Heiner Kuhlmann

List of Publications by Year in Descending Order

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

#	Paper	IF	Citations
69	Image-based analysis of yield parameters in viticulture. *Biosystems Engineering*, **2022**, 218, 94-109	4.8	0
68	A priori vs. In-situ Terrestrial Laser Scanner Calibration in the Context of the Instability of Calibration Parameters. *Springer Proceedings in Earth and Environmental Sciences*, **2021**, 128-141	0.2	3
67	Empirical Evaluation of Terrestrial Laser Scanner Calibration Strategies: Manufacturer-Based, Target-Based and Keypoint-Based. *Springer Proceedings in Earth and Environmental Sciences*, **2021**, 41-56	0.2	
66	Assessing the Temporal Stability of Terrestrial Laser Scanners During Long-Term Measurements. *Springer Proceedings in Earth and Environmental Sciences*, **2021**, 69-84	0.2	1
65	Deformation analysis of a reference wall towards the uncertainty investigation of terrestrial laser scanners. *Journal of Applied Geodesy*, **2021**, 15, 189-206	0.9	2
64	Increasing Spatio-Temporal Resolution for Monitoring Alpine Solifluction Using Terrestrial Laser Scanners and 3D Vector Fields. *Remote Sensing*, **2021**, 13, 1192	5	4
63	Pheno4D: A spatio-temporal dataset of maize and tomato plant point clouds for phenotyping and advanced plant analysis. *PLoS ONE*, **2021**, 16, e0256340	3.7	5
62	Quality Analysis of Direct Georeferencing in Aspects of Absolute Accuracy and Precision for a UAV-Based Laser Scanning System. *Remote Sensing*, **2021**, 13, 3564	5	3
61	Designing and Evaluating a User-Oriented Calibration Field for the Target-Based Self-Calibration of Panoramic Terrestrial Laser Scanners. *Remote Sensing*, **2020**, 12, 15	5	7
60	Temporal Upsampling of Point Cloud Sequences by Optimal Transport for Plant Growth Visualization. *Computer Graphics Forum*, **2020**, 39, 167-179	2.4	2
59	Design and Evaluation of a Permanently Installed Plane-Based Calibration Field for Mobile Laser Scanning Systems. *Remote Sensing*, **2020**, 12, 555	5	10
58	Counting of grapevine berries in images via semantic segmentation using convolutional neural networks. *ISPRS Journal of Photogrammetry and Remote Sensing*, **2020**, 164, 73-83	11.8	33
57	Plant, space and time - linked together in an integrative and scalable data management system for phenomic approaches in agronomic field trials. *Plant Methods*, **2020**, 16, 55	5.8	0
56	Automatic Differentiation of Damaged and Unharmed Grapes Using RGB Images and Convolutional Neural Networks. *Lecture Notes in Computer Science*, **2020**, 347-359	0.9	1
55	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. *Journal of Applied Geodesy*, **2020**, 14, 39-54	0.9	3
54	Statistical shape analysis of tap roots: a methodological case study on laser scanned sugar beets. *BMC Bioinformatics*, **2020**, 21, 335	3.6	1
53	Investigating the gravitational stability of a radio telescope reference point using a terrestrial laser scanner: Case study at the Onsala Space Observatory 20-m radio telescope. *ISPRS Journal of Photogrammetry and Remote Sensing*, **2019**, 149, 67-76	11.8	4

52	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	17
51	How to Efficiently Determine the Range Precision of 3D Terrestrial Laser Scanners. *Sensors*, **2019**, 19,	3.8	26
50	Sensitivity Analysis and Minimal Measurement Geometry for the Target-Based Calibration of High-End Panoramic Terrestrial Laser Scanners. *Remote Sensing*, **2019**, 11, 1519	5	6
49	Empirical stochastic model of detected target centroids: Influence on registration and calibration of terrestrial laser scanners. *Journal of Applied Geodesy*, **2019**, 13, 179-197	0.9	6
48	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,	3.8	9
47	Dealing with systematic laser scanner errors due to misalignment at area-based deformation analyses. *Journal of Applied Geodesy*, **2018**, 12, 169-185	0.9	8
46	GPS Multipath Analysis Using Fresnel Zones. *Sensors*, **2018**, 19,	3.8	14
45	Accurate georeferencing of TLS point clouds with short GNSS observation durations even under challenging measurement conditions. *Journal of Applied Geodesy*, **2018**, 12, 289-301	0.9	1
44	Solifluction meets vegetation: the role of biogeomorphic feedbacks for turf-banked solifluction lobe development. *Earth Surface Processes and Landforms*, **2017**, 42, 1623-1635	3.7	21
43	Direct Georeferencing for Portable Mapping Systems: In the Air and on the Ground. *Journal of Surveying Engineering, - ASCE*, **2017**, 143, 04017010	1.3	8
42	Towards System Calibration of Panoramic Laser Scanners from a Single Station. *Sensors*, **2017**, 17,	3.8	19
41	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,	3.8	13
40	Ingenieurgeodäsie – eine Einführung. *Springer Reference Naturwissenschaften*, **2017**, 1-22	0.2	
39	Measuring Leaf Thickness with 3D Close-Up Laser Scanners: Possible or Not?. *Journal of Imaging*, **2017**, 3, 22	3.1	3
38	Impact of spatial correlations on the surface estimation based on terrestrial laser scanning. *Journal of Applied Geodesy*, **2017**, 11,	0.9	14
37	Empirical assessment of obstruction adaptive elevation masks to mitigate site-dependent effects. *GPS Solutions*, **2017**, 21, 1695-1706	4.4	6
36	Phenoliner: A New Field Phenotyping Platform for Grapevine Research. *Sensors*, **2017**, 17,	3.8	36
35	Mobile Multisensorsysteme. *Springer Reference Naturwissenschaften*, **2017**, 93-129	0.2	

34	Flähenhafte Abtastung mit Laserscanning. *Springer Reference Naturwissenschaften*, **2017**, 167-212	0.2	2
33	Generation and application of hyperspectral 3D plant models: methods and challenges. *Machine Vision and Applications*, **2016**, 27, 611-624	2.8	50
32	Investigations on the Influence of Antenna Near-field Effects and Satellite Obstruction on the Uncertainty of GNSS-based Distance Measurements. *Journal of Applied Geodesy*, **2016**, 10,	0.9	2
31	Fast and effective online pose estimation and mapping for UAVs **2016**,		17
30	Towards Automated Large-Scale 3D Phenotyping of Vineyards under Field Conditions. *Sensors*, **2016**, 16,	3.8	33
29	Challenges and Present Fields of Action at Laser Scanner Based Deformation Analyses. *Journal of Applied Geodesy*, **2016**, 10,	0.9	31
28	Laser Scanning Based Growth Analysis of Plants as a New Challenge for Deformation Monitoring. *Journal of Applied Geodesy*, **2016**, 10,	0.9	4
27	Accuracy analysis of a multi-view stereo approach for phenotyping of tomato plants at the organ level. *Sensors*, **2015**, 15, 9651-65	3.8	75
26	Calibration of hyperspectral close-range pushbroom cameras for plant phenotyping. *ISPRS Journal of Photogrammetry and Remote Sensing*, **2015**, 106, 172-182	11.8	49
25	An automated field phenotyping pipeline for application in grapevine research. *Sensors*, **2015**, 15, 4823-36	3.8	39
24	Detecting and analyzing fault edges in sampled ground movements. *Applied Geomatics*, **2015**, 7, 103-114	2.2	3
23	Real-time single-frequency GPS/MEMS-IMU attitude determination of lightweight UAVs. *Sensors*, **2015**, 15, 26212-35	3.8	63
22	Improved area-based deformation analysis of a radio telescope's main reflector based on terrestrial laser scanning. *Journal of Applied Geodesy*, **2015**, 9, 1-14	0.9	22
21	Development, Calibration and Evaluation of a Portable and Direct Georeferenced Laser Scanning System for Kinematic 3D Mapping. *Journal of Applied Geodesy*, **2015**, 9,	0.9	11
20	Generation and Application of Hyperspectral 3D Plant Models. *Lecture Notes in Computer Science*, **2015**, 117-130	0.9	5
19	Mobile Multisensorsysteme **2015**, 1-36		
18	Flähenhafte Abtastung mit Laserscanning **2015**, 1-46		
17	Ingenieurgeodäsie – eine Einfürung **2015**, 1-22		

LIST OF PUBLICATIONS

16	High-precision laser scanning system for capturing 3D plant architecture and analysing growth of cereal plants. *Biosystems Engineering*, **2014**, 121, 1-11	4.8	123
15	Direkte Georeferenzierung von MAVs (Micro Aerial Vehicles) - Systementwurf, Systemkalibrierung und erste Tests. *Photogrammetrie, Fernerkundung, Geoinformation*, **2014**, 2014, 227-237		7
14	Low-cost 3D systems: suitable tools for plant phenotyping. *Sensors*, **2014**, 14, 3001-18	3.8	170
13	Limits of active laser triangulation as an instrument for high precision plant imaging. *Sensors*, **2014**, 14, 2489-509	3.8	23
12	Automated analysis of barley organs using 3D laser scanning: an approach for high throughput phenotyping. *Sensors*, **2014**, 14, 12670-86	3.8	65
11	A multi-resolution approach for an automated fusion of different low-cost 3D sensors. *Sensors*, **2014**, 14, 7563-79	3.8	9
10	Modeling the Beam Deflection of a Gantry Crane under Load. *Journal of Surveying Engineering, - ASCE*, **2014**, 140, 52-59	1.3	12
9	High-Precision Surface Inspection: Uncertainty Evaluation within an Accuracy Range of 15μm with Triangulation-based Laser Line Scanners. *Journal of Applied Geodesy*, **2014**, 8,	0.9	7
8	Magnetic Field Sensor Calibration for Attitude Determination. *Journal of Applied Geodesy*, **2014**, 8,	0.9	3
7	Biased and Unbiased Estimates Based on Laser Scans of Surfaces with Unknown Deformations. *Journal of Applied Geodesy*, **2014**, 8,	0.9	13
6	Aiming at self-calibration of terrestrial laser scanners using only one single object and one single scan. *Journal of Applied Geodesy*, **2014**, 8,	0.9	16
5	Surface feature based classification of plant organs from 3D laserscanned point clouds for plant phenotyping. *BMC Bioinformatics*, **2013**, 14, 238	3.6	126
4	Development of an instantaneous GNSS/MEMS attitude determination system. *GPS Solutions*, **2013**, 17, 129-138	4.4	34
3	Automatic optimization of height network configurations for detection of surface deformations. *Journal of Applied Geodesy*, **2013**, 7,	0.9	6
2	Estimation of Focal Length Variations of a 100-m Radio Telescope's Main Reflector by Laser Scanner Measurements. *Journal of Surveying Engineering, - ASCE*, **2012**, 138, 126-135	1.3	15
1	Deformation Detection in the GPS Real-Time Series by the Multiple Kalman Filters Model. *Journal of Surveying Engineering, - ASCE*, **2010**, 136, 157-164	1.3	13