Robert E Kearney

List of Publications by Year
in descending order

130 papers	4,253 citations	147801 31 h-index	123424 61 g-index
132 all docs	132 docs citations	132 times ranked	4069 citing authors

#	Article	IF	Citations
1	Quantitative Proteomics Analysis of the Secretory Pathway. Cell, 2006, 127, 1265-1281.	28.9	425
2	Identification of intrinsic and reflex contributions to human ankle stiffness dynamics. IEEE Transactions on Biomedical Engineering, 1997, 44, 493-504.	4.2	344
3	A HUPO test sample study reveals common problems in mass spectrometryâ€“based proteomics. Nature Methods, 2009, 6, 423-430.	19.0	316
4	Tandem MS analysis of brain clathrin-coated vesicles reveals their critical involvement in synaptic vesicle recycling. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 3833-3838.	7.1	277
5	The effect of locomotor training combined with functional electrical stimulation in chronic spinal cord injured subjects: walking and reflex studies. Brain Research Reviews, 2002, 40, 274-291.	9.0	170
6	Position dependence of ankle joint dynamicsâ€”I. Passive mechanics. Journal of Biomechanics, 1986, 19, 727-735.	2.1	152
7	Automated detection of focal cortical dysplasia lesions using computational models of their MRI characteristics and texture analysis. NeuroImage, 2003, 19, 1748-1759.	4.2	125
8	Identification of intrinsic and reflex ankle stiffness components in stroke patients. Experimental Brain Research, 2005, 165, 422-434.	1.5	114
9	Separable Least Squares Identification of Nonlinear Hammerstein Models: Application to Stretch Reflex Dynamics. Annals of Biomedical Engineering, 2001, 29, 707-718.	2.5	113
10	Identification of time-varying biological systems from ensemble data (joint dynamics application). IEEE Transactions on Biomedical Engineering, 1992, 39, 1213-1225.	4.2	101
11	Classification of Normal and Hypoxic Fetuses From Systems Modeling of Intrapartum Cardiotocography. IEEE Transactions on Biomedical Engineering, 2010, 57, 771-779.	4.2	99
12	Position dependence of ankle joint dynamicsâ€”II. Active mechanics. Journal of Biomechanics, 1986, 19, 737-751.	2.1	85
13	Conduction of nervous impulses in spinal roots and peripheral nerves of dystrophic mice. Brain Research, 1978, 143, 71-85.	2.2	72
14	Methods for peptide identification by spectral comparison. Proteome Science, 2007, 5, 3.	1.7	69
15	Computational Models of MRI Characteristics of Focal Cortical Dysplasia Improve Lesion Detection. NeuroImage, 2002, 17, 1755-1760.	4.2	67
16	Nonlinear identification of stretch reflex dynamics. Annals of Biomedical Engineering, 1988, 16, 79-94.	2.5	63
17	The effects of long-term FES-assisted walking on intrinsic and reflex dynamic stiffness in spastic spinal-cord-injured subjects. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2002, 10, 280-289.	4.9	63
18	A Least-Squares Parameter Estimation Algorithm for Switched Hammerstein Systems With Applications to the VOR. IEEE Transactions on Biomedical Engineering, 2005, 52, 431-444.	4.2	57

#	Article	IF	Citations
19	Identification of Time-Varying Intrinsic and Reflex Joint Stiffness. IEEE Transactions on Biomedical Engineering, 2011, 58, 1715-1723.	4.2	52
20	Subspace Identification of SISO Hammerstein Systems: Application to Stretch Reflex Identification. IEEE Transactions on Biomedical Engineering, 2013, 60, 2725-2734.	4.2	50
21	Patterns of reintubation in extremely preterm infants: a longitudinal cohort study. Pediatric Research, 2018, 83, 969-975.	2.3	50
22	The Impact of Time Interval between Extubation and Reintubation on Death or Bronchopulmonary Dysplasia in Extremely Preterm Infants. Journal of Pediatrics, 2019, 205, 70-76.e2.	1.8	44
23	Identification of time-varying stiffness dynamics of the human ankle joint during an imposed movement. Experimental Brain Research, 1997, 114, 71-85.	1.5	43
24	Nonparametric Block-Structured Modeling of Lung Tissue Strip Mechanics. Annals of Biomedical Engineering, 1998, 26, 242-252.	2.5	38
25	NARMAX representation and identification of ankle dynamics. IEEE Transactions on Biomedical Engineering, 2003, 50, 70-81.	4.2	38
26	Proteomic analysis of the transitional endoplasmic reticulum in hepatocellular carcinoma: An organelle perspective on cancer. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2010, 1804, 1869-1881.	2.3	38
27	Modulation of Stretch Reflexes During Imposed Walking Movements of the Human Ankle. Journal of Neurophysiology, 1999, 81, 2893-2902.	1.8	35
28	Voluntary modulation of human stretch reflexes. Experimental Brain Research, 2007, 183, 201-213.	1.5	35
29	Ankle Joint Intrinsic Dynamics is More Complex than a Mass-Spring-Damper Model. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1568-1580.	4.9	34
30	Identification of the Dynamic Relationship Between Intrapartum Uterine Pressure and Fetal Heart Rate for Normal and Hypoxic Fetuses. IEEE Transactions on Biomedical Engineering, 2009, 56, 1587-1597.	4.2	33
31	Prediction of Extubation readiness in extremely preterm infants by the automated analysis of cardiorespiratory behavior: study protocol. BMC Pediatrics, 2017, 17, 167.	1.7	33
32	Assessment of Extubation Readiness Using Spontaneous Breathing Trials in Extremely Preterm Neonates. JAMA Pediatrics, 2020, 174, 178.	6.2	33
33	A Subspace Approach to the Structural Decomposition and Identification of Ankle Joint Dynamic Stiffness. IEEE Transactions on Biomedical Engineering, 2017, 64, 1357-1368.	4.2	31
34	Identification of time-varying dynamics of the human triceps surae stretch reflex. Experimental Brain Research, 1993, 97, 115-127.	1.5	30
35	A bootstrap method for structure detection of NARMAX models. International Journal of Control, 2004, 77, 132-143.	1.9	29
36	Ankle intrinsic stiffness changes with postural sway. Journal of Biomechanics, 2019, 85, 50-58.	2.1	29

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37	Toward the Bionic Face: A Novel Neuroprosthetic Device Paradigm for Facial Reanimation Consisting of Neural Blockade and Functional Electrical Stimulation. Plastic and Reconstructive Surgery, 2019, 143, 62e-76e.	1.4	28
38	Real-Time Estimation of Intrinsic and Reflex Stiffness. IEEE Transactions on Biomedical Engineering, 2007, 54, 1875-1884.	4.2	27
39	Multicomponent Internal Recalibration of an LCâ^'FTICR-MS Analysis Employing a Partially Characterized Complex Peptide Mixture:Â Systematic and Random Errors. Analytical Chemistry, 2005, 77, 7246-7254.	6.5	24
40	Compartmentalization of membrane trafficking, glucose transport, glycolysis, actin, tubulin and the proteasome in the cytoplasmic droplet/Hermes body of epididymal sperm. Open Biology, 2015, 5, 150080.	3.6	24
41	An Adaptive Filter to Reduce Cardiogenic Oscillations on Esophageal Pressure Signals. Annals of Biomedical Engineering, 1998, 26, 260-267.	2.5	23
42	Automated Estimation of the Phase Between Thoracic and Abdominal Movement Signals. IEEE Transactions on Biomedical Engineering, 2005, 52, 614-621.	4.2	23
43	Automated analysis of respiratory behavior in extremely preterm infants and extubation readiness. Pediatric Pulmonology, 2015, 50, 479-486.	2.0	23
44	Expression, sorting, and segregation of Golgi proteins during germ cell differentiation in the testis. Molecular Biology of the Cell, 2015, 26, 4015-4032.	2.1	23
45	Identification of intrinsic and reflexive contributions to low-back stiffness: medium-term reliability and construct validity. Journal of Biomechanics, 2015, 48, 254-261.	2.1	21
46	Automated Off-Line Respiratory Event Detection for the Study of Postoperative Apnea in Infants. IEEE Transactions on Biomedical Engineering, 2011, 58, 1724-1733.	4.2	20
47	Prediction of extubation readiness in extreme preterm infants based on measures of cardiorespiratory variability. , 2012, 2012, 5630-3.		19
48	Identification of Time-Varying Hammerstein Systems from Ensemble Data. Annals of Biomedical Engineering, 2001, 29, 619-635.	2.5	17
49	The protein microscope: incorporating mass spectrometry into cell biology. Nature Methods, 2007, 4, 783-784.	19.0	17
50	Linear Parameter Varying Identification of Dynamic Joint Stiffness during Time-Varying Voluntary Contractions. Frontiers in Computational Neuroscience, 2017, 11, 35.	2.1	17
51	Identification of time-varying dynamics of the human triceps surae stretch reflex. Experimental Brain Research, 1993, 97, 128-138.	1.5	16
52	Automated unsupervised respiratory event analysis. , 2011, 2011, 3201-4.		16
53	Heart Rate Variability in Extremely Preterm Infants Receiving Nasal CPAP and Non-Synchronized Noninvasive Ventilation Immediately After Extubation. Respiratory Care, 2018, 63, 62-69.	1.6	15
54	Analysis and modeling of noise in biomedical systems. , 2013, 2013, 997-1000.		14

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55	Design and Validation of a Biofeedback Device to Improve Heel-to-Toe Gait in Seniors. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 140-146.	6.3	14
56	A Machineâ€Learning Approach to the Detection of Fetal Hypoxia during Labor and Delivery. AI Magazine, 2012, 33, 79-90.	1.6	13
57	Physiological tremor increases when skeletal muscle is shortened: implications for fusimotor control. Journal of Physiology, 2017, 595, 7331-7346.	2.9	13
58	Generalized eigenvector algorithm for nonlinear system identification with non-white inputs. Annals of Biomedical Engineering, 1997, 25, 802-814.	2.5	12
59	Automated respiratory inductive plethysmography to evaluate breathing in infants at risk for postoperative apnea. Canadian Journal of Anaesthesia, 2008, 55, 739-747.	1.6	12
60	Measurement of Dynamic Joint Stiffness from Multiple Short Data Segments. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 925-934.	4.9	12
61	Decoupling of stretch reflex and background muscle activity during anticipatory postural adjustments in humans. Experimental Brain Research, 2010, 205, 205-213.	1.5	11
62	Elimination of Redundant Protein Identifications in High Throughput Proteomics. , 2005, 2005, 4803-6.		10
63	Estimation of Time-Varying, Intrinsic and Reflex Dynamic Joint Stiffness during Movement. Application to the Ankle Joint. Frontiers in Computational Neuroscience, 2017, 11, 51.	2.1	10
64	Unbiased Estimation of Human Joint Intrinsic Mechanical Properties During Movement. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 1975-1984.	4.9	10
65	The effects of nasal continuous positive airway pressure and high flow nasal cannula on heart rate variability in extremely preterm infants after extubation: A randomized crossover trial. Pediatric Pulmonology, 2019, 54, 788-796.	2.0	10
66	A pilot<scp>nonâ€inferiority</scp>randomized controlled trial to assess automatic adjustments of insulin doses in adolescents with type 1 diabetes on multiple daily injections therapy. Pediatric Diabetes, 2020, 21, 950-959.	2.9	10
67	Identification of a Time-Varying, Box-Jenkins Model of Intrinsic Joint Compliance. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2017, 25, 1211-1220.	4.9	9
68	Cardiorespiratory behavior of preterm infants receiving continuous positive airway pressure and high flow nasal cannula post extubation: randomized crossover study. Pediatric Research, 2020, 87, 62-68.	2.3	9
69	A Model-Based Insulin Dose Optimization Algorithm for People With Type 1 Diabetes on Multiple Daily Injections Therapy. IEEE Transactions on Biomedical Engineering, 2021, 68, 1208-1219.	4.2	9
70	Linear parameter varying identification of ankle joint intrinsic stiffness during imposed walking movements. , 2013, 2013, 4923-7.		8
71	Identification of a parametric, discrete-time model of ankle stiffness. , 2013, 2013, 5065-70.		8
72	Scoring Tools for the Analysis of Infant Respiratory Inductive Plethysmography Signals. PLoS ONE, 2015, 10, e0134182.	2.5	8

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73	Experimental Methods to Study Human Postural Control. Journal of Visualized Experiments, 2019, , .	0.3	8
74	Automatic unsupervised respiratory analysis of infant respiratory inductance plethysmography signals. PLoS ONE, 2020, 15, e0238402.	2.5	8
75	Modulation of ankle stiffness during postural sway. , 2014, 2014, 4062-5.		7
76	Time-varying identification of ankle dynamic joint stiffness during movement with constant muscle activation. , 2015, 2015, 6740-3.		7
77	Ankle intrinsic stiffness is modulated by postural sway. , 2017, 2017, 70-73.		7
78	EMG-Torque Dynamics Change With Contraction Bandwidth. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2018, 26, 807-816.	4.9	7
79	The Efficacy of Basal Rate and Carbohydrate Ratio Learning Algorithm for Closed-Loop Insulin Delivery (Artificial Pancreas) in Youth with Type 1 Diabetes in a Diabetes Camp. Diabetes Technology and Therapeutics, 2020, 22, 185-194.	4.4	7
80	Real-Time Estimation of Intrinsic and Reflex Stiffness. , 2006, 2006, 292-5.		6
81	Decomposition of a Parallel Cascade Model For Ankle Dynamics Using Subspace Methods. Proceedings of the American Control Conference, 2007, , .	0.0	6
82	An identification algorithm for Hammerstein systems using subspace method. , 2011, , .		6
83	A novel algorithm for linear parameter varying identification of Hammerstein systems with time-varying nonlinearities. , 2013, 2013, 4928-32.		6
84	Automated analysis of respiratory behavior for the prediction of apnea in infants following general anesthesia. , 2014, 2014, 262-5.		6
85	Identification of human balance control responses to visual inputs using virtual reality. Journal of Neurophysiology, 2022, 127, 1159-1170.	1.8	6
86	An object-oriented toolbox for linear and nonlinear system identification. , 2004, 2006, 514-7.		5
87	Estimation of the gain and threshold of the stretch reflex with a novel subspace identification algorithm. , 2011, 2011, 4431-4.		5
88	Identification of ankle joint stiffness during passive movements — A subspace linear parameter varying approach. , 2014, 2014, 1603-6.		5
89	Measurement of shank angle during stance using laser range finders. , 2016, 2016, 3374-3377.		5
90	Automated ongoing data validation and quality control of multi-institutional studies. , 2016, 2016, 2504-2507.		5

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91	A NARMAX method for the identification of time-varying joint stiffness. , 2012, 2012, 6518-21.		4
92	Subspace method decomposition and identification of the parallel-cascade model of ankle joint stiffness: Theory and simulation. , 2013, 2013, 5071-4.		4
93	An Instrumental Variable Approach for the Identification of Time-Varying, Hammerstein Systems**DLG is supported by Fonds de recherche du Qubec Nature et technologies.. IFAC-PapersOnLine, 2015, 48, 196-201.	0.9	4
94	Patterns of muscle activation and modulation of ankle intrinsic stiffness in different postural operating conditions. Journal of Neurophysiology, 2020, 123, 743-754.	1.8	4
95	A Non-Parametric Approach for Identification of Parameter Varying Hammerstein Systems. IEEE Access, 2022, 10, 6348-6362.	4.2	4
96	Increasing peptide identification in tandem mass spectrometry through automatic function switching optimization. Journal of the American Society for Mass Spectrometry, 2005, 16, 1818-1826.	2.8	3
97	Parametric Methods for Identification of Time-Invariant and Time-Varying Joint Stiffness Models. IFAC-PapersOnLine, 2015, 48, 1375-1380.	0.9	3
98	Feature selection and oversampling in analysis of clinical data for extubation readiness in extreme preterm infants. , 2015, 2015, 4427-30.		3
99	A semi-Markov chain approach to modeling respiratory patterns prior to extubation in preterm infants. , 2017, 2017, 2022-2026.		3
100	Optimal Classification of Respiratory Patterns From Manual Analyses Using Expectation-Maximization. IEEE Journal of Biomedical and Health Informatics, 2018, 22, 1026-1035.	6.3	3
101	Undersampling and Bagging of Decision Trees in the Analysis of Cardiorespiratory Behavior for the Prediction of Extubation Readiness in Extremely Preterm Infants. , 2018, 2018, 4940-4944.		3
102	Identification of Central and Stretch Reflex Contributions to Human Postural Control. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2021, 29, 497-507.	4.9	3
103	Control of an unstable load using visual feedback. , 2008, 2008, 2489-92.		2
104	Efficient estimation of time-varying intrinsic and reflex stiffness. , 2011, 2011, 4124-7.		2
105	Identification of Hammerstein Systems from Short Segments of Data: Application to Stretch Reflex Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 798-803.	0.4	2
106	Identification of ankle joint stiffness from short segments of data: Application to passive dynamics during movement. , 2014, 2014, 3284-7.		2
107	A Non-Parametric Linear Parameter Varying Approach for Identification of Linear Time-Varying Systems**This work has been supported by Qatar National Research Funds (QNRF).. IFAC-PapersOnLine, 2015, 48, 733-738.	0.9	2
108	Identification of time-varying dynamics of reflex EMG in the ankle plantarflexors during time-varying, isometric contractions. , 2015, 2015, 6744-7.		2

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109	Methods for the Identification of Time-Varying Hammerstein Systems with Applications to the Study of Dynamic Joint Stiffness. IFAC-PapersOnLine, 2015, 48, 1023-1028.	0.9	2
110	The characterization of the kinematic and dynamic properties of the ankle joint for an artificial ankle joint design. , 2016, , .		2
111	Predicting extubation readiness in extreme preterm infants based on patterns of breathing. , 2017, , .		2
112	A Closed-Loop Method to Identify EMG-Torque Dynamics in Human Balance Control. , 2019, 2019, 5059-5062.		2
113	Identification of time-varying properties of the human triceps surae stretch reflex: II. rapid imposed movement. , 1992, , .		1
114	Identification of time-varying dynamics of the human triceps surae stretch reflex: I. rapid isometric contractions. , 1992, , .		1
115	A Bootstrap Method for Narmax Model Order Selection. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 329-332.	0.4	1
116	A Bayesian approach to peptide identification using Accurate Mass and Time tags from LC-FTICR-MS proteomics experiments. , 2008, 2008, 3775-8.		1
117	Detecting the temporal extent of the impulse response function from intra-partum cardiotocography for normal and hypoxic fetuses. , 2008, 2008, 2797-800.		1
118	Using a robotic interface and haptic feedback to improve grip coordination of hand function following stroke — Case study. , 2013, , .		1
119	Design of a hydraulic ankle-foot orthosis. , 2016, , .		1
120	Performance of ensemble time-varying system identification methods: Analog simulations and biological applications. , 1992, , .		0
121	Identifier and database from the same sequence repository provide the greatest number of correct pairings between RNA and protein data. , 2009, , .		0
122	Accurate samples for testing mass spectrometry based peptide quantification algorithms. , 2010, 2010, 5524-8.		0
123	Postprandial hyperglycaemia following insulin suspensions by the artificial pancreas: Implications for bolus calculators. Diabetes, Obesity and Metabolism, 2020, 22, 1474-1477.	4.4	0
124	Estimation and Discriminability of Doppler Ultrasound Fetal Heart Rate Variability Measures. Frontiers in Artificial Intelligence, 2021, 4, 674238.	3.4	0
125	Short Segment and Parameter Varying Identification of Time-Varying Dynamic Joint Stiffness. Biosystems and Biorobotics, 2019, , 632-636.	0.3	0
126	Real-Time Estimation of Intrinsic and Reflex Stiffness. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0

#	Article	IF	Citations
127	Title is missing!. , 2020, 15, e0238402.		0
128	Title is missing!. , 2020, 15, e0238402.		0
129	Title is missing!. , 2020, 15, e0238402.		0
130	Title is missing!. , 2020, 15, e0238402.		0