

# Gary A Mirka

## List of Publications by Year in descending order

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112  
papers

2,403  
citations

218381

26  
h-index

233125

45  
g-index

114  
all docs

114  
docs citations

114  
times ranked

1372  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Stochastic Model of Trunk Muscle Coactivation During Trunk Bending. <i>Spine</i> , 1993, 18, 1396-1409.	1.0	184
2	The quantification of EMG normalization error. <i>Ergonomics</i> , 1991, 34, 343-352.	1.1	179
3	The effects of video display terminal height on the operator: a comparison of the 15° and 40° recommendations. <i>Applied Ergonomics</i> , 1998, 29, 239-246.	1.7	142
4	A Comprehensive Evaluation of Trunk Response to Asymmetric Trunk Motion. <i>Spine</i> , 1992, 17, 318-326.	1.0	125
5	The Effects of Preview and Task Symmetry on Trunk Muscle Response to Sudden Loading. <i>Human Factors</i> , 1989, 31, 101-115.	2.1	88
6	An in vivo assessment of the low back response to prolonged flexion: Interplay between active and passive tissues. <i>Clinical Biomechanics</i> , 2007, 22, 965-971.	0.5	85
7	Muscle activities during asymmetric trunk angular accelerations. <i>Journal of Orthopaedic Research</i> , 1990, 8, 824-832.	1.2	82
8	Electromyographic studies of the lumbar trunk musculature during the generation of low-level trunk acceleration. <i>Journal of Orthopaedic Research</i> , 1993, 11, 811-817.	1.2	74
9	A field evaluation of monitor placement effects in VDT users. <i>Applied Ergonomics</i> , 2001, 32, 313-325.	1.7	72
10	Influence of knee angle and individual flexibility on the flexion-relaxation response of the low back musculature. <i>Journal of Electromyography and Kinesiology</i> , 2004, 14, 485-494.	0.7	60
11	The effects of obesity on lifting performance. <i>Applied Ergonomics</i> , 2008, 39, 93-98.	1.7	51
12	Intra-abdominal pressure during trunk extension motions. <i>Clinical Biomechanics</i> , 1996, 11, 267-274.	0.5	46
13	A biomechanical analysis of anterior load carriage. <i>Ergonomics</i> , 2007, 50, 2104-2117.	1.1	46
14	Ergonomic risk factors for low back pain in North Carolina crab pot and gill net commercial fishermen. <i>American Journal of Industrial Medicine</i> , 2009, 52, 311-321.	1.0	42
15	Selective activation of the external oblique musculature during axial torque production. <i>Clinical Biomechanics</i> , 1997, 12, 172-180.	0.5	41
16	Influence of asymmetry on the flexion relaxation response of the low back musculature. <i>Clinical Biomechanics</i> , 2011, 26, 35-39.	0.5	41
17	Continuous Assessment of Back Stress (CABS): A New Method to Quantify Low-Back Stress in Jobs with Variable Biomechanical Demands. <i>Human Factors</i> , 2000, 42, 209-225.	2.1	39
18	Cervicobrachial muscle response to cognitive load in a dual-task scenario. <i>Ergonomics</i> , 2004, 47, 625-645.	1.1	38

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19	An algorithm for defining the onset and cessation of the flexion-relaxation phenomenon in the low back musculature. <i>Journal of Electromyography and Kinesiology</i> , 2012, 22, 376-382.	0.7	36
20	College students and computers: Assessment of usage patterns and musculoskeletal discomfort. <i>Work</i> , 2009, 32, 285-298.	0.6	35
21	The effects of a sloped ground surface on trunk kinematics and L5/S1 moment during lifting. <i>Ergonomics</i> , 2004, 47, 646-659.	1.1	34
22	An investigation of ergonomic interventions in dental hygiene work. <i>Applied Ergonomics</i> , 2002, 33, 175-184.	1.7	32
23	Effect of Grip Span on Lateral Pinch Grip Strength. <i>Human Factors</i> , 2002, 44, 569-577.	2.1	31
24	Low-level exertions of the neck musculature: A study of research methods. <i>Journal of Electromyography and Kinesiology</i> , 2006, 16, 485-497.	0.7	30
25	Describing the active region boundary of EMG-assisted biomechanical models of the low back. <i>Clinical Biomechanics</i> , 2012, 27, 422-427.	0.5	29
26	Transverse-Contour Modeling of Trunk Muscles—Distributed Forces and Spinal Loads During Lifting and Twisting. <i>Spine</i> , 2000, 25, 180.	1.0	28
27	Ergonomic interventions for the furniture manufacturing industry. Part II—Handtools. <i>International Journal of Industrial Ergonomics</i> , 2002, 29, 275-287.	1.5	28
28	Effects of passive exoskeleton support on EMG measures of the neck, shoulder and trunk muscles while holding simulated surgical postures and performing a simulated surgical procedure. <i>Applied Ergonomics</i> , 2022, 100, 103646.	1.7	25
29	Multivariate input modeling with Johnson distributions. , 1996, , .		24
30	The effects of a suspended-load backpack on gait. <i>Gait and Posture</i> , 2009, 29, 151-153.	0.6	24
31	Biomechanical evaluation of postures assumed when harvesting from bush crops. <i>International Journal of Industrial Ergonomics</i> , 2009, 39, 347-352.	1.5	23
32	The Effect of Personality Type on Muscle Coactivation during Elbow Flexion. <i>Human Factors</i> , 1999, 41, 51-60.	2.1	22
33	Ergonomic interventions for the reduction of low back stress in framing carpenters in the home building industry. <i>International Journal of Industrial Ergonomics</i> , 2003, 31, 397-409.	1.5	22
34	Technical Note: The use of mirrors during an assembly task: a study of ergonomics and productivity. <i>Ergonomics</i> , 2001, 44, 215-228.	1.1	21
35	Ergonomic interventions for the furniture manufacturing industry. Part I—lift assist devices. <i>International Journal of Industrial Ergonomics</i> , 2002, 29, 263-273.	1.5	21
36	Differences in trunk kinematics and ground reaction forces between older and younger adults during lifting. <i>International Journal of Industrial Ergonomics</i> , 2006, 36, 767-772.	1.5	20

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37	An evaluation of backpack harness systems in non-neutral torso postures. <i>Applied Ergonomics</i> , 2007, 38, 541-547.	1.7	20
38	Use of the CABS methodology to assess biomechanical stress in commercial crab fishermen. <i>Applied Ergonomics</i> , 2005, 36, 61-70.	1.7	19
39	A study of lifting tasks performed on laterally slanted ground surfaces. <i>Ergonomics</i> , 2005, 48, 782-795.	1.1	19
40	The effect of sinusoidal rolling ground motion on lifting biomechanics. <i>Applied Ergonomics</i> , 2010, 42, 131-137.	1.7	19
41	An Investigation of the Variability in Human Performance during Sagittally Symmetric Lifting Tasks. <i>IIE Transactions</i> , 1996, 28, 745-752.	2.1	17
42	Analysis of Alternative Keyboards Using Learning Curves. <i>Human Factors</i> , 2009, 51, 35-45.	2.1	17
43	The effect of stance width on trunk kinematics and trunk kinetics during sagittally asymmetric lifting. <i>International Journal of Industrial Ergonomics</i> , 2011, 41, 147-152.	1.5	17
44	Evaluating Ergonomic Stresses in North Carolina Commercial Crab Pot and Gill Net Fishermen. <i>Journal of Occupational and Environmental Hygiene</i> , 2008, 5, 182-196.	0.4	16
45	Ergonomic interventions for commercial crab fishermen. <i>International Journal of Industrial Ergonomics</i> , 2011, 41, 481-487.	1.5	16
46	Medial knee joint loading during stair ambulation and walking while carrying loads. <i>Gait and Posture</i> , 2013, 37, 460-462.	0.6	16
47	Effects of semi-rigid arch-support orthotics: an investigation with potential ergonomic implications. <i>Applied Ergonomics</i> , 2000, 31, 515-522.	1.7	14
48	Development of an ergonomics guideline for the furniture manufacturing industry. <i>Applied Ergonomics</i> , 2005, 36, 241-247.	1.7	14
49	Ergonomic interventions for the reduction of back and shoulder biomechanical loading when weighing calves. <i>International Journal of Industrial Ergonomics</i> , 2007, 37, 103-110.	1.5	14
50	Adaptive system identification applied to the biomechanical response of the human trunk during sudden loading. <i>Journal of Biomechanics</i> , 2005, 38, 2472-2479.	0.9	13
51	Trunk muscle fatigue and its implications in EMG-assisted biomechanical modeling. <i>International Journal of Industrial Ergonomics</i> , 2013, 43, 425-429.	1.5	13
52	A systems-level perspective of the biomechanics of the trunk flexion-extension movement: Part I "Normal low back condition. <i>International Journal of Industrial Ergonomics</i> , 2015, 46, 7-11.	1.5	13
53	Medial Longitudinal Arch Deformation during Walking and Stair Navigation While Carrying Loads. <i>Foot and Ankle International</i> , 2011, 32, 623-629.	1.1	12
54	Effect of surgical radiation personal protective equipment on EMG-based measures of back and shoulder muscle fatigue: A laboratory study of novices. <i>Applied Ergonomics</i> , 2020, 84, 103029.	1.7	12

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55	The interaction between load and coupling during dynamic manual materials handling tasks. <i>Occupational Ergonomics</i> , 1998, 1, 3-11.	0.3	12
56	Evaluation of a Redesigned Self-Checkout Station for Wheelchair Users. <i>Assistive Technology</i> , 2006, 18, 15-24.	1.2	10
57	Learning curve analysis of a patient lift-assist device. <i>Applied Ergonomics</i> , 2007, 38, 765-771.	1.7	10
58	An evaluation of arborist handsaws. <i>Applied Ergonomics</i> , 2009, 40, 8-14.	1.7	10
59	A Laboratory Study of the Effects of Wrist Splint Orthoses on Forearm Muscle Activity and Upper Extremity Posture. <i>Human Factors</i> , 2006, 48, 499-510.	2.1	9
60	Lumbar Motion Response to a Constant Load Velocity Lift. <i>Human Factors</i> , 1990, 32, 493-501.	2.1	8
61	An empirical approach to characterizing trunk muscle coactivation using simulation input modeling techniques. <i>Journal of Biomechanics</i> , 2000, 33, 1701-1704.	0.9	8
62	An Adaptive System Identification Model of the Biomechanical Response of the Human Trunk During Sudden Loading. <i>Journal of Biomechanical Engineering</i> , 2006, 128, 235-241.	0.6	8
63	The effects of horizontal load speed and lifting frequency on lifting technique and biomechanics. <i>Ergonomics</i> , 2010, 53, 1024-1032.	1.1	8
64	The effects of repetitive bouts of a fatiguing exertion (with breaks) on the slope of EMG measures of localized muscle fatigue. <i>Journal of Electromyography and Kinesiology</i> , 2020, 51, 102382.	0.7	8
65	Viscoelastic Responses of the Lumbar Spine during Prolonged Stooping. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2005, 49, 1269-1273.	0.2	7
66	A systems-level perspective of the biomechanics of the trunk flexion-extension movement: Part II – Fatigued low back conditions. <i>International Journal of Industrial Ergonomics</i> , 2015, 46, 1-6.	1.5	7
67	Productivity and Ergonomic Investigation of Bent-Handle Pliers. <i>Human Factors</i> , 2004, 46, 234-243.	2.1	6
68	The Effect of a Repetitive, Fatiguing Lifting Task on Horizontal Ground Reaction Forces. <i>Journal of Applied Biomechanics</i> , 2005, 21, 260-270.	0.3	6
69	The effects of load weight and load starting height on variability of lifting kinematics and kinetics. <i>International Journal of Industrial Ergonomics</i> , 2019, 73, 102830.	1.5	6
70	Effects of break scheduling strategies on subjective and objective measures of neck and shoulder muscle fatigue in asymptomatic adults performing a standing task requiring static neck flexion. <i>Applied Ergonomics</i> , 2021, 92, 103311.	1.7	6
71	Exploring the relationship between neck flexion and neck problems in occupational populations: a systematic review of the literature. <i>Ergonomics</i> , 2022, 65, 587-603.	1.1	6
72	Assessing the Effects of Positive Feedback and Reinforcement in the Introduction Phase of an Ergonomic Intervention. <i>Human Factors</i> , 2005, 47, 526-535.	2.1	5

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73	Effects of age on muscle activity and upper body kinematics during a repetitive forearm supination task. <i>International Journal of Industrial Ergonomics</i> , 2006, 36, 951-957.	1.5	5
74	Hand-hold location and trunk kinematics during box handling. <i>Ergonomics</i> , 2010, 53, 1033-1038.	1.1	5
75	The effect of a lower extremity kinematic constraint on lifting biomechanics. <i>Applied Ergonomics</i> , 2011, 42, 867-872.	1.7	5
76	The Effects of VDT Location on User Posture and Comfort: A Field Study. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1998, 42, 871-875.	0.2	4
77	A laboratory investigation of personality type and break-taking behavior. <i>International Journal of Industrial Ergonomics</i> , 2005, 35, 237-246.	1.5	4
78	Application of an Entropy-Assisted Optimization Model in Prediction of Agonist and Antagonist Muscle Forces. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2007, 51, 923-927.	0.2	4
79	The Use of Mirrors during an Assembly Task: A Study of Ergonomics and Productivity. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2000, 44, 189-192.	0.2	3
80	Combined effect of low back muscle fatigue and passive tissue elongation on the flexion-relaxation response. <i>Applied Ergonomics</i> , 2017, 63, 72-78.	1.7	3
81	Effect of Load Weight and Starting Height on the Variability of Trunk Kinematics. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2018, 62, 905-909.	0.2	3
82	A Study of the Interaction between Load and Coupling during Lifting. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1994, 38, 644-648.	0.2	2
83	The Influence of Head, Forearm and Back Support on Myoelectric Activity, Performance and Subjective Comfort during a VDT Task. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2001, 45, 1082-1086.	0.2	2
84	The Effect of a Knee Support on the Biomechanical Response of the Low Back. <i>Journal of Applied Biomechanics</i> , 2007, 23, 275-281.	0.3	2
85	Effect of Time on the Variability of Lifting Kinematics in a Repetitive Lifting Task. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2018, 62, 910-914.	0.2	2
86	Development and Assessment of a Method to Estimate the Value of a Maximum Voluntary Isometric Contraction Electromyogram from Submaximal Electromyographic Data. <i>Journal of Applied Biomechanics</i> , 2022, 38, 76-83.	0.3	2
87	The Effects of Asymmetry, Load Level, Start Position and Load Velocity on Lumbar Motion. <i>Proceedings of the Human Factors Society Annual Meeting</i> , 1988, 32, 700-704.	0.1	1
88	The Effects of Lifting Frequency on the Dynamics of Lifting. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1995, 39, 650-654.	0.2	1
89	Assessing Low Back Stress in the Construction Industry Using the Continuous Assessment of Back Stress (CABS) Method. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 1998, 42, 886-890.	0.2	1
90	Ergonomic Interventions for the Home Building Industry. <i>Proceedings of the Human Factors and Ergonomics Society</i> , 2000, 44, 5-703-5-706.	0.2	1

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91	Ergonomic Hand tool Interventions for the Furniture Manufacturing Industry. Proceedings of the Human Factors and Ergonomics Society, 2000, 44, 5-99-5-102.	0.2	1
92	Assessing the Relationship between Cognitive Load and Cervicobrachial Muscle Response during a Typing Task. Proceedings of the Human Factors and Ergonomics Society, 2001, 45, 1092-1096.	0.2	1
93	The Effect of Personality Type on Assembly Time and Wrist Kinematics during a Laboratory Task. Proceedings of the Human Factors and Ergonomics Society, 2002, 46, 1105-1109.	0.2	1
94	Differences in Trunk Kinematics and Ground Reaction Forces Between Older and Younger Adults during Lifting. Proceedings of the Human Factors and Ergonomics Society, 2005, 49, 177-181.	0.2	1
95	Coordination indices between lifting kinematics and kinetics. International Journal of Industrial Ergonomics, 2008, 38, 1062-1066.	1.5	1
96	Trunk kinematic variability as a function of time during the early phase of a repetitive lifting task. Human Factors and Ergonomics in Manufacturing, 2021, 31, 291-299.	1.4	1
97	Inter-individual variability in a repetitive lifting task. Proceedings of the Human Factors and Ergonomics Society, 2021, 65, 833-837.	0.2	1
98	Development of a Test Battery for Fatigue Assessment of Agriculture Seating Systems: A Laboratory and Field Study. Journal of Agromedicine, 2022, , 1-13.	0.9	1
99	Impact of a Neck Strap Intervention on Perceived Effort, Thumb Force, and Muscle Activity of Clarinetists. Medical Problems of Performing Artists, 2021, 36, 225-232.	0.2	1
100	Effects of Fatigue on Muscle Groups under Dynamic Exertions. Proceedings of the Human Factors Society Annual Meeting, 1989, 33, 646-650.	0.1	0
101	Selective Activation of the External Obliques during Twisting. Proceedings of the Human Factors and Ergonomics Society, 1995, 39, 610-614.	0.2	0
102	The Use of the Multivariate Johnson Distributions to Model Trunk Muscle Coactivation. Proceedings of the Human Factors and Ergonomics Society, 1996, 40, 584-588.	0.2	0
103	Predicting Trunk Kinematics Using Static Task Parameters. Proceedings of the Human Factors and Ergonomics Society, 2000, 44, 158-161.	0.2	0
104	Human Modeling and Simulation: Establishing Parameters for an Adjustable Notebook Computer Display. Proceedings of the Human Factors and Ergonomics Society, 2001, 45, 682-686.	0.2	0
105	Nonlinear System Identification Applied to the Biomechanical Response of the Human Trunk during Sudden Loading. Proceedings of the Human Factors and Ergonomics Society, 2002, 46, 1076-1080.	0.2	0
106	Use of the Cabs Methodology to Assess Biomechanical Stress in Commercial Crab Fishermen. Proceedings of the Human Factors and Ergonomics Society, 2002, 46, 1152-1156.	0.2	0
107	The Effects of Personality Type and Stress on Muscle Activity during Simulated Work Tasks. Proceedings of the Human Factors and Ergonomics Society, 2003, 47, 1159-1163.	0.2	0
108	Application of Universal Design Principles in the Design of a Self-Checkout System. Proceedings of the Human Factors and Ergonomics Society, 2004, 48, 1111-1115.	0.2	0

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109	The Effects of Fatigue from Repeated Trunk Extensions on Trunk Muscle Activity. Proceedings of the Human Factors and Ergonomics Society, 2005, 49, 1315-1319.	0.2	0
110	Lifting Performed on Laterally Slanted Ground Surfaces. Proceedings of the Human Factors and Ergonomics Society, 2005, 49, 1325-1329.	0.2	0
111	Lifting Kinematics and Kinetics during Simulated Boat Motions. Proceedings of the Human Factors and Ergonomics Society, 2010, 54, 1178-1181.	0.2	0
112	Technical note: Using Johnson distributions to model trunk kinematics. Theoretical Issues in Ergonomics Science, 2020, , 1-12.	1.0	0