## Heiner Kuhlmann

## List of Publications by Citations

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69 19 1,335 35 h-index g-index citations papers 1,581 2.8 4.94 72 L-index avg, IF ext. citations ext. papers

#	Paper	IF	Citations
69	Low-cost 3D systems: suitable tools for plant phenotyping. <i>Sensors</i> , <b>2014</b> , 14, 3001-18	3.8	170
68	Surface feature based classification of plant organs from 3D laserscanned point clouds for plant phenotyping. <i>BMC Bioinformatics</i> , <b>2013</b> , 14, 238	3.6	126
67	High-precision laser scanning system for capturing 3D plant architecture and analysing growth of Lereal plants. <i>Biosystems Engineering</i> , <b>2014</b> , 121, 1-11	4.8	123
66	Accuracy analysis of a multi-view stereo approach for phenotyping of tomato plants at the organ level. <i>Sensors</i> , <b>2015</b> , 15, 9651-65	3.8	75
65	Automated analysis of barley organs using 3D laser scanning: an approach for high throughput phenotyping. <i>Sensors</i> , <b>2014</b> , 14, 12670-86	3.8	65
64	Real-time single-frequency GPS/MEMS-IMU attitude determination of lightweight UAVs. <i>Sensors</i> , <b>2015</b> , 15, 26212-35	3.8	63
63	Generation and application of hyperspectral 3D plant models: methods and challenges. <i>Machine Vision and Applications</i> , <b>2016</b> , 27, 611-624	2.8	50
62	Calibration of hyperspectral close-range pushbroom cameras for plant phenotyping. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , <b>2015</b> , 106, 172-182	11.8	49
61	An automated field phenotyping pipeline for application in grapevine research. Sensors, 2015, 15, 4823	- <b>3,6</b> 8	39
60	Phenoliner: A New Field Phenotyping Platform for Grapevine Research. Sensors, 2017, 17,	3.8	36
59	Development of an instantaneous GNSS/MEMS attitude determination system. <i>GPS Solutions</i> , <b>2013</b> , 17, 129-138	4.4	34
58	Counting of grapevine berries in images via semantic segmentation using convolutional neural networks. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , <b>2020</b> , 164, 73-83	11.8	33
57	Towards Automated Large-Scale 3D Phenotyping of Vineyards under Field Conditions. <i>Sensors</i> , <b>2016</b> , 16,	3.8	33
56	Challenges and Present Fields of Action at Laser Scanner Based Deformation Analyses. <i>Journal of Applied Geodesy</i> , <b>2016</b> , 10,	0.9	31
55	How to Efficiently Determine the Range Precision of 3D Terrestrial Laser Scanners. <i>Sensors</i> , <b>2019</b> , 19,	3.8	26
54	Limits of active laser triangulation as an instrument for high precision plant imaging. <i>Sensors</i> , <b>2014</b> , 14, 2489-509	3.8	23
53	Improved area-based deformation analysis of a radio telescope main reflector based on terrestrial laser scanning. <i>Journal of Applied Geodesy</i> , <b>2015</b> , 9, 1-14	0.9	22

## (2018-2017)

Solifluction meets vegetation: the role of biogeomorphic feedbacks for turf-banked solifluction lobe development. <i>Earth Surface Processes and Landforms</i> , <b>2017</b> , 42, 1623-1635	3.7	21
Towards System Calibration of Panoramic Laser Scanners from a Single Station. Sensors, 2017, 17,	3.8	19
Decreasing the Uncertainty of the Target Center Estimation at Terrestrial Laser Scanning by Choosing the Best Algorithm and by Improving the Target Design. <i>Remote Sensing</i> , <b>2019</b> , 11, 845	5	17
Fast and effective online pose estimation and mapping for UAVs <b>2016</b> ,		17
Aiming at self-calibration of terrestrial laser scanners using only one single object and one single scan. <i>Journal of Applied Geodesy</i> , <b>2014</b> , 8,	0.9	16
Estimation of Focal Length Variations of a 100-m Radio Telescope Main Reflector by Laser Scanner Measurements. <i>Journal of Surveying Engineering, - ASCE</i> , <b>2012</b> , 138, 126-135	1.3	15
Impact of spatial correlations on the surface estimation based on terrestrial laser scanning. <i>Journal of Applied Geodesy</i> , <b>2017</b> , 11,	0.9	14
GPS Multipath Analysis Using Fresnel Zones. <i>Sensors</i> , <b>2018</b> , 19,	3.8	14
Terrestrial Laser Scanner Two-Face Measurements for Analyzing the Elevation-Dependent Deformation of the Onsala Space Observatory 20-m Radio Telescope's Main Reflector in a Bundle Adjustment. <i>Sensors</i> , <b>2017</b> , 17,	3.8	13
Biased and Unbiased Estimates Based on Laser Scans of Surfaces with Unknown Deformations. Journal of Applied Geodesy, <b>2014</b> , 8,	0.9	13
Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model. <i>Journal of Surveying Engineering, - ASCE</i> , <b>2010</b> , 136, 157-164	1.3	13
Modeling the Beam Deflection of a Gantry Crane under Load. <i>Journal of Surveying Engineering, - ASCE</i> , <b>2014</b> , 140, 52-59	1.3	12
Development, Calibration and Evaluation of a Portable and Direct Georeferenced Laser Scanning System for Kinematic 3D Mapping. <i>Journal of Applied Geodesy</i> , <b>2015</b> , 9,	0.9	11
Design and Evaluation of a Permanently Installed Plane-Based Calibration Field for Mobile Laser Scanning Systems. <i>Remote Sensing</i> , <b>2020</b> , 12, 555	5	10
Strategy for Determining the Stochastic Distance Characteristics of the 2D Laser Scanner Z + F Profiler 9012A with Special Focus on the Close Range. <i>Sensors</i> , <b>2018</b> , 18,	3.8	9
A multi-resolution approach for an automated fusion of different low-cost 3D sensors. <i>Sensors</i> , <b>2014</b> , 14, 7563-79	3.8	9
Direct Georeferencing for Portable Mapping Systems: In the Air and on the Ground. <i>Journal of Surveying Engineering, - ASCE</i> , <b>2017</b> , 143, 04017010	1.3	8
Dealing with systematic laser scanner errors due to misalignment at area-based deformation analyses. <i>Journal of Applied Geodesy</i> , <b>2018</b> , 12, 169-185	0.9	8
	Towards System Calibration of Panoramic Laser Scanners from a Single Station. Sensors, 2017, 17,  Decreasing the Uncertainty of the Target Center Estimation at Terrestrial Laser Scanning by Choosing the Best Algorithm and by Improving the Target Design. Remote Sensing, 2019, 11, 845  Fast and effective online pose estimation and mapping for UAVs 2016,  Aiming at self-calibration of terrestrial laser scanners using only one single object and one single scan. Journal of Applied Geodesy, 2014, 8,  Estimation of Focal Length Variations of a 100-m Radio TelescopeB Main Reflector by Laser Scanner Measurements. Journal of Surveying Engineering, - ASCE, 2012, 138, 126-135  Impact of spatial correlations on the surface estimation based on terrestrial laser scanning. Journal of Applied Geodesy, 2017, 11,  GPS Multipath Analysis Using Fresnel Zones. Sensors, 2018, 19,  Terrestrial Laser Scanner Two-Face Measurements for Analyzing the Elevation-Dependent Deformation of the Onsala Space Observatory 20-m Radio Telescope's Main Reflector in a Bundle Adjustment. Sensors, 2017, 17,  Biased and Unbiased Estimates Based on Laser Scans of Surfaces with Unknown Deformations. Journal of Applied Geodesy, 2014, 8,  Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model. Journal of Surveying Engineering, - ASCE, 2010, 136, 157-164  Modeling the Beam Deflection of a Gantry Crane under Load. Journal of Surveying Engineering, - ASCE, 2014, 140, 52-59  Development, Calibration and Evaluation of a Portable and Direct Georeferenced Laser Scanning System for Kinematic 3D Mapping. Journal of Applied Geodesy, 2015, 9,  Design and Evaluation of a Permanently Installed Plane-Based Calibration Field for Mobile Laser Scanning Systems. Remote Sensing, 2020, 12, 555  Strategy for Determining the Stochastic Distance Characteristics of the 2D Laser Scanner Z + F Profiler 9012A with Special Focus on the Close Range. Sensors, 2018, 18,  A multi-resolution approach for an automated fusion of different low-cost 3D sensors. S	Towards System Calibration of Panoramic Laser Scanners from a Single Station. Sensors, 2017, 17, 3.8  Decreasing the Uncertainty of the Target Center Estimation at Terrestrial Laser Scanning by Choosing the Best Algorithm and by Improving the Target Design. Remote Sensing, 2019, 11, 845 5  Fast and effective online pose estimation and mapping for UAVs 2016,  Aiming at self-calibration of terrestrial laser scanners using only one single object and one single scan. Journal of Applied Geodesy, 2014, 8.  Estimation of Focal Length Variations of a 100-m Radio Telescope® Main Reflector by Laser Scanner Measurements. Journal of Surveying Engineering, - ASCE, 2012, 138, 126-135 1.3  Impact of spatial correlations on the surface estimation based on terrestrial laser scanning. Journal of Applied Geodesy, 2017, 11,  GPS Multipath Analysis Using Fresnel Zones. Sensors, 2018, 19, 3.8  Terrestrial Laser Scanner Two-Face Measurements for Analyzing the Elevation-Dependent Deformation of the Onsala Space Observatory 20-m Radio Telescope's Main Reflector in a Bundle Adjustment. Sensors, 2017, 17, 17, 18  Blased and Unbiased Estimates Based on Laser Scans of Surfaces with Unknown Deformations. Journal of Applied Geodesy, 2014, 8, 0.9  Deformation Detection in the CPS Real-Time Series by the Multiple Kalman Filters Model. Journal of Surveying Engineering, - ASCE, 2010, 136, 157-164 1.3  Modeling the Beam Deflection of a Gantry Crane under Load. Journal of Surveying Engineering, - ASCE, 2010, 136, 157-164 1.3  Development, Calibration and Evaluation of a Portable and Direct Georeferenced Laser Scanning Systems Remote Sensing, 2020, 12, 555 5  Strategy for Determining the Stochastic Distance Characteristics of the 2D Laser Scanner Z + F Profiler 9012A with Special Focus on the Close Range. Sensors, 2018, 18, 18, 18  A multi-resolution approach for an automated fusion of different low-cost 3D sensors. Sensors, 2014, 14, 7563-79 1.3  Direct Georeferencing for Portable Mapping Systems: In the Air and on the Ground. Journal of Surveying

34	Designing and Evaluating a User-Oriented Calibration Field for the Target-Based Self-Calibration of Panoramic Terrestrial Laser Scanners. <i>Remote Sensing</i> , <b>2020</b> , 12, 15	5	7
33	Direkte Georeferenzierung von MAVs (Micro Aerial Vehicles) - Systementwurf, Systemkalibrierung und erste Tests. <i>Photogrammetrie, Fernerkundung, Geoinformation</i> , <b>2014</b> , 2014, 227-237		7
32	High-Precision Surface Inspection: Uncertainty Evaluation within an Accuracy Range of 15th with Triangulation-based Laser Line Scanners. <i>Journal of Applied Geodesy</i> , <b>2014</b> , 8,	0.9	7
31	Sensitivity Analysis and Minimal Measurement Geometry for the Target-Based Calibration of High-End Panoramic Terrestrial Laser Scanners. <i>Remote Sensing</i> , <b>2019</b> , 11, 1519	5	6
30	Empirical assessment of obstruction adaptive elevation masks to mitigate site-dependent effects. <i>GPS Solutions</i> , <b>2017</b> , 21, 1695-1706	4.4	6
29	Automatic optimization of height network configurations for detection of surface deformations. Journal of Applied Geodesy, <b>2013</b> , 7,	0.9	6
28	Empirical stochastic model of detected target centroids: Influence on registration and calibration of terrestrial laser scanners. <i>Journal of Applied Geodesy</i> , <b>2019</b> , 13, 179-197	0.9	6
27	Generation and Application of Hyperspectral 3D Plant Models. <i>Lecture Notes in Computer Science</i> , <b>2015</b> , 117-130	0.9	5
26	Pheno4D: A spatio-temporal dataset of maize and tomato plant point clouds for phenotyping and advanced plant analysis. <i>PLoS ONE</i> , <b>2021</b> , 16, e0256340	3.7	5
25	Investigating the gravitational stability of a radio telescopell reference point using a terrestrial laser scanner: Case study at the Onsala Space Observatory 20-m radio telescope. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , <b>2019</b> , 149, 67-76	11.8	4
24	Increasing Spatio-Temporal Resolution for Monitoring Alpine Solifluction Using Terrestrial Laser Scanners and 3D Vector Fields. <i>Remote Sensing</i> , <b>2021</b> , 13, 1192	5	4
23	Laser Scanning Based Growth Analysis of Plants as a New Challenge for Deformation Monitoring. Journal of Applied Geodesy, <b>2016</b> , 10,	0.9	4
22	Detecting and analyzing fault edges in sampled ground movements. <i>Applied Geomatics</i> , <b>2015</b> , 7, 103-11	42.2	3
21	Measuring Leaf Thickness with 3D Close-Up Laser Scanners: Possible or Not?. <i>Journal of Imaging</i> , <b>2017</b> , 3, 22	3.1	3
20	Magnetic Field Sensor Calibration for Attitude Determination. Journal of Applied Geodesy, 2014, 8,	0.9	3
19	A priori vs. In-situ Terrestrial Laser Scanner Calibration in the Context of the Instability of Calibration Parameters. <i>Springer Proceedings in Earth and Environmental Sciences</i> , <b>2021</b> , 128-141	0.2	3
18	On the applicability of a scan-based mobile mapping system for monitoring the planarity and subsidence of road surfaces [Pilot study on the A44n motorway in Germany. <i>Journal of Applied Geodesy</i> , <b>2020</b> , 14, 39-54	0.9	3
17	Quality Analysis of Direct Georeferencing in Aspects of Absolute Accuracy and Precision for a UAV-Based Laser Scanning System. <i>Remote Sensing</i> , <b>2021</b> , 13, 3564	5	3

## LIST OF PUBLICATIONS

16	Temporal Upsampling of Point Cloud Sequences by Optimal Transport for Plant Growth Visualization. <i>Computer Graphics Forum</i> , <b>2020</b> , 39, 167-179	2.4	2
15	Investigations on the Influence of Antenna Near-field Effects and Satellite Obstruction on the Uncertainty of GNSS-based Distance Measurements. <i>Journal of Applied Geodesy</i> , <b>2016</b> , 10,	0.9	2
14	Fl©henhafte Abtastung mit Laserscanning. Springer Reference Naturwissenschaften, 2017, 167-212	0.2	2
13	Deformation analysis of a reference wall towards the uncertainty investigation of terrestrial laser scanners. <i>Journal of Applied Geodesy</i> , <b>2021</b> , 15, 189-206	0.9	2
12	Automatic Differentiation of Damaged and Unharmed Grapes Using RGB Images and Convolutional Neural Networks. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 347-359	0.9	1
11	Assessing the Temporal Stability of Terrestrial Laser Scanners During Long-Term Measurements. <i>Springer Proceedings in Earth and Environmental Sciences</i> , <b>2021</b> , 69-84	0.2	1
10	Statistical shape analysis of tap roots: a methodological case study on laser scanned sugar beets. <i>BMC Bioinformatics</i> , <b>2020</b> , 21, 335	3.6	1
9	Accurate georeferencing of TLS point clouds with short GNSS observation durations even under challenging measurement conditions. <i>Journal of Applied Geodesy</i> , <b>2018</b> , 12, 289-301	0.9	1
8	Plant, space and time - linked together in an integrative and scalable data management system for phenomic approaches in agronomic field trials. <i>Plant Methods</i> , <b>2020</b> , 16, 55	5.8	O
7	Image-based analysis of yield parameters in viticulture. <i>Biosystems Engineering</i> , <b>2022</b> , 218, 94-109	4.8	Ο
6	Ingenieurgeodsie Leine Einfflrung. Springer Reference Naturwissenschaften, 2017, 1-22	0.2	
5	Empirical Evaluation of Terrestrial Laser Scanner Calibration Strategies: Manufacturer-Based, Target-Based and Keypoint-Based. <i>Springer Proceedings in Earth and Environmental Sciences</i> , <b>2021</b> , 41	-56 <sup>0.2</sup>	
4	Mobile Multisensorsysteme <b>2015</b> , 1-36		
3	Fl@henhafte Abtastung mit Laserscanning <b>2015</b> , 1-46		
2	IngenieurgeodBie Leine Einfflrung <b>2015</b> , 1-22		
1	Mobile Multisensorsysteme. <i>Springer Reference Naturwissenschaften</i> , <b>2017</b> , 93-129	0.2	