WACV)*. Link.

[40] **Oct. 2013** (with Bernhard Dieber et al.). "Ella: Middleware for Multi-camera Surveillance in Heterogeneous Visual Sensor Networks". In: *Proceedings of the International Conference on Distributed Smart Cameras (ICDSC)*. Link.

[41] **Dec. 2013** (with Matej Kristan et al.). "The Visual Object Tracking VOT2013 Challenge Results". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW)*. Link.

[42] **Oct. 2013** (with Georg Nebehay). "TLM: Tracking-Learning-Matching of Keypoints". In: *Proceedings of the International Conference on Distributed Smart Cameras (ICDSC)*. Link.

[43] **2013d** (with Georg Nebehay et al.). "Can Diversity amongst Learners Improve Online Object Tracking". In: *Proceedings of the International Multiple Classifier Systems Workshop (MCS)*. Link.

[44] **Sept. 2011** (with Tobias Becker et al.). "Hardware Accelerated object Tracking". In: *Proceedings of the International Conference on Field Programmable Logic and Applications (FPL) Workshop on Computer Vision on Low-Power Reconfigurable Architectures*. Link.

[45] **Nov. 2011** (with Cristina Picus and Branislav Micusik). "Branch and bound global optima search for tracking a single object in a network of non-overlapping cameras". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW)*. Link.

[46]   **Sept. 2010** (with Nabil Belbachir and Roman Gmeiner). "A Neuromorphic Smart Camera for Real-time 360° Distortion-free Panoramas". In: *Proceedings of the International Conference on Distributed Smart Cameras (ICDSC)*. Link.

[47]   **June 2010** (with Branislav Micusik). "Localizing non-overlapping surveillance cameras under the L-Infinity norm". In: *Proceedings of the Conference on Computer Vision and Pattern Recognition (CVPR)*. Link.

[48]   **May 2010** (with Anton Waltl, Bernhard Schalko, and Gustavo Fernandez Dominguez). "Digital Video Surveillance in Road Tunnels". In: *Proceedings of the International Conference on Tunnel Safety and Ventilation*. Link.

[49]   **Sept. 2010** (with Cristina Picus and Branislav Micusik). "From Single Cameras to the Camera Network: An Auto-Calibration Framework for Surveillance". In: *Proceedings of the Annual Symposium of the German Association for Pattern Recognition (DAGM)*. Link.

[50]   **Sept. 2009** (with Georg Nebehay). "A self-calibration method for smart video cameras". In: *Proceedings of the International Conference on Computer Vision Workshops (ICCVW)*. Link.

[51]   **Dec. 2008** (with Horst Bischof). "Tracking across non-overlapping views via geometry". In: *Proceedings of the International Conference onPattern Recognition (ICPR)*. Link.

[52]   **Sept. 2007** (with Horst Bischof). "People tracking across two distant self-calibrated cameras". In: *Proceedings of the International Conference on Advanced Video and Signal Based Surveillance (AVSS)*. Link.

[53]   **Aug. 2006** (with Dietmar Bauer, Norbert Brändle, and Stefan Seer). "Finding Highly Frequented Paths in Video Sequences". In: *Proceedings of the International Conference on Pattern Recognition (ICPR)*. Link.

[54]   **Feb. 2006** (with Horst Bischof). "Computation of the epipolar geometry in slightly overlapping views". In: *Proceedings of the Computer Vision Winter Workshop (CVWW)*. Link.

[55]   **Aug. 2006** (with Horst Bischof). "Fundamental matrix and slightly overlapping views". In: *Proceedings of the International Conference on Pattern Recognition (ICPR)*. Link.

[56]   **Dec. 2005** (with Horst Bischof). "Online Auto-Calibration in Man-Made Worlds". In: *Proceedings of the International Conference on Digital Image Computing: Techniques and Applications (DICTA)*. Link.

[57]   **Sept. 2005** et al. "Influence of camera properties on image analysis in visual tunnel surveillance". In: *Proceedings of the Intelligent Transportation Systems Conference (ITSC)*. Link.

[58]   **Nov. 2005** (with Helmut Schwabach et al.). "Video Based Image Analysis for Tunnel Safety - VITUS-1: A Tunnel Video Surveillance and Traffic Control System". In: *Proceedings of the 12th World Congress on Intelligent Transport Systems*. Link.

[59]   **June 2004** (with Horst Bischof). "Vanishing points and lorries". In: *Proceedings of the Workshop of the Austrian Association for Pattern Recognition (AAPR)*. Link.

[60]   **June 2003** (with Michael Bramberger et al.). "A Smart Camera for Traffic Surveillance". In: *Proceedings of the Workshop on Intelligent Solutions in Embedded Systems (WISES)*. Link.

[61]   **Mar. 2003** (with Michael Bramberger et al.). "Intelligent Traffic Video Sensor: Architecture and Applications". In: *Proceedings of the Workshop on Telecommunications and Mobile Computing (TCMC)*. Link.

[62]   **Sept. 2002** (with Horst Bischof). "Learning spatiotemporal traffic behaviour and traffic patterns for unusual event detection". In: *Proceedings of the Workshop of the Austrian Association for Pattern Recognition (AAPR)*. Link.

[63]   **Feb. 2000** (with Horst Bischof). "Car tracking in tunnels". In: *Proceedings of the Computer Vision Winter Workshop (CVWW)*. Link.