

# Tania S Douglas

## List of Publications by Citations

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106  
papers

1,076  
citations

18  
h-index

28  
g-index

125  
ext. papers

1,297  
ext. citations

2.7  
avg, IF

4.56  
L-index

#	Paper	IF	Citations
106	Motion artifact removal for functional near infrared spectroscopy: a comparison of methods. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2010</b> , 57, 1377-87	5	94
105	Classification of Mycobacterium tuberculosis in images of ZN-stained sputum smears. <i>IEEE Transactions on Information Technology in Biomedicine</i> , <b>2010</b> , 14, 949-57		66
104	Image processing for craniofacial landmark identification and measurement: a review of photogrammetry and cephalometry. <i>Computerized Medical Imaging and Graphics</i> , <b>2004</b> , 28, 401-9	7.6	62
103	Automated focusing in bright-field microscopy for tuberculosis detection. <i>Journal of Microscopy</i> , <b>2010</b> , 240, 155-63	1.9	52
102	A stereo-photogrammetric method to measure the facial dysmorphology of children in the diagnosis of fetal alcohol syndrome. <i>Medical Engineering and Physics</i> , <b>2002</b> , 24, 683-9	2.4	40
101	Automated detection of tuberculosis in Ziehl-Neelsen-stained sputum smears using two one-class classifiers. <i>Journal of Microscopy</i> , <b>2010</b> , 237, 96-102	1.9	31
100	Morphometric analysis of facial landmark data to characterize the facial phenotype associated with fetal alcohol syndrome. <i>Journal of Anatomy</i> , <b>2007</b> , 210, 209-20	2.9	31
99	Eye feature extraction for diagnosing the facial phenotype associated with fetal alcohol syndrome. <i>Medical and Biological Engineering and Computing</i> , <b>2003</b> , 41, 101-6	3.1	30
98	Ultrasound imaging in lower limb prosthetics. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , <b>2002</b> , 10, 11-21	4.8	29
97	Hierarchical information-based clustering for connectivity-based cortex parcellation. <i>Frontiers in Neuroinformatics</i> , <b>2011</b> , 5, 18	3.9	28
96	A user-centred design framework for mHealth. <i>PLoS ONE</i> , <b>2020</b> , 15, e0237910	3.7	22
95	A pilot study evaluating the "STATSCAN" digital X-ray machine in paediatric polytrauma. <i>Emergency Radiology</i> , <b>2008</b> , 15, 35-42	3	21
94	A modified stakeholder participation assessment framework for design thinking in health innovation. <i>Healthcare</i> , <b>2018</b> , 6, 191-196	1.8	21
93	A review of facial image analysis for delineation of the facial phenotype associated with fetal alcohol syndrome. <i>American Journal of Medical Genetics, Part A</i> , <b>2010</b> , 152A, 528-36	2.5	20
92	Radiation dose from a linear slit scanning X-ray machine with full-body imaging capabilities. <i>Radiation Protection Dosimetry</i> , <b>2008</b> , 130, 482-9	0.9	20
91	Morphometric analysis and classification of the facial phenotype associated with fetal alcohol syndrome in 5- and 12-year-old children. <i>American Journal of Medical Genetics, Part A</i> , <b>2010</b> , 152A, 32-41	2.5	19
90	Automated detection of malaria in Giemsa-stained thin blood smears. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2013</b> , 2013, 3698-701	0.9	18

89	Improved red blood cell counting in thin blood smears <b>2011</b> ,		18
88	Digital radiographic measurement of the atlantodental interval in children. <i>Journal of Pediatric Orthopaedics</i> , <b>2007</b> , 27, 23-6	2.4	17
87	Review of 2-D/3-D Reconstruction Using Statistical Shape and Intensity Models and X-Ray Image Synthesis: Toward a Unified Framework. <i>IEEE Reviews in Biomedical Engineering</i> , <b>2019</b> , 12, 269-286	6.4	17
86	A review of cellphone microscopy for disease detection. <i>Journal of Microscopy</i> , <b>2015</b> , 260, 248-59	1.9	16
85	The use of the Statscan digital X-ray unit in paediatric polytrauma. <i>Pediatric Radiology</i> , <b>2009</b> , 39, 433-7	2.8	16
84	Causes and distribution of facial fractures in a group of South African children and the value of computed tomography in their assessment. <i>International Journal of Oral and Maxillofacial Surgery</i> , <b>2006</b> , 35, 903-6	2.9	15
83	Design, construction, and testing of a stereo-photogrammetric tool for the diagnosis of fetal alcohol syndrome in infants. <i>IEEE Transactions on Medical Imaging</i> , <b>2009</b> , 28, 1448-58	11.7	14
82	Role of depth in eye distance measurements: comparison of single and stereo-photogrammetry. <i>American Journal of Human Biology</i> , <b>2003</b> , 15, 573-8	2.7	14
81	The impact of mHealth interventions on health systems: a systematic review protocol. <i>Systematic Reviews</i> , <b>2016</b> , 5, 200	3	14
80	Fuzzy clustering to detect tuberculous meningitis-associated hyperdensity in CT images. <i>Computers in Biology and Medicine</i> , <b>2008</b> , 38, 165-70	7	13
79	Evaluation of autofocus algorithms for tuberculosis microscopy. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2007</b> , 2007, 3489-92		13
78	Eye measurements in 7-year-old black South African children. <i>Annals of Human Biology</i> , <b>2006</b> , 33, 241-54	1.7	13
77	Towards understanding the drivers of policy change: a case study of infection control policies for multi-drug resistant tuberculosis in South Africa. <i>Health Research Policy and Systems</i> , <b>2017</b> , 15, 41	3.7	11
76	Testing a dual-modality system that combines full-field digital mammography and automated breast ultrasound. <i>Clinical Imaging</i> , <b>2016</b> , 40, 498-505	2.7	10
75	Early detection of fractures with low-dose digital X-ray images in a pediatric trauma unit. <i>Journal of Trauma</i> , <b>2008</b> , 65, E4-7		10
74	Stereo image matching for facial feature measurement to aid in fetal alcohol syndrome screening. <i>Medical Engineering and Physics</i> , <b>2007</b> , 29, 459-64	2.4	9
73	Automatic segmentation of magnetic resonance images of the trans-femoral residual limb. <i>Medical Engineering and Physics</i> , <b>1998</b> , 20, 756-63	2.4	9
72	Mobile phone-based evaluation of latent tuberculosis infection: Proof of concept for an integrated image capture and analysis system. <i>Computers in Biology and Medicine</i> , <b>2018</b> , 98, 76-84	7	9

71	Sectoral collaboration networks for cardiovascular medical device development in South Africa. <i>Scientometrics</i> , <b>2015</b> , 105, 1721-1741	3	8
70	Precision assessment of stereo-photogrammetrically derived facial landmarks in infants. <i>Annals of Anatomy</i> , <b>2011</b> , 193, 100-5	2.9	8
69	Three-dimensional point localisation in low-dose X-ray images using stereo-photogrammetry. <i>Medical and Biological Engineering and Computing</i> , <b>2004</b> , 42, 37-43	3.1	8
68	The Impact of mHealth Interventions on Breast Cancer Awareness and Screening: Systematic Review Protocol. <i>JMIR Research Protocols</i> , <b>2017</b> , 6, e246	2	8
67	Dual-Energy X-Ray Absorptiometry for Measurement of Phalangeal Bone Mineral Density on a Slot-Scanning Digital Radiography System. <i>IEEE Transactions on Biomedical Engineering</i> , <b>2015</b> , 62, 2850-9 <sup>5</sup>		7
66	Engaging Communities on Health Innovation: Experiences in Implementing Design Thinking. <i>International Quarterly of Community Health Education</i> , <b>2020</b> , 41, 101-114	1	7
65	<b>2009</b> ,		7
64	Measurement of Skin Induration Size Using Smartphone Images and Photogrammetric Reconstruction: Pilot Study. <i>JMIR Biomedical Engineering</i> , <b>2017</b> , 2, e3	1.3	7
63	Computer-aided detection of pulmonary pathology in pediatric chest radiographs. <i>Lecture Notes in Computer Science</i> , <b>2010</b> , 13, 619-25	0.9	7
62	Are linear measurements and computerized volumetric ratios determined from axial MRI useful for diagnosing hydrocephalus in children with tuberculous meningitis?. <i>Childs Nervous System</i> , <b>2012</b> , 28, 79-85	1.7	6
61	Additive manufacturing: From implants to organs. <i>South African Medical Journal</i> , <b>2014</b> , 104, 408-9	1.5	6
60	Creating a virtual slide map from sputum smear images for region-of-interest localisation in automated microscopy. <i>Computer Methods and Programs in Biomedicine</i> , <b>2012</b> , 108, 38-52	6.9	6
59	Evaluation of Preoperative Patient Education and Computer-Assisted Patient Instruction. <i>Journal of Spinal Disorders</i> , <b>1998</b> , 11, 29-35		6
58	Short emergency department length of stay attributed to full-body digital radiography--a review of 3 paediatric cases. <i>South African Medical Journal</i> , <b>2006</b> , 96, 613-4	1.5	6
57	The sociology of space as a catalyst for innovation in the health sector. <i>Social Science and Medicine</i> , <b>2017</b> , 180, 36-44	5.1	5
56	Design Thinking as a Complement to Human Factors Engineering for Enhancing Medical Device Usability. <i>Engineering Studies</i> , <b>2019</b> , 11, 34-50	1.5	5
55	Monte-Carlo simulation of a slot-scanning X-ray imaging system. <i>Physica Medica</i> , <b>2016</b> , 32, 284-9	2.7	5
54	Computer assisted detection of abnormal airway variation in CT scans related to paediatric tuberculosis. <i>Medical Image Analysis</i> , <b>2014</b> , 18, 963-76	15.4	5

53	Modeling, validation and application of a mathematical tissue-equivalent breast phantom for linear slot-scanning digital mammography. <i>Physics in Medicine and Biology</i> , <b>2009</b> , 54, 1533-53	3.8	5
52	Digital radiographic measurement of the main bronchi: a pilot study. <i>Annals of Tropical Paediatrics</i> , <b>2009</b> , 29, 209-16		5
51	Automated Fluorescence Microscope for Tuberculosis Detection1. <i>Journal of Medical Devices, Transactions of the ASME</i> , <b>2014</b> , 8,	1.3	4
50	Model-based segmentation of the middle phalanx in digital radiographic images of the hand. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2013</b> , 2013, 3702-5	0.9	4
49	Biomedical engineering education in developing countries: research synthesis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2011</b> , 2011, 3628-30	0.9	4
48	Medical device regulation in South Africa: The Medicines and Related Substances Amendment Act 14 of 2015. <i>South African Medical Journal</i> , <b>2018</b> , 108, 168-170	1.5	4
47	Nanomedicine for drug delivery in South Africa: a protocol for systematic review. <i>Systematic Reviews</i> , <b>2018</b> , 7, 154	3	4
46	Does the DHET research output subsidy model penalise high-citation publication? A case study. <i>South African Journal of Science</i> , <b>2016</b> , Volume 112,	1.3	3
45	The medical device development landscape in South Africa: Institutions, sectors and collaboration. <i>South African Journal of Science</i> , <b>2017</b> , 113,	1.3	3
44	Open source modular ptosis crutch for the treatment of myasthenia gravis. <i>Expert Review of Medical Devices</i> , <b>2018</b> , 15, 137-143	3.5	3
43	Femoral neck anteversion measurement using linear slot scanning radiography. <i>Medical Engineering and Physics</i> , <b>2016</b> , 38, 187-91	2.4	3
42	Computed digital absorptiometry for measurement of phalangeal bone mineral mass on a slot-scanning digital radiography system. <i>Osteoporosis International</i> , <b>2014</b> , 25, 2625-30	5.3	3
41	Contextual innovation and social engagement: From impact factor to impact. <i>South African Journal of Science</i> , <b>2013</b> , 109, 1-2	1.3	3
40	Multiple injuries diagnosed using full-body digital x-ray. <i>Journal of Pediatric Surgery</i> , <b>2006</b> , 41, e25-8	2.6	3
39	Ultrasound image matching using genetic algorithms. <i>Medical and Biological Engineering and Computing</i> , <b>2002</b> , 40, 168-72	3.1	3
38	A Gaussian Process Model Based Generative Framework for Data Augmentation of Multi-modal 3D Image Volumes. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 90-100	0.9	3
37	MEDICAL DEVICE INNOVATION IN SOUTH AFRICA: EVOLUTION OF COLLABORATION NETWORKS (2001-2013). <i>South African Journal of Industrial Engineering</i> , <b>2019</b> , 30,	1.7	3
36	Minimally invasive transcatheter aortic valve implantation for the treatment of rheumatic heart disease in developing countries. <i>Expert Review of Medical Devices</i> , <b>2016</b> , 13, 979-985	3.5	3

35	Critical elements in the design, development and use of medical devices. A systemic perspective of orthopedic devices landscape in low- and middle-income countries. <i>Health Policy and Technology</i> , <b>2022</b> , 11, 100593	4.8	3
34	The scientific base for orthopaedic device development in South Africa: spatial and sectoral evolution of knowledge development. <i>Scientometrics</i> , <b>2019</b> , 119, 31-54	3	2
33	Detecting Breast Cancer with a Dual-Modality Device. <i>Diagnostics</i> , <b>2017</b> , 7,	3.8	2
32	Towards the socialization of science, technology and innovation for African development. <i>African Journal of Science, Technology, Innovation and Development</i> , <b>2018</b> , 10, 110-113	0.7	2
31	Image-based analysis of droplets in microfluidics. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2013</b> , 2013, 1776-9	0.9	2
30	Filtration to reduce paediatric dose for a linear slot-scanning digital X-ray machine. <i>Radiation Protection Dosimetry</i> , <b>2015</b> , 167, 552-61	0.9	2
29	. <i>IEEE Technology and Society Magazine</i> , <b>2012</b> , 31, 51-57	0.8	2
28	Measurement of prevertebral cervical soft tissue thickness on lateral digital radiographs. <i>Journal of Pediatric Orthopaedics</i> , <b>2012</b> , 32, 249-52	2.4	2
27	A pilot study evaluating erect chest imaging in children, using the Lodox Statscan digital X-ray machine. <i>South African Journal of Radiology</i> , <b>2009</b> , 13, 80	0.6	2
26	Fuzzy clustering of CT images for the measurement of hydrocephalus associated with tuberculous meningitis. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , <b>2005</b> , 2005, 4014-6		2
25	Dynamic Multi-object Gaussian Process Models. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 755-764	0.9	2
24	Statistical shape-kinematics models of the skeletal joints: Application to the shoulder complex. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2019</b> , 2019, 4815-4818	0.9	2
23	A statistical shape model of the skull developed from a South African population. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2017</b> , 2017, 333-336	0.9	1
22	Interactive patient-specific 3D approximation of scapula bone shape from 2D X-ray images using landmark-constrained statistical shape model fitting. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2017</b> , 2017, 1814-1818	0.9	1
21	Comparison of image fusion and focus function-based techniques for autofocusing in fluorescence microscopy for tuberculosis screening. <i>International Journal of Medical Engineering and Informatics</i> , <b>2013</b> , 5, 177	0.5	1
20	Image fusion for autofocusing in fluorescence microscopy for tuberculosis screening <b>2011</b> ,		1
19	Creating a virtual slide map of sputum smears by auto-stitching. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2011</b> , 2011, 5088-91	0.9	1
18	Automatic boundary extraction from magnetic resonance images of the residual limb of a trans-femoral amputee		1

17	Monte-Carlo simulation of a slot-scanning digital mammography system for tomosynthesis. <i>Journal of X-Ray Science and Technology</i> , <b>2016</b> , 24, 191-206	2.1	1
16	Natural ventilation as a means of airborne tuberculosis infection control in minibus taxis. <i>South African Journal of Science</i> , <b>2019</b> , 115,	1.3	1
15	Learning by solving as a pedagogical approach to inclusive health innovation. <i>Development Southern Africa</i> , <b>2020</b> , 37, 418-431	1.4	1
14	<b>2018</b> ,		1
13	Architecture of a village small cell network for mobile health <b>2018</b> ,		1
12	Focus areas of cardiovascular medical device research in South Africa. <i>South African Medical Journal</i> , <b>2015</b> , 106, 55-6	1.5	
11	Interactive segmentation of airways from chest X-ray images using active shape models. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2012</b> , 2012, 1498-501	0.9	
10	Radiological findings at a South African forensic pathology laboratory in cases of sudden unexpected death in infants. <i>South African Journal of Radiology</i> , <b>2012</b> , 16, 4-6	0.6	
9	Biomedical engineering at UCT - challenges and opportunities. <i>South African Medical Journal</i> , <b>2012</b> , 102, 456	1.5	
8	Effect of aluminium filtration on dose and image quality in paediatric slot-scanning radiography. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2013</b> , 2013, 2332-5	0.9	
7	Drivers and restrainers of relevance in graduate BME education - a South African study. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , <b>2012</b> , 2012, 5054-7	0.9	
6	A user-centred design framework for mHealth <b>2020</b> , 15, e0237910		
5	A user-centred design framework for mHealth <b>2020</b> , 15, e0237910		
4	A user-centred design framework for mHealth <b>2020</b> , 15, e0237910		
3	A user-centred design framework for mHealth <b>2020</b> , 15, e0237910		
2	A user-centred design framework for mHealth <b>2020</b> , 15, e0237910		
1	A user-centred design framework for mHealth <b>2020</b> , 15, e0237910		