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 (16.389) and Springer IJCV (7.410) are the top journals in computer vision. Impact factors are from 2019, 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 and Roman Pflugfelder. "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 and Roman Pflugfelder. "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** Roman Pflugfelder and 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** 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** Bernhard Rinner et al. "Self-Aware and Self-Expressive Camera Networks". In: *IEEE Computer* 48.7, pp. 21–28. Link.

[3] **Apr. 2010** Roman Pflugfelder and 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** Bernhard Rinner et al. "Eine intelligente Kamera zur Verkehrsüberwachung". In: *Bulletin SEV/VSE* 95.11, pp. 19–23. Link.

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

Peer-Reviewed Books

[6] **2021a** Christos Bolakis et al. "FOLDOUT: A Through Foliage Surveillance System for Border Security". In: *Technology Development for Security Practitioners*. Ed. by Babak Akhgar, Dimitrios Kavallieros, and Evangelos Sdongos. Springer International Publishing, pp. 259–279. Link.

[7] **2016a** 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.

[8] **2012b** Cristina Picus, Roman Pflugfelder, 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.

[9] **2010e** Roman Pflugfelder and Branislav Micusik. "Self-Calibrating Cameras in Video Surveillance". In: *Smart Cameras*. Ed. by Ahmed Nabil Belbachir. Springer, pp. 161–179. Link.

Patents

[10] **Oct. 2012** Roman Pflugfelder and Branislav Micusik. *EP 12791682 Method for determining the position of cameras*. Link.

[11] **Dec. 2011** Ahmed Nabil Belbachir, Roman Pflugfelder, and Manfred Mayerhofer. *DE 102011120718.3 Vorrichtung zur Aufnahme von 360° Stereo Panoramabildern*. Link.

[12] **Oct. 2011** Roman Pflugfelder and Branislav Micusik. *AT 511968 Verfahren zur Bestimmung der Position von Kameras*. Link.

[13] **July 2010** Ahmed Nabil Belbachir et al. *AT 507764 Verfahren zur Detektion von Objekten*. Link.

[14] **Oct. 2009** Ahmed Nabil Belbachir and Roman Pflugfelder. *EP 2182720 Method and device for taking pictures*. Link.
[15] **Oct. 2008** Ahmed Nabil Belbachir and Roman Pflugfelder. *AT 507543 Verfahren und Vorrichtung zur Aufnahme von Bildern*. Link.
[16] **Sept. 2005** Roman Pflugfelder and Horst Bischof. *AT 502356 Verfahren zur automatischen Ermittlung der Kalibrierung und Projektion einer Überwachungs-Kamera*. Link.

Unreviewed Publications

[17] **Apr. 2022** Roman Pflugfelder, Axel Weissenfeld, and Julian Wagner. "Deep Vehicle Detection in Satellite Video". Link.
[18] **Aug. 2018** R. Pflugfelder. "An In-Depth Analysis of Visual Tracking with Siamese Neural Networks". arXiv. Link.
[19] **July 2017** R. Pflugfelder. "Siamese Learning Visual Tracking: A Survey". arXiv. Link.
[20] **Mar. 2011** Georg Nebehay et al. "Evaluation of an online learning approach for robust object tracking". Technical Report, AIT Austrian Institute of Technology. Link.
[21] **May 2008** Roman Pflugfelder. "Self-calibrating Cameras in Video Surveillance". Ph.D. thesis, Graz University of Technology. Link.
[22] **Feb. 2007** Roman Pflugfelder and Nikolaus Viertl. "Automatic Calibration of the Velocity in Tunnels". Project Report. Link.
[23] **Jan. 2002** Roman Pflugfelder. "Visual Traffic Surveillance Using Real-time Tracking". MS.c thesis, Vienna University of Technology. Link.
[24] **May 2002** Roman Pflugfelder. "Visual Traffic Surveillance Using Real-time Tracking". Technical Report 71, Vienna University of Technology. Link.
[25] **June 2002** Roman Pflugfelder. "Visuelle Verkehrsüberwachung in intelligenten Transportsystemen". Technical Report 73, Vienna University of Technology. Link.
[26] **May 2000** Remi Megret et al. "Motion Estimation with combined Mesh/Region Motion Models". Erasmus Intensive Programme Report INSA Lyon. Link.
[27] **Nov. 1999** Roman Pflugfelder. "An Introduction to GA Theory". Seminarwork, Vienna University of Technology Vienna. Link.

Peer-Reviewed Conferences

[28] **2021b** Matej Kristan et al. "The Ninth Visual Object Tracking VOT2021 Challenge Results". In: *ICCV 2021 Workshops*. to appear.
[29] **2021c** Luis Patino et al. "PETS2021: Through-foliage detection and tracking challenge and evaluation". In: *IEEE AVSS*. to appear.
[30] **2021d** Roman Pflugfelder and Jonas Auer. "Person Localisation under Fragmented Occlusion". In: *IEEE AVSS*. to appear.
[31] **2020a** Matej Kristan et al. "The Eighth Visual Object Tracking VOT2020 Challenge Results". In: *Computer Vision – ECCV 2020 Workshops*. Ed. by Adrien Bartoli and Andrea Fusiello. Springer International Publishing, pp. 547–601. Link.

[32] **Sept. 2020** Julian Pegoraro and Roman Pflugfelder. "The Problem of Fragmented Occlusion in Object Detection". In: *Austrian Joint Computer Vision and Robotics Workshop (ACVRW)*. Link.

[33] **Feb. 2020** Roman Pflugfelder, Axel Weissenfeld, and Julian Wagner. "On Learning Vehicle Detection in Satellite Video". In: *Proceedings of the 25th Computer Vision Winter Workshop Conference (CVWW)*. Ed. by Alan Lukezic, Domen Tabernik, and Klemen Grm. Rogaska Slatina: Slovenian Pattern Recognition Society. Link.

[34] **Oct. 2019** 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.

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

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

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

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

[39] **Sept. 2016** Axel Weissenfeld et al. "Architecture for Dynamic Allocation of Computer Vision Tasks". In: *Proceedings of the International Conference on Distributed Smart Camera (ICDSC)*. Link.

[40] **Dec. 2015** 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.

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

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

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

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

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

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

[47] **Oct. 2013** 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.

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

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

[50] **2013d** Georg Nebehay et al. "Can Diversity amongst Learners Improve Online Object Tracking". In: *Proceedings of the International Multiple Classifier Systems Workshop (MCS)*. Link.

[51] **Sept. 2011** 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.

[52] **Nov. 2011** Cristina Picus, Roman Pflugfelder, 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.

[53] **Sept. 2010** Nabil Belbachir, Roman Pflugfelder, 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.

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

[55] **May 2010** Roman Pflugfelder et al. "Digital Video Surveillance in Road Tunnels". In: *Proceedings of the International Conference on Tunnel Safety and Ventilation*. Link.

[56] **Sept. 2010** Cristina Picus, Branislav Micusik, and Roman Pflugfelder. "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.

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

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

[59] **Sept. 2007** Roman Pflugfelder and 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.

[60] **Aug. 2006** Dietmar Bauer et al. "Finding Highly Frequented Paths in Video Sequences". In: *Proceedings of the International Conference on Pattern Recognition (ICPR)*. Link.

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

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

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

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

[65] **Nov. 2005** 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.

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

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

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

[69] **Sept. 2002** Roman Pflugfelder and 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.

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