

# Geoff R Fernie

## List of Publications by Year in descending order

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Version: 2024-02-01

117  
papers

3,244  
citations

186265

28  
h-index

168389

53  
g-index

121  
all docs

121  
docs citations

121  
times ranked

2759  
citing authors

#	ARTICLE	IF	CITATIONS
1	Aging and Postural Control. Journal of the American Geriatrics Society, 1990, 38, 1-9.	2.6	355
2	A Planning System Based on Markov Decision Processes to Guide People With Dementia Through Activities of Daily Living. IEEE Transactions on Information Technology in Biomedicine, 2006, 10, 323-333.	3.2	144
3	Design of an Intervertebral Disc Prosthesis. Spine, 1991, 16, S256-S260.	2.0	142
4	An anatomical comparison of the human and bovine thoracolumbar spine. Journal of Orthopaedic Research, 1986, 4, 298-303.	2.3	139
5	Change-in-support reactions for balance recovery. IEEE Engineering in Medicine and Biology Magazine, 2003, 22, 20-26.	0.8	120
6	Efficacy and Effectiveness of a Balance-Enhancing Insole. Journals of Gerontology - Series A Biological Sciences and Medical Sciences, 2008, 63, 595-602.	3.6	101
7	Preventing falls in older adults: New interventions to promote more effective change-in-support balance reactions. Journal of Electromyography and Kinesiology, 2008, 18, 243-254.	1.7	99
8	A Posture Control Model and Balance Test for the Prediction of Relative Postural Stability. IEEE Transactions on Biomedical Engineering, 1987, BME-34, 797-810.	4.2	93
9	The efficacy of an intelligent cognitive orthosis to facilitate handwashing by persons with moderate to severe dementia. Neuropsychological Rehabilitation, 2004, 14, 135-171.	1.6	93
10	Oxybutynin Chloride for Geriatric Urinary Dysfunction: a Double-blind Placebo-controlled Study. Age and Ageing, 1989, 18, 195-200.	1.6	82
11	Pedestrian behavior and safety on a two-stage crossing with a center refuge island and the effect of winter weather on pedestrian compliance rate. Accident Analysis and Prevention, 2010, 42, 1156-1163.	5.7	81
12	The Use of Artificial Intelligence in the Design of an Intelligent Cognitive Orthosis for People with Dementia. Assistive Technology, 2001, 13, 23-39.	2.0	78
13	Urinary Dysfunction in a Geriatric Long-Term Care Population: Prevalence and Patterns*. Journal of the American Geriatrics Society, 1981, 29, 211-214.	2.6	72
14	Hand hygiene monitoring technology: a systematic review of efficacy. Journal of Hospital Infection, 2015, 89, 51-60.	2.9	72
15	Using psychological theory to inform methods to optimize the implementation of a hand hygiene intervention. Implementation Science, 2012, 7, 77.	6.9	64
16	Age-related differences in dynamic balance control during stair descent and effect of varying step geometry. Applied Ergonomics, 2016, 52, 275-284.	3.1	64
17	Reducing fall risk by improving balance control: Development, evaluation and knowledge-translation of new approaches. Journal of Safety Research, 2011, 42, 473-485.	3.6	58
18	Effectiveness of propantheline bromide in the treatment of geriatric patients with detrusor instability. Neurourology and Urodynamics, 1986, 5, 133-140.	1.5	56

#	ARTICLE	IF	CITATIONS
19	Acceptability of a wearable hand hygiene device with monitoring capabilities. <i>Journal of Hospital Infection</i> , 2008, 70, 216-222.	2.9	54
20	Impact attenuation of floor coverings in simulated falling accidents. <i>Applied Ergonomics</i> , 1990, 21, 107-114.	3.1	49
21	Challenges to Human Drivers in Increasingly Automated Vehicles. <i>Human Factors</i> , 2020, 62, 310-328.	3.5	49
22	The Efficacy of Head Immobilization Techniques During Simulated Vehicle Motion. <i>Spine</i> , 1999, 24, 1839.	2.0	45
23	A biomechanical assessment of floor and overhead lifts using one or two caregivers for patient transfers. <i>Applied Ergonomics</i> , 2012, 43, 521-531.	3.1	36
24	Understanding and measuring powered wheelchair mobility and manoeuvrability. Part I. Reach in confined spaces. <i>Disability and Rehabilitation</i> , 2005, 27, 939-949.	1.8	35
25	Aging and the Use of Pedestrian Facilities in Winter – The Need for Improved Design and Better Technology. <i>Journal of Urban Health</i> , 2013, 90, 602-617.	3.6	34
26	Validation of an automated algorithm for detecting apneas and hypopneas by acoustic analysis of breath sounds. <i>Sleep Medicine</i> , 2013, 14, 562-571.	1.6	32
27	The development of a computerized cueing device to help people with dementia to be more independent. <i>Technology and Disability</i> , 2001, 13, 23-40.	0.6	30
28	Usability testing of multimodal feedback interface and simulated collision-avoidance power wheelchair for long-term-care home residents with cognitive impairments. <i>Journal of Rehabilitation Research and Development</i> , 2011, 48, 801.	1.6	30
29	A system for portable sleep apnea diagnosis using an embedded data capturing module. <i>Journal of Clinical Monitoring and Computing</i> , 2013, 27, 303-311.	1.6	30
30	Production of a reproducible spinal burst fracture for use in biomechanical testing. <i>Journal of Orthopaedic Research</i> , 1987, 5, 462-465.	2.3	28
31	Influence of Stairway Handrail Height on the Ability to Generate Stabilizing Forces and Moments. <i>Human Factors</i> , 1984, 26, 705-714.	3.5	27
32	Utilization of ultrasound sensors for anti-collision systems of powered wheelchairs. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2005, 13, 24-32.	4.9	27
33	Migration, Attachment, and Orientation of Human Gingival Fibroblasts to Root Slices, Naked and Porous-surfaced Titanium Alloy Discs, and Zircalloy 2 Discs in vitro. <i>Journal of Dental Research</i> , 1987, 66, 1000-1005.	5.2	24
34	Comparison of in-laboratory and home diagnosis of sleep apnea using a cordless portable acoustic device. <i>Sleep Medicine</i> , 2016, 22, 91-96.	1.6	24
35	Evolution of the Coefficient of Friction with Surface Wear for Advanced Surface Textured Composites. <i>Advanced Materials Interfaces</i> , 2017, 4, 1600983.	3.7	24
36	On the classification of a geriatric subject as a faller or nonfaller. <i>Medical and Biological Engineering and Computing</i> , 1986, 24, 219-222.	2.8	23

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37	The Impact of New Lifting Technology in Long Term Care. AAOHN Journal, 1994, 42, 582-589.	0.5	23
38	Blood pressure and thermal responses to repeated whole body cold exposure: effect of winter clothing. European Journal of Applied Physiology, 2009, 107, 673-685.	2.5	23
39	Effect of electronic real-time prompting on hand hygiene behaviors in health care workers. American Journal of Infection Control, 2018, 46, 768-774.	2.3	23
40	Interventions to Promote More Effective Balance-Recovery Reactions in Industrial Settings: New Perspectives on Footwear and Handrails. Industrial Health, 2008, 46, 40-50.	1.0	22
41	The Effect of Automated Monitoring and Real-Time Prompting on Nurses' Hand Hygiene Performance. CIN - Computers Informatics Nursing, 2013, 31, 498-504.	0.5	20
42	Slip resistance of winter footwear on snow and ice measured using maximum achievable incline. Ergonomics, 2016, 59, 717-728.	2.1	20
43	A percutaneous implant using a porous metal surface coating for adhesion to bone and a velour covering for soft tissue attachment: Results of trials in pigs. Journal of Biomedical Materials Research Part B, 1977, 11, 883-891.	3.1	19
44	Research Note Effect of Stairway Pitch on Optimal Handrail Height. Human Factors, 1985, 27, 355-359.	3.5	19
45	Defining the configuration of a hand hygiene monitoring system. American Journal of Infection Control, 2010, 38, 518-522.	2.3	19
46	Hand hygiene monitoring technology: protocol for a systematic review. Systematic Reviews, 2013, 2, 101.	5.3	19
47	High friction on ice provided by elastomeric fiber composites with textured surfaces. Applied Physics Letters, 2015, 106, .	3.3	19
48	Multifunctional Textured Surfaces with Enhanced Friction and Hydrophobic Behaviors Produced by Fiber Debonding and Pullout. ACS Applied Materials & Interfaces, 2016, 8, 29818-29826.	8.0	19
49	An assessment of a system to monitor the activity of patients in a rehabilitation programme. Prosthetics and Orthotics International, 1979, 3, 99-102.	1.0	19
50	Bladder volume estimation in the elderly using a portable ultrasound-based measurement device. Journal of Medical Engineering and Technology, 1993, 17, 99-103.	1.4	18
51	Evaluation of a Contact Sensor Skirt for an Anti-Collision Power Wheelchair for Older Adult Nursing Home Residents With Dementia: Safety and Mobility. Assistive Technology, 2011, 23, 117-134.	2.0	18
52	A Guideline for the Design of a Four-Wheeled Walker. Assistive Technology, 1997, 9, 116-129.	2.0	17
53	How a diverse research ecosystem has generated new rehabilitation technologies: Review of NIDILRR's Rehabilitation Engineering Research Centers. Journal of NeuroEngineering and Rehabilitation, 2017, 14, 109.	4.6	17
54	An evaluation of computer aided design of below-knee prosthetic sockets. Prosthetics and Orthotics International, 1990, 14, 136-142.	1.0	16

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55	Design of built environments to accommodate mobility scooter users: part II. Disability and Rehabilitation: Assistive Technology, 2011, 6, 432-439.	2.2	15
56	Automated Monitoring. CIN - Computers Informatics Nursing, 2014, 32, 397-403.	0.5	15
57	Slip resistance and wearability of safety footwear used on icy surfaces for outdoor municipal workers. Work, 2019, 62, 37-47.	1.1	14
58	Chapter 26 A system identification approach to balance testing. Progress in Brain Research, 1988, 76, 297-306.	1.4	13
59	Design of built environments to accommodate mobility scooter users: part I. Disability and Rehabilitation: Assistive Technology, 2011, 6, 67-76.	2.2	13
60	Results of the pilot phase of a clinical evaluation of computer aided design of trans-tibial prosthesis sockets. Prosthetics and Orthotics International, 1986, 10, 142-148.	1.0	12
61	Assessing the performance of winter footwear using a new maximum achievable incline method. Applied Ergonomics, 2015, 50, 218-225.	3.1	12
62	Selecting slip resistant winter footwear for personal support workers. Work, 2019, 64, 135-151.	1.1	12
63	Assisting Frail Seniors With Toileting in a Home Bathroom: Approaches Used by Home Care Providers. Journal of Applied Gerontology, 2019, 38, 717-749.	2.0	12
64	Urodynamic Characterization of Incontinence in the Elderly by Bladder Volume. Journal of Urology, 1983, 129, 772-774.	0.4	11
65	Embedded System for Hygiene Compliance Monitoring. IEEE Transactions on Automation Science and Engineering, 2010, 7, 695-698.	5.2	11
66	Advanced Technologies to Curb Healthcare-Associated Infections. HealthcarePapers, 2009, 9, 52-55.	0.3	11
67	Power Mobility for a Nursing Home Resident With Dementia. American Journal of Occupational Therapy, 2009, 63, 765-771.	0.3	11
68	The experiences of using an anti-collision power wheelchair for three long-term care home residents with mild cognitive impairment. Disability and Rehabilitation: Assistive Technology, 2011, 6, 347-363.	2.2	10
69	Secondary measures of hand hygiene performance in health care available with continuous electronic monitoring of individuals. American Journal of Infection Control, 2019, 47, 38-44.	2.3	10
70	The effects of caregiver experience on low back loads during floor and overhead lift maneuvering activities. International Journal of Industrial Ergonomics, 2011, 41, 653-660.	2.6	9
71	Effect of intermittent deployment of an electronic monitoring system on hand hygiene behaviors in healthcare workers. American Journal of Infection Control, 2019, 47, 376-380.	2.3	9
72	Effects of multi-functional surface-texturing on the ice friction and abrasion characteristics of hybrid composite materials for footwear. Wear, 2019, 418-419, 253-264.	3.1	9

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73	Evaluation of Winter Footwear: Comparison of Test Methods to Determine Footwear Slip Resistance on Ice Surfaces. <i>International Journal of Environmental Research and Public Health</i> , 2021, 18, 405.	2.6	9
74	Shape sensing as an educational aid for student prosthetists. <i>Prosthetics and Orthotics International</i> , 1984, 8, 87-90.	1.0	8
75	Specifications for a mass producible static lounge chair for the elderly. <i>Applied Ergonomics</i> , 1989, 20, 39-45.	3.1	8
76	Computer-Aided Design and Computer-Aided Manufacturing (CAD/CAM) in Prosthetics. <i>Clinical Orthopaedics and Related Research</i> , 1990, &NA;, 39??43.	1.5	8
77	The Effect of Electrical Stimulation of the Calf Muscle on Leg Fluid Accumulation over a Long Period of Sitting. <i>Scientific Reports</i> , 2017, 7, 6055.	3.3	8
78	Reproducibility and predictors of the apnea hypopnea index across multiple nights. <i>Sleep Science</i> , 2018, 11, 28-33.	1.0	8
79	LOWER BACK LOADS DURING MANEUVERING TASKS WITH LIFTING DEVICES. <i>Biomechanisms</i> , 2000, 15, 243-254.	0.1	8
80	An Interface to Enhance Mobility for People with Hemispatial Neglect. <i>Assistive Technology</i> , 1997, 9, 55-61.	2.0	7
81	Adaptive segmentation and normalization of breathing acoustic data of subjects with obstructive sleep apnea. , 2009, , .		7
82	Nursing activity recognition using an inexpensive game controller: An application to infection control. <i>Technology and Health Care</i> , 2010, 18, 393-408.	1.2	7
83	Electronic Monitoring of Individual Healthcare Workersâ€™ Hand Hygiene Event Rate. <i>Infection Control and Hospital Epidemiology</i> , 2014, 35, 1189-1192.	1.8	7
84	The Evaluation of Vertical Pole Configuration and Location on Assisting the Sit-to-Stand Movement in Older Adults with Mobility Limitations. <i>Assistive Technology</i> , 2015, 27, 208-218.	2.0	7
85	Phase tracking of the breathing cycle in sleeping subjects by frequency analysis of acoustic data. <i>International Journal of Healthcare Technology and Management</i> , 2010, 11, 163.	0.1	6
86	Deep Neural Network for Slip Detection on Ice Surface. <i>Sensors</i> , 2020, 20, 6883.	3.8	6
87	Influential Factors in Remote Monitoring of Heart Failure Patients: A Review of the Literature and Direction for Future Research. <i>Sensors</i> , 2021, 21, 3575.	3.8	5
88	Techniques of lower limb prosthetic manufacture using Lightcast II. <i>Prosthetics and Orthotics International</i> , 1977, 1, 84-88.	1.0	4
89	Organizing Group Programs for Cognitively Impaired Elderly Residents of Nursing Homes. <i>Clinical Gerontologist</i> , 1990, 9, 123-134.	2.2	4
90	Effect of calf muscle electrical stimulation on rostral fluid shift, snoring and obstructive sleep apnea. <i>Sleep Medicine</i> , 2019, 57, 36-42.	1.6	4

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91	Bathing frail seniors at home: Home care providersâ€™ approaches. <i>Work</i> , 2020, 66, 499-517.	1.1	4
92	Adaptive Technology. , 2006, , 425-441.		4
93	Technological innovations for individuals with Alzheimer's disease. <i>American Journal of Alzheimer S Care and Related Disorders &amp; Research</i> , 1990, 5, 9-14.	0.1	3
94	Estimation of sleep status in sleep apnea patients using a novel head actigraphy technique. , 2015, 2015, 5416-9.		3
95	Toward mitigating pressure injuries: Detecting patient orientation from vertical bed reaction forces. <i>Journal of Rehabilitation and Assistive Technologies Engineering</i> , 2020, 7, 205566832091216.	0.9	3
96	Quantifying Mobility Scooter Performance in Winter Environments. <i>Archives of Physical Medicine and Rehabilitation</i> , 2021, 102, 1902-1909.	0.9	3
97	Increasing the Accessibility of a Conventional Cooking Range for Wheelchair Users. <i>American Journal of Occupational Therapy</i> , 1994, 48, 463-466.	0.3	3
98	Walkway Safety Evaluation and Hazards Investigation for Trips and Stumbles Prevention. <i>Advances in Intelligent Systems and Computing</i> , 2019, , 807-815.	0.6	3
99	Design of a Novel Wearable System for Foot Clearance Estimation. <i>Sensors</i> , 2021, 21, 7891.	3.8	3
100	Advanced technologies to curb healthcare-associated infections. , 2009, 9, 51-5 discussion 60-2.		3
101	Assistive Devices, Robotics, and Quality of Life in the Frail Elderly. , 1991, , 142-167.		2
102	Technology to assist elderly people's safe mobility. <i>Experimental Aging Research</i> , 1994, 20, 219-228.	1.2	2
103	Automatic detection of the onset of nursing activities using accelerometers and adaptive segmentation. <i>Technology and Health Care</i> , 2011, 19, 319-329.	1.2	2
104	A novel approach for slip resistance evaluation of winter footwear based on probability of slipping and cost analysis. <i>Safety Science</i> , 2021, 137, 105133.	4.9	2
105	Product Development: Using a 3D Computer Model to Optimize the Stability of the Rocketâ„¢ Powered Wheelchair. <i>Assistive Technology</i> , 2001, 13, 46-58.	2.0	1
106	Footwear and Mobility Scooters: Developing Performance Standards For Winter Conditions Using An Adjustable Ramp Test. <i>Archives of Physical Medicine and Rehabilitation</i> , 2014, 95, e105.	0.9	1
107	A Vision-Based Approach for Sidewalk and Walkway Trip Hazards Assessment. <i>International Journal of Environmental Research and Public Health</i> , 2020, 17, 8438.	2.6	1
108	Stairs And Winter Weather. <i>Medicine and Science in Sports and Exercise</i> , 2005, 37, S257-S258.	0.4	1

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109	Winter Presents Barriers To Physical And Social Activity In Functionally Impaired Older Adults. <i>Medicine and Science in Sports and Exercise</i> , 2005, 37, S257.	0.4	1
110	A New Performance Metric to Estimate the Risk of Exposure to Infection in a Health Care Setting: Descriptive Study. <i>JMIR Formative Research</i> , 2022, 6, e32384.	1.4	1
111	Development of a simulation-based experimental research framework for the characterization of cannabis-related driving impairment. <i>Transportation Research Interdisciplinary Perspectives</i> , 2022, 13, 100561.	2.7	1
112	An instrument for the measurement of foot and ankle volume. <i>Journal of Medical Engineering and Technology</i> , 1979, 3, 140-140.	1.4	0
113	Reply by authors: Effectiveness of propantheline bromide in the treatment of geriatric patients with detrusor instability. <i>Neurourology and Urodynamics</i> , 1986, 5, 143-144.	1.5	0
114	Research and Development in Assistive Technology at the Centre for Studies in Aging in Toronto. <i>Technology and Disability</i> , 1994, 3, 315-320.	0.6	0
115	Corrigendum to "Acceptability of a wearable hand hygiene device with monitoring capabilities" [ <i>Journal of Hospital Infection</i> 2008; 70: 216-222]. <i>Journal of Hospital Infection</i> , 2009, 71, 389.	2.9	0
116	1513 Efficacy of Hand Hygiene (HH) Monitoring Technology: a Systematic Review. <i>Open Forum Infectious Diseases</i> , 2014, 1, S401-S401.	0.9	0
117	CEAL - Flight Simulation Technology Applied to Rehabilitation Research. , 2010, , .		0