Susan S Margulies

List of Publications by Citations

96 papers	5,274 citations	32 h-index	72 g-index
103 ext. papers	5,950 ext. citations	4.2 avg, IF	5.87 L-index

#	Paper	IF	Citations
96	The shaken baby syndrome. A clinical, pathological, and biomechanical study. *Journal of Neurosurgery*, **1987**, 66, 409-15	3.2	497
95	Inflicted Childhood Neurotrauma: New Insight into The Detection, Pathobiology, Prevention, and Treatment of Our Youngest Patients with Traumatic Brain Injury. *Journal of Neurotrauma*, **2007**, 24, 1-4	5.4	472
94	Regional, directional, and age-dependent properties of the brain undergoing large deformation. *Journal of Biomechanical Engineering*, **2002**, 124, 244-52	2.1	451
93	Are in vivo and in situ brain tissues mechanically similar?. *Journal of Biomechanics*, **2004**, 37, 1339-52	2.9	327
92	Age-dependent material properties of the porcine cerebrum: effect on pediatric inertial head injury criteria. *Journal of Biomechanics*, **1998**, 31, 1119-26	2.9	230
91	Infant skull and suture properties: measurements and implications for mechanisms of pediatric brain injury. *Journal of Biomechanical Engineering*, **2000**, 122, 364-71	2.1	229
90	Age-dependent changes in material properties of the brain and braincase of the rat. *Journal of Neurotrauma*, **2003**, 20, 1163-77	5.4	224
89	Alveolar epithelial surface area-volume relationship in isolated rat lungs. *Journal of Applied Physiology*, **1999**, 86, 2026-33	3.7	223
88	Anthropomorphic simulations of falls, shakes, and inflicted impacts in infants. *Journal of Neurosurgery*, **2003**, 99, 143-50	3.2	175
87	Material properties of human infant skull and suture at high rates. *Journal of Neurotrauma*, **2006**, 23, 1222-32	5.4	159
86	Equibiaxial deformation-induced injury of alveolar epithelial cells in vitro. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **1998**, 275, L1173-83	5.8	124
85	Traumatic axonal injury after closed head injury in the neonatal pig. *Journal of Neurotrauma*, **2002**, 19, 843-53	5.4	116
84	Role of stretch on tight junction structure in alveolar epithelial cells. *American Journal of Respiratory Cell and Molecular Biology*, **2001**, 25, 584-91	5.7	107
83	A fiber-reinforced composite model of the viscoelastic behavior of the brainstem in shear. *Journal of Biomechanics*, **1999**, 32, 865-70	2.9	82
82	Physiological and histopathological responses following closed rotational head injury depend on direction of head motion. *Experimental Neurology*, **2011**, 227, 79-88	5.7	80
81	White matter tract-oriented deformation predicts traumatic axonal brain injury and reveals rotational direction-specific vulnerabilities. *Biomechanics and Modeling in Mechanobiology*, **2015**, 14, 877-96	3.8	78
80	Material properties of porcine parietal cortex. *Journal of Biomechanics*, **2006**, 39, 2521-5	2.9	72

79	Cyclic stretch-induced oxidative stress increases pulmonary alveolar epithelial permeability. *American Journal of Respiratory Cell and Molecular Biology*, **2013**, 49, 156-64	5.7	71
78	Folliculin controls lung alveolar enlargement and epithelial cell survival through E-cadherin, LKB1, and AMPK. *Cell Reports*, **2014**, 7, 412-423	10.6	70
77	A Porcine Model of Traumatic Brain Injury via Head Rotational Acceleration. *Methods in Molecular Biology*, **2016**, 1462, 289-324	1.4	61
76	Parametric study of head impact in the infant. *Stapp Car Crash Journal*, **2007**, 51, 1-15	1	61
75	Measurement of stretch-induced loss of alveolar epithelial barrier integrity with a novel in vitro method. *American Journal of Physiology - Cell Physiology*, **2002**, 283, C1801-8	5.4	58
74	Neurobehavioral functional deficits following closed head injury in the neonatal pig. *Experimental Neurology*, **2007**, 204, 234-43	5.7	55
73	Potential for head injuries in infants from low-height falls. *Journal of Neurosurgery: Pediatrics*, **2008**, 2, 321-30	2.1	53
72	Combination Therapies for Traumatic Brain Injury: Retrospective Considerations. *Journal of Neurotrauma*, **2016**, 33, 101-12	5.4	43
71	MicroRNA modulate alveolar epithelial response to cyclic stretch. *BMC Genomics*, **2012**, 13, 154	4.5	41
70	Stretch increases alveolar epithelial permeability to uncharged micromolecules. *American Journal of Physiology - Cell Physiology*, **2006**, 290, C1179-88	5.4	37
69	Influence of age and fall type on head injuries in infants and toddlers. *International Journal of Developmental Neuroscience*, **2012**, 30, 201-6	2.7	35
68	Mitochondrial bioenergetic alterations after focal traumatic brain injury in the immature brain. *Experimental Neurology*, **2015**, 271, 136-44	5.7	34
67	Biomechanics of the toddler head during low-height falls: an anthropomorphic dummy analysis. *Journal of Neurosurgery: Pediatrics*, **2010**, 6, 57-68	2.1	33
66	Circulating markers of endothelial and alveolar epithelial dysfunction are associated with mortality in pediatric acute respiratory distress syndrome. *Intensive Care Medicine*, **2016**, 42, 1137-45	14.5	33
65	Finite element model predictions of intracranial hemorrhage from non-impact, rapid head rotations in the piglet. *International Journal of Developmental Neuroscience*, **2012**, 30, 191-200	2.7	31
64	Neurocritical care monitoring correlates with neuropathology in a swine model of pediatric traumatic brain injury. *Neurosurgery*, **2011**, 69, 1139-47; discussion 1147	3.2	30
63	Peripheral Blood Mitochondrial DNA as a Biomarker of Cerebral Mitochondrial Dysfunction following Traumatic Brain Injury in a Porcine Model. *PLoS ONE*, **2015**, 10, e0130927	3.7	30
62	Behavioral deficits and axonal injury persistence after rotational head injury are direction dependent. *Journal of Neurotrauma*, **2013**, 30, 538-45	5.4	29

61	Embedded axonal fiber tracts improve finite element model predictions of traumatic brain injury. *Biomechanics and Modeling in Mechanobiology*, **2020**, 19, 1109-1130	3.8	29
60	Influences of developmental age on the resolution of diffuse traumatic intracranial hemorrhage and axonal injury. *Journal of Neurotrauma*, **2014**, 31, 206-14	5.4	25
59	In vivo pons motion within the skull. *Journal of Biomechanics*, **2007**, 40, 92-9	2.9	25
58	Persistently Altered Brain Mitochondrial Bioenergetics After Apparently Successful Resuscitation From Cardiac Arrest. *Journal of the American Heart Association*, **2015**, 4, e002232	6	24
57	Rac1 pathway mediates stretch response in pulmonary alveolar epithelial cells. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **2013**, 305, L141-53	5.8	24
56	Cyclic stretch magnitude and duration affect rat alveolar epithelial gene expression. *Cellular Physiology and Biochemistry*, **2010**, 25, 113-22	3.9	24
55	Integrated Stress Response Mediates Epithelial Injury in Mechanical Ventilation. *American Journal of Respiratory Cell and Molecular Biology*, **2017**, 57, 193-203	5.7	23
54	Mitochondrial response in a toddler-aged swine model following diffuse non-impact traumatic brain injury. *Mitochondrion*, **2016**, 26, 19-25	4.9	22
53	Superoxide mediates tight junction complex dissociation in cyclically stretched lung slices. *Journal of Biomechanics*, **2016**, 49, 1330-1335	2.9	21
52	Neuroprotective Effects of Cyclosporine in a Porcine Pre-Clinical Trial of Focal Traumatic Brain Injury. *Journal of Neurotrauma*, **2018**,	5.4	20
51	Utilizing multiple scale models to improve predictions of extra-axial hemorrhage in the immature piglet. *Biomechanics and Modeling in Mechanobiology*, **2016**, 15, 1101-19	3.8	19
50	Cyclic Head Rotations Produce Modest Brain Injury in Infant Piglets. *Journal of Neurotrauma*, **2017**, 34, 235-247	5.4	18
49	Video Confirmation of Head Impact Sensor Data From High School Soccer Players. *American Journal of Sports Medicine*, **2020**, 48, 1246-1253	6.8	17
48	Development of a fluorescent microsphere technique for rapid histological determination of cerebral blood flow. *Brain Research*, **2010**, 1326, 128-34	3.7	17
47	Evaluation of Tissue-Level Brain Injury Metrics Using Species-Specific Simulations. *Journal of Neurotrauma*, **2021**, 38, 1879-1888	5.4	17
46	Clinical and Device-based Metrics of Gait and Balance in Diagnosing Youth Concussion. *Medicine and Science in Sports and Exercise*, **2020**, 52, 542-548	1.2	16
45	Multi-Scale White Matter Tract Embedded Brain Finite Element Model Predicts the Location of Traumatic Diffuse Axonal Injury. *Journal of Neurotrauma*, **2021**, 38, 144-157	5.4	16
44	Toward development of clinically translatable diagnostic and prognostic metrics of traumatic brain injury using animal models: A review and a look forward. *Experimental Neurology*, **2019**, 318, 101-123	5.7	15

43	Accounting for sampling variability, injury under-reporting, and sensor error in concussion injury risk curves. *Journal of Biomechanics*, **2015**, 48, 3059-65	2.9	15
42	Head Impact Sensor Studies In Sports: A Systematic Review Of Exposure Confirmation Methods. *Annals of Biomedical Engineering*, **2020**, 48, 2497-2507	4.7	15
41	Cecal ligation and puncture accelerates development of ventilator-induced lung injury. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **2015**, 308, L443-51	5.8	14
40	Infant skull fracture risk for low height falls. *International Journal of Legal Medicine*, **2019**, 133, 847-862	3.1	14
39	MRI study of regional variations of pharyngeal wall compliance in cats. *Journal of Applied Physiology* , **1998**, 85, 1884-97	3.7	13
38	Head Rotational Kinematics, Tissue Deformations, and Their Relationships to the Acute Traumatic Axonal Injury. *Journal of Biomechanical Engineering*, **2020**, 142,	2.1	13
37	Circulating nucleosomes are associated with mortality in pediatric acute respiratory distress syndrome. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **2016**, 310, L1177-84	5.8	11
36	Alterations in Daytime and Nighttime Activity in Piglets after Focal and Diffuse Brain Injury. *Journal of Neurotrauma*, **2016**, 33, 734-40	5.4	11
35	Utility of Pupillary Light Reflex Metrics as a Physiologic Biomarker for Adolescent Sport-Related Concussion. *JAMA Ophthalmology*, **2020**, 138, 1135-1141	3.9	11
34	Biofidelic neck influences head kinematics of parietal and occipital impacts following short falls in infants. *Accident Analysis and Prevention*, **2015**, 82, 143-53	6.1	10
33	Failure and Fatigue Properties of Immature Human and Porcine Parasagittal Bridging Veins. *Annals of Biomedical Engineering*, **2017**, 45, 1877-1889	4.7	9
32	Improved prediction of direction-dependent, acute axonal injury in piglets. *Journal of Neuroscience Research*, **2018**, 96, 536-544	4.4	9
31	Protein kinase R-like endoplasmatic reticulum kinase is a mediator of stretch in ventilator-induced lung injury. *Respiratory Research*, **2018**, 19, 157	7.3	8
30	Mechanical effects of genioglossus muscle stimulation on the pharyngeal airway by MRI in cats. *Respiratory Physiology and Neurobiology*, **2007**, 156, 154-64	2.8	8
29	Frequency-Dependent Changes in Resting State Electroencephalogram Functional Networks after Traumatic Brain Injury in Piglets. *Journal of Neurotrauma*, **2019**, 36, 2558-2578	5.4	7
28	Comparison of Heart Rate and Blood Pressure with Toe Pinch and Bispectral Index for Monitoring the Depth of Anesthesia in Piglets. *Journal of the American Association for Laboratory Animal Science*, **2015**, 54, 536-44	1.3	7
27	Increased platelet mitochondrial respiration after cardiac arrest and resuscitation as a potential peripheral biosignature of cerebral bioenergetic dysfunction. *Journal of Bioenergetics and Biomembranes*, **2016**, 48, 269-79	3.7	7
26	Sport- and Gender-Based Differences in Head Impact Exposure and Mechanism in High School Sports. *Orthopaedic Journal of Sports Medicine*, **2021**, 9, 2325967120984423	3.5	6

25	Repeated Loading Behavior of Pediatric Porcine Common Carotid Arteries. *Journal of Biomechanical Engineering*, **2016**, 138,	2.1	6
24	Using Serum Amino Acids to Predict Traumatic Brain Injury: A Systematic Approach to Utilize Multiple Biomarkers. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	5
23	Measurement and Finite Element Model Validation of Immature Porcine Brain-Skull Displacement during Rapid Sagittal Head Rotations. *Frontiers in Bioengineering and Biotechnology*, **2018**, 6, 16	5.8	4
22	Changes in event-related potential functional networks predict traumatic brain injury in piglets. *Clinical Biomechanics*, **2019**, 64, 14-21	2.2	4
21	Nordihydroguaiaretic acid reduces secondary organ injury in septic rats after cecal ligation and puncture. *PLoS ONE*, **2020**, 15, e0237613	3.7	4
20	Biofidelic white matter heterogeneity decreases computational model predictions of white matter strains during rapid head rotations. *Computer Methods in Biomechanics and Biomedical Engineering*, **2016**, 19, 1618-29	2.1	4
19	Predictions of neonatal porcine bridging vein rupture and extra-axial hemorrhage during rapid head rotations. *Journal of the Mechanical Behavior of Biomedical Materials*, **2020**, 106, 103740	4.1	3
18	Laboratory Assessment of a Headband-Mounted Sensor for Measurement of Head Impact Rotational Kinematics. *Journal of Biomechanical Engineering*, **2021**, 143,	2.1	3
17	Comparison of Video-Identified Head Contacts and Sensor-Recorded Events in High School Soccer. *Journal of Applied Biomechanics*, **2021**, 1-5	1.2	3
16	Assessment of Saccades and Gaze Stability in the Diagnosis of Pediatric Concussion.. *Clinical Journal of Sport Medicine*, **2022**, 32, 108-113	3.2	3
15	Evaluation of Diffusion Tensor Imaging and Fluid Based Biomarkers in a Large Animal Trial of Cyclosporine in Focal Traumatic Brain Injury. *Journal of Neurotrauma*, **2021**, 38, 1870-1878	5.4	3
14	Variations in Head Impact Rates in Male and Female High School Soccer. *Medicine and Science in Sports and Exercise*, **2021**, 53, 1245-1251	1.2	3
13	HER2 Signaling Implicated in Regulating Alveolar Epithelial Permeability with Cyclic Stretch. *International Journal of Molecular Sciences*, **2019**, 20,	6.3	2
12	An adaptive-remeshing framework to predict impact-induced skull fracture in infants. *Biomechanics and Modeling in Mechanobiology*, **2020**, 19, 1595-1605	3.8	2
11	Differentiating septic children with and without acute respiratory distress syndrome using proteomics.. *American Journal of Physiology - Lung Cellular and Molecular Physiology*, **2022**,	5.8	1
10	Claudin-5 decreases alveolar epithelial barrier function. *FASEB Journal*, **2008**, 22, 464.1	0.9	1
9	Target detection in healthy 4-week old piglets from a passive two-tone auditory oddball paradigm. *BMC Neuroscience*, **2020**, 21, 52	3.2	1
8	Integrating Human and Non-Human Primate Data to Estimate Human Tolerances for Traumatic Brain Injury.. *Journal of Biomechanical Engineering*, **2021**,	2.1	1

7	Learning Environments and Evidence-Based Practices in Bioengineering and Biomedical Engineering. *Biomedical Engineering Education*, **2022**, 2, 1		0
6	Pre- and post-season visio-vestibular function in healthy adolescent athletes. *Physician and Sportsmedicine*, **2021**, 1-9	2.4	0
5	Factors affecting biomarkers of endothelial and alveolar epithelial dysfunction: response to comments by Kyo et al. *Intensive Care Medicine*, **2016**, 42, 2113-2114	14.5	
4	Initial Neurologic Presentation in Young Children Sustaining Inflicted and Unintentional Fatal Head Injuries: In Reply. *Pediatrics*, **2005**, 116, 1608-1609	7.4	
3	Rac mediates actin remodeling and permeability during alveolar epithelial stretch. *FASEB Journal*, **2011**, 25, 865.3	0.9	
2	Quantifying head impact exposure, mechanisms and kinematics using instrumented mouthguards in female high school lacrosse.. *Research in Sports Medicine*, **2022**, 1-15	3.8	
1	Quantifying Head Impact Exposure, Mechanisms and Kinematics Using an Instrumented Mouthguard in Female High School Lacrosse. *Orthopaedic Journal of Sports Medicine*, **2022**, 10, 23259671221S0040	2.5	