

Melvyn L Smith

List of Publications by Year in descending order

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Version: 2024-02-01

83
papers

1,476
citations

331259

21
h-index

360668

35
g-index

89
all docs

89
docs citations

89
times ranked

1239
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards Machine Vision for Insect Welfare Monitoring and Behavioural Insights. <i>Frontiers in Veterinary Science</i> , 2022, 9, 835529.	0.9	6
2	Diabetes mellitus prediction and diagnosis from a data preprocessing and machine learning perspective. <i>Computer Methods and Programs in Biomedicine</i> , 2022, 220, 106773.	2.6	50
3	Towards Facial Expression Recognition for On-Farm Welfare Assessment in Pigs. <i>Agriculture (Switzerland)</i> , 2021, 11, 847.	1.4	10
4	The quiet revolution in machine vision - a state-of-the-art survey paper, including historical review, perspectives, and future directions. <i>Computers in Industry</i> , 2021, 130, 103472.	5.7	79
5	A computer vision approach to improving cattle digestive health by the monitoring of faecal samples. <i>Scientific Reports</i> , 2020, 10, 17557.	1.6	6
6	Optical imaging technology in colonoscopy: Is there a role for photometric stereo?. <i>World Journal of Gastrointestinal Endoscopy</i> , 2020, 12, 138-148.	0.4	0
7	Surface Normals Based Landmarking for 3D Face Recognition Using Photometric Stereo Captures. , 2019, , .		0
8	A photometric stereo-based 3D imaging system using computer vision and deep learning for tracking plant growth. <i>GigaScience</i> , 2019, 8, .	3.3	62
9	Multispectral imaging for presymptomatic analysis of light leaf spot in oilseed rape. <i>Plant Methods</i> , 2019, 15, 4.	1.9	28
10	Eye Centre Localisation with Convolutional Neural Network Based Regression. , 2019, , .		1
11	Weed classification in grasslands using convolutional neural networks. , 2019, , .		11
12	Visual features based boosted classification of weeds for real-time selective herbicide sprayer systems. <i>Computers in Industry</i> , 2018, 98, 23-33.	5.7	53
13	Innovative 3D and 2D machine vision methods for analysis of plants and crops in the field. <i>Computers in Industry</i> , 2018, 97, 122-131.	5.7	28
14	Vanishing point detection for visual surveillance systems in railway platform environments. <i>Computers in Industry</i> , 2018, 98, 153-164.	5.7	10
15	Towards on-farm pig face recognition using convolutional neural networks. <i>Computers in Industry</i> , 2018, 98, 145-152.	5.7	203
16	Photometric stereo for three-dimensional leaf venation extraction. <i>Computers in Industry</i> , 2018, 98, 56-67.	5.7	13
17	Broad-Leaf Weed Detection in Pasture. , 2018, , .		25
18	Early and non-intrusive lameness detection in dairy cows using 3-dimensional video. <i>Biosystems Engineering</i> , 2017, 153, 63-69.	1.9	73

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19	Gender recognition from facial images: two or three dimensions?. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 333.	0.8	8
20	Gender and gaze gesture recognition for human-computer interaction. Computer Vision and Image Understanding, 2016, 149, 32-50.	3.0	35
21	Eye center localization and gaze gesture recognition for human-computer interaction. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2016, 33, 314.	0.8	29
22	Combination of 3D skin surface texture features and 2D ABCD features for improved melanoma diagnosis. Medical and Biological Engineering and Computing, 2015, 53, 961-974.	1.6	11
23	3D reconstruction of concave surfaces using polarisation imaging. Journal of Modern Optics, 2015, 62, 927-932.	0.6	5
24	Long-range concealed object detection through active covert illumination. , 2015, , .		1
25	Testing the Validity of Lamberts Law for Micro-scale Photometric Stereo Applied to Paper Substrates. , 2015, , .		3
26	Paper type classification based on a new 3D surface texture measure. Electronics Letters, 2014, 50, 596-598.	0.5	1
27	An improved photometric stereo through distance estimation and light vector optimization from diffused maxima region. Pattern Recognition Letters, 2014, 50, 15-22.	2.6	18
28	Recovering Skin Reflectance and Geometry for Diagnosis of Melanoma. Series in Bioengineering, 2014, , 243-265.	0.3	2
29	Real-time recovery of moving 3D faces for emerging applications. Computers in Industry, 2013, 64, 1390-1398.	5.7	6
30	Multidimensional imaging for skin tissue surface characterization. Computers in Industry, 2013, 64, 1383-1389.	5.7	3
31	Robust 3D face capture using example-based photometric stereo. Computers in Industry, 2013, 64, 1399-1410.	5.7	6
32	Using nasal curves matching for expression robust 3D nose recognition. , 2013, , .		10
33	Incorporating clinical metadata with digital image features for automated identification of cutaneous melanoma. British Journal of Dermatology, 2013, 169, 1034-1040.	1.4	8
34	Face Recognition and Verification Using Photometric Stereo: The Photoface Database and a Comprehensive Evaluation. IEEE Transactions on Information Forensics and Security, 2013, 8, 121-135.	4.5	36
35	In vivo measurement of skin microrelief using photometric stereo in the presence of interreflections. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2013, 30, 278.	0.8	13
36	Analysis of three dimensional textures through use of photometric stereo, co-occurrence matrices and neural networks. , 2012, , .		0

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37	Combinatorial photometric stereo and its application in 3D modeling of melanoma. Machine Vision and Applications, 2012, 23, 1029-1045.	1.7	4
38	Dynamic deflectometry: A novel approach for the on-line reconstruction of specular freeform surfaces. Optics and Lasers in Engineering, 2012, 50, 1765-1778.	2.0	9
39	2.5D Facial Expression Recognition using Photometric Stereo and the Area Weighted Histogram of Shape Index. , 2012, , .		5
40	Distribution quantification on dermoscopy images for computer-assisted diagnosis of cutaneous melanomas. Medical and Biological Engineering and Computing, 2012, 50, 503-513.	1.6	29
41	Unsupervised sub-€segmentation for pigmented skin lesions. Skin Research and Technology, 2012, 18, 77-87.	0.8	14
42	A robust multi-scale integration method to obtain the depth from gradient maps. Computer Vision and Image Understanding, 2012, 116, 882-895.	3.0	15
43	A system for the dynamic industrial inspection of specular freeform surfaces. Optics and Lasers in Engineering, 2012, 50, 632-644.	2.0	15
44	Face recognition in 2D and 2.5D using ridgelets and photometric stereo. Pattern Recognition, 2012, 45, 3317-3327.	5.1	30
45	Novel Photometric Stereo Based Pulmonary Function Testing. , 2012, , .		2
46	Enhanced 3D curvature pattern and melanoma diagnosis. Computerized Medical Imaging and Graphics, 2011, 35, 155-165.	3.5	5
47	The Photoface database. , 2011, , .		29
48	Biological Indexes Based Reflectional Asymmetry for Classifying Cutaneous Lesions. Lecture Notes in Computer Science, 2011, 14, 124-132.	1.0	5
49	Multi-scale Integration of Slope Data on an Irregular Mesh. Lecture Notes in Computer Science, 2011, , 109-120.	1.0	1
50	A computer assisted diagnosis system for malignant melanoma using 3D skin surface texture features and artificial neural network. International Journal of Modelling, Identification and Control, 2010, 9, 370.	0.2	10
51	A efficient and practical 3D face scanner using near infrared and visible photometric stereo. Procedia Computer Science, 2010, 2, 11-19.	1.2	3
52	Baseline face recognition using photometric stereo data. Procedia Computer Science, 2010, 2, 20-25.	1.2	3
53	3D face reconstructions from photometric stereo using near infrared and visible light. Computer Vision and Image Understanding, 2010, 114, 942-951.	3.0	53
54	Using 3D differential forms to characterize a pigmented lesion in vivo. Skin Research and Technology, 2010, 16, 77-84.	0.8	9

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55	A new method describing border irregularity of pigmented lesions. <i>Skin Research and Technology</i> , 2010, 16, 66-76.	0.8	20
56	Multi-Scale Depth from Slope with Weights. , 2010, , .		4
57	Obtaining malignant melanoma indicators through statistical analysis of 3D skin surface disruptions. <i>Skin Research and Technology</i> , 2009, 15, 262-270.	0.8	12
58	Segmentation of clinical lesion images using normalized cut. , 2009, , .		3
59	Facial Geometry Estimation Using Photometric Stereo and Profile Views. <i>Lecture Notes in Computer Science</i> , 2009, , 1-11.	1.0	2
60	Facial Reconstruction and Alignment Using Photometric Stereo and Surface Fitting. <i>Lecture Notes in Computer Science</i> , 2009, , 88-95.	1.0	6
61	Concealed Object Perception and Recognition Using a Photometric Stereo Strategy. <i>Lecture Notes in Computer Science</i> , 2009, , 445-455.	1.0	2
62	Simulation of a complex optical polishing process using a neural network. <i>Robotics and Computer-Integrated Manufacturing</i> , 2008, 24, 32-37.	6.1	9
63	Reflectance of human skin using colour photometric stereo: with particular application to pigmented lesion analysis. <i>Skin Research and Technology</i> , 2008, 14, 173-179.	0.8	34
64	Lens production enhancement by adoption of artificial influence functions and a knowledge-based system in a magnetorheological finishing process. <i>Proceedings of SPIE</i> , 2007, , .	0.8	0
65	Computer vision applications – Special issue. <i>Image and Vision Computing</i> , 2007, 25, 1035-1036.	2.7	0
66	A new approach to the three-dimensional quantification of angularity using image analysis of the size and form of coarse aggregates. <i>Engineering Geology</i> , 2007, 91, 254-264.	2.9	53
67	Examining the uncertainty of the recovered surface normal in three light photometric stereo. <i>Image and Vision Computing</i> , 2007, 25, 1073-1079.	2.7	24
68	Object surface recovery using a multi-light photometric stereo technique for non-Lambertian surfaces subject to shadows and specularities. <i>Image and Vision Computing</i> , 2007, 25, 1050-1057.	2.7	72
69	A new approach to predict computer controlled polishing results. , 2005, , .		1
70	Dynamic photometric stereo – a new technique for moving surface analysis. <i>Image and Vision Computing</i> , 2005, 23, 841-852.	2.7	24
71	Automatic machine vision calibration using statistical and neural network methods. <i>Image and Vision Computing</i> , 2005, 23, 887-899.	2.7	37
72	Simulation of an optical-sensing technique for tracking surgical tools employed in computer-assisted interventions. <i>IEEE Sensors Journal</i> , 2005, 5, 1127-1131.	2.4	11

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73	Dynamic Photometric Stereo. Lecture Notes in Computer Science, 2005, , 826-833.	1.0	1
74	The Virtual Point Light Source Model the Practical Realisation of Photometric Stereo for Dynamic Surface Inspection. Lecture Notes in Computer Science, 2005, , 495-502.	1.0	1
75	Comparison of a new contact topographical measurement system for spherical and aspherical surfaces with interferometry. , 2004, , .		1
76	Machine Vision Inspection for Polished Stone Manufacture. Key Engineering Materials, 2003, 250, 131-137.	0.4	2
77	Stereo vision technology for object measurement. , 2003, 5011, 307.		1
78	Automated visual inspection for polished stone manufacture. , 2003, , .		0
79	<title>Overview of passive and active vision techniques for hand-held 3D data acquisition</title>. , 2003, 4877, 16.		11
80	Seeing is believing in the machine vision age. Metal Powder Report, 2002, 57, 20-29.	0.3	1
81	<title>Innovative approach to surface inspection using an alliance of machine vision and computer graphical techniques</title>. , 2001, 4189, 99.		1
82	<title>Vision system and three-dimensional modeling techniques for quantification of the morphology of irregular particles</title>. , 2000, 4197, 146.		0
83	Automated inspection of textured ceramic tiles. Computers in Industry, 2000, 43, 73-82.	5.7	42