

Theodore Raphan

List of Publications by Year in descending order

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128
papers

5,725
citations

81743

39
h-index

79541

73
g-index

128
all docs

128
docs citations

128
times ranked

1645
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative analysis of the velocity characteristics of optokinetic nystagmus and optokinetic afternystagmus. <i>Journal of Physiology</i> , 1977, 270, 321-344.	1.3	639
2	VELOCITY STORAGE, NYSTAGMUS, AND VISUAL-VESTIBULAR INTERACTIONS IN HUMANS. <i>Annals of the New York Academy of Sciences</i> , 1981, 374, 421-433.	1.8	320
3	Interaction of the body, head, and eyes during walking and turning. <i>Experimental Brain Research</i> , 2001, 136, 1-18.	0.7	299
4	Role of the otolith organs in generation of horizontal nystagmus: effects of selective labyrinthine lesions. <i>Brain Research</i> , 1983, 276, 159-164.	1.1	276
5	EFFECTS OF GRAVITY ON ROTATORY NYSTAGMUS IN MONKEYS. <i>Annals of the New York Academy of Sciences</i> , 1981, 374, 44-55.	1.8	268
6	Control of Spatial Orientation of the Angular Vestibuloocular Reflex by the Nodulus and Uvula. <i>Journal of Neurophysiology</i> , 1998, 79, 2690-2715.	0.9	187
7	Modeling Slow Phase Velocity Generation during Off-Vertical Axis Rotationa. <i>Annals of the New York Academy of Sciences</i> , 1988, 545, 29-50.	1.8	169
8	Modeling Control of Eye Orientation in Three Dimensions. I. Role of Muscle Pulleys in Determining Saccadic Trajectory. <i>Journal of Neurophysiology</i> , 1998, 79, 2653-2667.	0.9	161
9	Perception of tilt (somatogravic illusion) in response to sustained linear acceleration during space flight. <i>Experimental Brain Research</i> , 2001, 138, 410-418.	0.7	144
10	The vestibulo-ocular reflex in three dimensions. <i>Experimental Brain Research</i> , 2002, 145, 1-27.	0.7	139
11	Habituation and adaptation of the vestibuloocular reflex: a model of differential control by the vestibulocerebellum. <i>Experimental Brain Research</i> , 1992, 90, 526-38.	0.7	133
12	Organizational Principles of Velocity Storage in Three Dimensions. <i>Annals of the New York Academy of Sciences</i> , 1988, 545, 74-92.	1.8	112
13	Robust pupil center detection using a curvature algorithm. <i>Computer Methods and Programs in Biomedicine</i> , 1999, 59, 145-157.	2.6	94
14	Effects of spaceflight on ocular counterrolling and the spatial orientation of the vestibular system. <i>Experimental Brain Research</i> , 1994, 102, 45-56.	0.7	90
15	Spatial Orientation of the Vestibular System. <i>Annals of the New York Academy of Sciences</i> , 1992, 656, 140-157.	1.8	85
16	The relation of motion sickness to the spatial?temporal properties of velocity storage. <i>Experimental Brain Research</i> , 2003, 151, 173-189.	0.7	85
17	Neural basis for eye velocity generation in the vestibular nuclei of alert monkeys during off-vertical axis rotation. <i>Experimental Brain Research</i> , 1992, 92, 209-26.	0.7	83
18	Asymmetric velocity storage for upward and downward nystagmus. <i>Brain Research</i> , 1979, 176, 159-164.	1.1	65

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19	The Nucleus of the Optic Tract: Its Function in Gaze Stabilization and Control of Visual-Vestibular Interaction. <i>Annals of the New York Academy of Sciences</i> , 1992, 656, 277-296.	1.8	65
20	Model-based study of the human cupular time constant. <i>Journal of Vestibular Research: Equilibrium and Orientation</i> , 1999, 9, 293-301.	0.8	64
21	Ocular counterrolling induced by centrifugation during orbital space flight. <i>Experimental Brain Research</i> , 2001, 137, 323-335.	0.7	63
22	Contribution of Vestibular Commissural Pathways to Spatial Orientation of the Angular Vestibuloocular Reflex. <i>Journal of Neurophysiology</i> , 1997, 78, 1193-1197.	0.9	61
23	Functions of the nucleus of the optic tract (NOT).. <i>Experimental Brain Research</i> , 2000, 131, 416-432.	0.7	60
24	Electrical activation of the human vestibulo-sympathetic reflex. <i>Experimental Brain Research</i> , 2006, 171, 251-261.	0.7	59
25	Orientation of human optokinetic nystagmus to gravity: a model-based approach. <i>Experimental Brain Research</i> , 1994, 99, 347-60.	0.7	58
26	Effects of Tilt of the Gravito-Inertial Acceleration Vector on the Angular Vestibuloocular Reflex During Centrifugation. <i>Journal of Neurophysiology</i> , 1999, 81, 2175-2190.	0.9	56
27	Control of Spatial Orientation of the Angular Vestibulo-Ocular Reflex by the Nodulus and Uvula of the Vestibulocerebellum. <i>Annals of the New York Academy of Sciences</i> , 1999, 871, 94-122.	1.8	56
28	Labyrinthine lesions and motion sickness susceptibility. <i>Experimental Brain Research</i> , 2007, 178, 477-487.	0.7	54
29	The Nodulus and Uvula: Source of Cerebellar Control of Spatial Orientation of the Angular Vestibulo-Ocular Reflex. <i>Annals of the New York Academy of Sciences</i> , 2002, 978, 28-45.	1.8	53
30	Dynamics and Kinematics of the Angular Vestibulo-Ocular Reflex in Monkey: Effects of Canal Plugging. <i>Journal of Neurophysiology</i> , 1998, 80, 3077-3099.	0.9	50
31	The Critical Role of Velocity Storage in Production of Motion Sickness. <i>Annals of the New York Academy of Sciences</i> , 2003, 1004, 359-376.	1.8	50
32	Coding of Velocity Storage in the Vestibular Nuclei. <i>Frontiers in Neurology</i> , 2017, 8, 386.	1.1	49
33	The Human Vestibulo-Ocular Reflex during Linear Locomotion. <i>Annals of the New York Academy of Sciences</i> , 2001, 942, 139-147.	1.8	46
34	Modeling the Organization of the Linear and Angular Vestibulo-Ocular Reflexes. <i>Annals of the New York Academy of Sciences</i> , 1996, 781, 348-363.	1.8	45
35	Context-Specific Adaptation of the Vertical Vestibuloocular Reflex With Regard to Gravity. <i>Journal of Neurophysiology</i> , 2000, 84, 3067-3071.	0.9	44
36	Orienting otolith-ocular reflexes in the rabbit during static and dynamic tilts and off-vertical axis rotation. <i>Vision Research</i> , 2001, 41, 3255-3270.	0.7	44

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37	Baclofen, motion sickness susceptibility and the neural basis for velocity storage. Progress in Brain Research, 2008, 171, 543-553.	0.9	44
38	Functions of the nucleus of the optic tract (NOT).. Experimental Brain Research, 2000, 131, 433-447.	0.7	41
39	Compensatory and Orienting Eye Movements Induced By Off-Vertical Axis Rotation (OVAR) in Monkeys. Journal of Neurophysiology, 2002, 88, 2445-2462.	0.9	41
40	Nodulo-Uvular Control of Central Vestibular Dynamics Determines Spatial Orientation of the Angular Vestibulo-Ocular Reflex. Annals of the New York Academy of Sciences, 1996, 781, 364-384.	1.8	39
41	Sinusoidal galvanic vestibular stimulation (sGVS) induces a vasovagal response in the rat. Experimental Brain Research, 2011, 210, 45-55.	0.7	37
42	Vestibular adaptation to space in monkeys. Otolaryngology - Head and Neck Surgery, 1998, 119, 65-77.	1.1	36
43	Spatial Properties of Central Vestibular Neurons. Journal of Neurophysiology, 2006, 95, 464-478.	0.9	36
44	Spatial orientation of the angular vestibulo-ocular reflex. Journal of Vestibular Research: Equilibrium and Orientation, 1999, 9, 163-172.	0.8	36
45	Motion sickness induced by off-vertical axis rotation (OVAR). Experimental Brain Research, 2010, 204, 207-222.	0.7	34
46	Head Stabilization by Vestibulocollic Reflexes During Quadrupedal Locomotion in Monkey. Journal of Neurophysiology, 2008, 100, 763-780.	0.9	33
47	Spatial Orientation of Caloric Nystagmus in Semicircular Canal-Plugged Monkeys. Journal of Neurophysiology, 2002, 88, 914-928.	0.9	32
48	Gravity-Specific Adaptation of the Angular Vestibuloocular Reflex: Dependence on Head Orientation With Regard to Gravity. Journal of Neurophysiology, 2003, 89, 571-586.	0.9	31
49	Effects of baclofen on the angular vestibulo-ocular reflex. Experimental Brain Research, 2006, 171, 262-271.	0.7	30
50	Nystagmus generated by sinusoidal pitch while rotating. Brain Research, 1983, 276, 165-172.	1.1	29
51	Vestibular Compensation and Orientation during Locomotion. Annals of the New York Academy of Sciences, 2001, 942, 128-138.	1.8	29
52	Three-dimensional kinematics and dynamics of the foot during walking: a model of central control mechanisms. Experimental Brain Research, 2007, 176, 476-496.	0.7	28
53	Adaptation of the angular vestibulo-ocular reflex to head movements in rotating frames of reference. Experimental Brain Research, 2009, 195, 553-567.	0.7	27
54	Frequency-Velocity Mismatch: A Fundamental Abnormality in Parkinsonian Gait. Journal of Neurophysiology, 2010, 103, 1478-1489.	0.9	27

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55	Modulation of vergence by off-vertical yaw axis rotation in the monkey normal characteristics and effects of space flight. <i>Experimental Brain Research</i> , 1996, 111, 21-9.	0.7	26
56	Relative contribution of walking velocity and stepping frequency to the neural control of locomotion. <i>Experimental Brain Research</i> , 2008, 185, 121-135.	0.7	26
57	Ocular and perceptual responses to linear acceleration in microgravity: Alterations in otolith function on the COSMOS and Neurolab flights. <i>Journal of Vestibular Research: Equilibrium and Orientation</i> , 2003, 13, 377-393.	0.8	26
58	Artificial gravity: A possible countermeasure for post-flight orthostatic intolerance. <i>Acta Astronautica</i> , 2005, 56, 867-876.	1.7	25
59	A Model of Blood Pressure, Heart Rate, and Vaso-Vagal Responses Produced by Vestibulo-Sympathetic Activation. <i>Frontiers in Neuroscience</i> , 2016, 10, 96.	1.4	25
60	Neural network modelling of eye compensation during off-vertical-axis rotation. <i>Neural Networks</i> , 1990, 3, 265-276.	3.3	24
61	Robust and real-time torsional eye position calculation using a template-matching technique. <i>Computer Methods and Programs in Biomedicine</i> , 2004, 74, 201-209.	2.6	24
62	Role of Muscle Pulleys in Producing Eye Position-Dependence in the Angular Vestibuloocular Reflex: A Model-Based Study. <i>Journal of Neurophysiology</i> , 2000, 84, 639-650.	0.9	23
63	Modeling 3-D Slow Phase Velocity Estimation During Off-Vertical-Axis Rotation (OVAR). <i>Journal of Vestibular Research: Equilibrium and Orientation</i> , 1992, 2, 1-14.	0.8	23
64	Plenary Lecture: Orientation of the Eyes to Gravitoinertial Acceleration. <i>Annals of the New York Academy of Sciences</i> , 2001, 942, 241-258.	1.8	22
65	The vasovagal response of the rat: its relation to the vestibulosympathetic reflex and to Mayer waves. <i>FASEB Journal</i> , 2013, 27, 2564-2572.	0.2	20
66	The Physiology of the Vestibuloocular Reflex (VOR). , 2004, , 235-285.		19
67	Spatial orientation of optokinetic nystagmus and ocular pursuit during orbital space flight. <i>Experimental Brain Research</i> , 2005, 160, 38-59.	0.7	19
68	Chapter 18 Control of the three-dimensional dynamic characteristics of the angular vestibulo-ocular reflex by the nodulus and uvula. <i>Progress in Brain Research</i> , 1997, 114, 321-334.	0.9	18
69	Dynamics of quadrupedal locomotion of monkeys: implications for central control. <i>Experimental Brain Research</i> , 2007, 177, 551-572.	0.7	18
70	Labyrinthine Activation during Rotation about Axes Tilted from the Vertical. <i>Advances in Oto-Rhino-Laryngology</i> , 1983, 30, 50-53.	1.6	17
71	Complementary gain modifications of the cervico-ocular (COR) and angular vestibulo-ocular (aVOR) reflexes after canal plugging. <i>Experimental Brain Research</i> , 2011, 210, 549-560.	0.7	17
72	Vasovagal Oscillations and Vasovagal Responses Produced by the Vestibulo-Sympathetic Reflex in the Rat. <i>Frontiers in Neurology</i> , 2014, 5, 37.	1.1	17

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73	Comparative assessment of bone mass and structure using texture-based and histomorphometric analyses. <i>Bone</i> , 2007, 40, 544-552.	1.4	16
74	Adaptation of Orientation Vectors of Otolith-Related Central Vestibular Neurons to Gravity. <i>Journal of Neurophysiology</i> , 2008, 100, 1686-1690.	0.9	16
75	Ocular and perceptual responses to linear acceleration in microgravity: alterations in otolith function on the COSMOS and Neurolab flights. <i>Journal of Vestibular Research: Equilibrium and Orientation</i> , 2003, 13, 377-93.	0.8	16
76	Spatial Distribution of Gravity-Dependent Gain Changes in the Vestibuloocular Reflex. <i>Journal of Neurophysiology</i> , 2005, 93, 3693-3698.	0.9	15
77	Unit Activity in the Vestibular Nuclei of Monkeys during Off-Vertical Axis Rotation. <i>Annals of the New York Academy of Sciences</i> , 1992, 656, 954-956.	1.8	14
78	Motion sickness on tilting trains. <i>FASEB Journal</i> , 2011, 25, 3765-3774.	0.2	14
79	Characterization of Yaw to Roll Cross-Coupling in the Three-Dimensional Structure of the Velocity Storage Integrator. <i>Annals of the New York Academy of Sciences</i> , 1992, 656, 829-831.	1.8	13
80	Rotation Axes of the Head During Positioning, Head Shaking, and Locomotion. <i>Journal of Neurophysiology</i> , 2007, 98, 3095-3108.	0.9	13
81	Spatial Properties of Otolith Units Recorded in the Vestibular Nuclei. <i>Annals of the New York Academy of Sciences</i> , 1999, 871, 458-462.	1.8	12
82	Orienting eye movements and nystagmus produced by translation while rotating (TWR). <i>Experimental Brain Research</i> , 2005, 163, 273-283.	0.7	12
83	Spatial Properties of Central Vestibular Neurons of Monkeys After Bilateral Lateral Canal Nerve Section. <i>Journal of Neurophysiology</i> , 2005, 94, 3860-3871.	0.9	11
84	Eye velocity asymmetry, ocular orientation, and convergence induced by angular rotation in the rabbit. <i>Vision Research</i> , 2006, 46, 961-969.	0.7	11
85	Implementation of Bio-Inspired Vestibulo-Ocular Reflex in a Quadrupedal Robot. <i>Proceedings - IEEE International Conference on Robotics and Automation</i> , 2007, , .	0.0	11
86	The effect of a short-term delay of puberty on trabecular bone mass and structure in female rats: A texture-based and histomorphometric analysis. <i>Bone</i> , 2007, 40, 419-424.	1.4	11
87	Learning to stabilize the head of a quadrupedal robot with an artificial vestibular system. , 2009, , .		11
88	Vestibular Activation Habituates the Vasovagal Response in the Rat. <i>Frontiers in Neurology</i> , 2017, 8, 83.	1.1	11
89	Adaptive Changes in the Angular VOR: Duration of Gain Changes and Lack of Effect of Nodulo€vulectomy. <i>Annals of the New York Academy of Sciences</i> , 2003, 1004, 78-93.	1.8	10
90	Adaptation of Orientation of Central Otolith-only Neurons. <i>Annals of the New York Academy of Sciences</i> , 2009, 1164, 367-371.	1.8	10

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91	The Representation of the Spatial Vertical in Human Optokinetic Nystagmus. Annals of the New York Academy of Sciences, 1992, 656, 843-846.	1.8	9
92	A Model-Based Approach for Assessing Parkinsonian Gait and Effects of Levodopa and Deep Brain Stimulation. , 2006, 2006, 1228-31.		9
93	Instantaneous rotation axes during active head movements. Journal of Vestibular Research: Equilibrium and Orientation, 2005, 15, 73-80.	0.8	9
94	Dependence of the Roll Angular Vestibuloocular Reflex (aVOR) on Gravity. Journal of Neurophysiology, 2009, 102, 2616-2626.	0.9	8
95	Effects of Flocculectomy on Vestibular and Optokinetic Nystagmus and Unit Activity in the Vestibular Nuclei. Advances in Oto-Rhino-Laryngology, 1983, 30, 226-229.	1.6	7
96	The Role of Gravity in Adaptation of the Vertical Angular Vestibulo-Ocular Reflex. Annals of the New York Academy of Sciences, 2005, 1039, 97-110.	1.8	7
97	Posture and Gaze during Circular Locomotion. Annals of the New York Academy of Sciences, 2006, 942, 470-471.	1.8	7
98	Vertical (Z-axis) acceleration alters the ocular response to linear acceleration in the rabbit. Experimental Brain Research, 2008, 185, 87-99.	0.7	7
99	Vestibular, locomotor, and vestibulo-autonomic research: 50 years of collaboration with Bernard Cohen. Journal of Neurophysiology, 2020, 123, 329-345.	0.9	7
100	Towards a Methodology for Stabilizing the Gaze of a Quadrupedal Robot. Lecture Notes in Computer Science, 2007, , 540-547.	1.0	7
101	Effects of Microinjection of Muscimol in the Vestibular Nuclei on Velocity Storage and Estimation of Head Velocity by the Otolith Organs. Annals of the New York Academy of Sciences, 1996, 781, 718-723.	1.8	6
102	Modeling Gravity-Dependent Plasticity of the Angular Vestibuloocular Reflex With a Physiologically Based Neural Network. Journal of Neurophysiology, 2006, 96, 3349-3361.	0.9	6
103	Differential coding of head rotation by lateral-vertical canal convergent central vestibular neurons. Progress in Brain Research, 2008, 171, 313-318.	0.9	6
104	Effect of Canal Plugging on Quadrupedal Locomotion in Monkey. Annals of the New York Academy of Sciences, 2009, 1164, 89-96.	1.8	6
105	Spatial orientation of the angular vestibulo-ocular reflex (aVOR) after semicircular canal plugging and canal nerve section. Experimental Brain Research, 2011, 210, 583-594.	0.7	6
106	Modeling Interval Timing by Recurrent Neural Nets. Frontiers in Integrative Neuroscience, 2019, 13, 46.	1.0	6
107	Adaptive changes in the angular VOR: duration of gain changes and lack of effect of nodulo-uvulectomy. Annals of the New York Academy of Sciences, 2003, 1004, 78-93.	1.8	6
108	Changes in the Vestibuloâ€Ocular Reflex after Plugging of the Semicircular Canals. Annals of the New York Academy of Sciences, 2001, 942, 287-299.	1.8	5

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109	Head Fixed Field Coil System For Measuring Eye Movements in Freely Moving Monkeys. , 2006, 2006, 5567-70.		5
110	Orientation adaptation of eye movementâ€related vestibular neurons due to prolonged head tilt. Annals of the New York Academy of Sciences, 2011, 1233, 214-218.	1.8	5
111	The human response to artificial gravity in a weightless environment: Results from the Neurolab centrifugation experiments. AIP Conference Proceedings, 2000, , .	0.3	4
112	Spatial Orientation of Caloric Nystagmus. Annals of the New York Academy of Sciences, 2002, 956, 190-204.	1.8	4
113	A RELATIONAL DATABASE APPLICATION IN SUPPORT OF INTEGRATED NEUROSCIENCE RESEARCH. Journal of Integrative Neuroscience, 2004, 03, 363-378.	0.8	4
114	Texture-based approaches for identifying neuro-anatomical structures and electrode tracks. Computer Methods and Programs in Biomedicine, 2004, 74, 221-233.	2.6	4
115	Modification of the Cervicoâ€ocular Reflex by Canal Plugging. Annals of the New York Academy of Sciences, 2009, 1164, 60-67.	1.8	4
116	Normalization Effects of Vision on the Compensatory VOR after Canal Plugging. Annals of the New York Academy of Sciences, 1996, 781, 713-717.	1.8	3
117	Quantification of trabecular bone mass and orientation using Gabor wavelets. , 2003, , .		3
118	Three-dimensional kinematics of saccadic eye movements in humans with cerebellar degeneration. Progress in Brain Research, 2008, 171, 215-218.	0.9	3
119	Dynamics of binocular fixation of targets during fore-aft motion. Progress in Brain Research, 2008, 171, 303-311.	0.9	3
120	Treatment of Gravitational Pulling Sensation in Patients With Mal de Debarquement Syndrome (MdDS): A Model-Based Approach. Frontiers in Integrative Neuroscience, 2022, 16, .	1.0	3
121	Combinning linear vestibulo-ocular and opto-kinetic reflex in a humanoid robot. , 2008, , .		2
122	Effects of the Linear Vestibuloâ€ocular Reflex on Accommodative Vergence Eye Movements. Annals of the New York Academy of Sciences, 2009, 1164, 499-504.	1.8	1
123	Predicting Vasovagal Responses: A Model-Based and Machine Learning Approach. Frontiers in Neurology, 2021, 12, 631409.	1.1	1
124	Robust High-speed Binocular 3D Eye Movement Tracking System Using a Two-radii Eye Model. , 2006, 2006, 5302-6.		0
125	Modeling spatial tuning of adaptation of the angular vestibulo-ocular reflex. Experimental Brain Research, 2012, 220, 165-178.	0.7	0
126	Improving Mobile Device Security by Embodying and Co-adapting a Behavioral Biometric Interface. Frontiers in Computer Science, 2022, 4, .	1.7	0

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127	Head Fixed Field Coil System For Measuring Eye Movements in Freely Moving Monkeys. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
128	A Model-Based Approach for Assessing Parkinsonian Gait and Effects of Levodopa and Deep Brain Stimulation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0