Nicole M Grosland

List of Publications by Year
in descending order

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53 papers	1,489 citations	361413 20 h-index	330143 37 g-index
53 all docs	53 docs citations	53 times ranked	1424 citing authors

#	Article	IF	Citations
1	Load-Sharing Between Anterior and Posterior Elements in a Lumbar Motion Segment Implanted With an Artificial Disc. Spine, 2001, 26, E122-E129.	2.0	232
2	Impact of impaired wrist motion on hand and upper-extremity performance. Journal of Hand Surgery, 2003, 28, 898-903.	1.6	95
3	Cartilage contact pressure elevations in dysplastic hips: a chronic overload model. Journal of Orthopaedic Surgery and Research, 2006, 1, 6.	2.3	88
4	Bicortical vs monocortical orthodontic skeletal anchorage. American Journal of Orthodontics and Dentofacial Orthopedics, 2008, 134, 625-635.	1.7	81
5	IA-FEMesh: An open-source, interactive, multiblock approach to anatomic finite element model development. Computer Methods and Programs in Biomedicine, 2009, 94, 96-107.	4.7	78
6	Intra-articular Contact Stress Distributions at the Ankle Throughout Stance Phaseâ€“patient-specific Finite Element Analysis as a Metric of Degeneration Propensity. Biomechanics and Modeling in Mechanobiology, 2006, 5, 82-89.	2.8	56
7	From Finite Element Meshes to Clouds of Points: A Review of Methods for Generation of Computational Biomechanics Models for Patient-Specific Applications. Annals of Biomedical Engineering, 2016, 44, 3-15.	2.5	52
8	Effect of screw diameter on orthodontic skeletal anchorage. American Journal of Orthodontics and Dentofacial Orthopedics, 2009, 136, 224-229.	1.7	46
9	Effect of miniscrew angulation on anchorage resistance. American Journal of Orthodontics and Dentofacial Orthopedics, 2011, 139, e147-e152.	1.7	44
10	An interactive multiblock approach to meshing the spine. Computer Methods and Programs in Biomedicine, 2009, 95, 227-235.	4.7	43
11	Stability Analysis of an Enhanced Load Sharing Posterior Fixation Device and Its Equivalent Conventional Device in a Calf Spine Model. Spine, 1999, 24, 2206.	2.0	42
12	New Methods for Assessing Cartilage Contact Stress after Articular Fracture. Clinical Orthopaedics and Related Research, 2004, 423, 52-58.	1.5	42
13	Variability in ACL Tunnel Placement. American Journal of Sports Medicine, 2013, 41, 1265-1273.	4.2	39
14	Biomechanical Studies on Two Anterior Thoracolumbar Implants in Cadaveric Spines. Spine, 1999, 24, 213-218.	2.0	38
15	Effect of miniscrew placement torque on resistance to miniscrew movement under load. American Journal of Orthodontics and Dentofacial Orthopedics, 2011, 140, e93-e98.	1.7	35
16	Impact of Simulated Proximal Interphalangeal Arthrodeses of All Fingers on Hand Function. Journal of Hand Surgery, 2006, 31, 940-946.	1.6	32
17	Validation of phalanx bone three-dimensional surface segmentation from computed tomography images using laser scanning. Skeletal Radiology, 2007, 37, 35-42.	2.0	31
18	Automated hexahedral meshing of anatomic structures using deformable registration. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 35-43.	1.6	28

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19	Biomechanical Analysis of the Cervical Spine Following Disc Degeneration, Disc Fusion, and Disc Replacement: A Finite Element Study. International Journal of Spine Surgery, 2019, 13, 491-500.	1.5	23
20	A Voxel-based Formulation for Contact Finite Element Analysis. Computer Methods in Biomechanics and Biomedical Engineering, 2002, 5, 21-32.	1.6	21
21	Semi-automated Phalanx Bone Segmentation Using the Expectation Maximization Algorithm. Journal of Digital Imaging, 2009, 22, 483-491.	2.9	20
22	A comprehensive finite element model of surgical treatment for cervical myelopathy. Clinical Biomechanics, 2020, 74, 79-86.	1.2	20
23	Effect of Multilevel Open-Door Laminoplasty and Laminectomy on Flexibility of the Cervical Spine. Spine, 2012, 37, E1165-E1170.	2.0	19
24	Volume of Brain Herniation in Patients with Ischemic Stroke After Decompressive Craniectomy. World Neurosurgery, 2016, 96, 101-106.	1.3	17
25	Hinged-Dynamic Posterior Device Permits Greater Loads on the Graft and Similar Stability as Compared with Its Equivalent Rigid Device: A Three-Dimensional Finite Element Assessment. Journal of Prosthetics and Orthotics, 2001, 13, 17-20.	0.4	16
26	Automated bony region identification using artificial neural networks: reliability and validation measurements. Skeletal Radiology, 2008, 37, 313-319.	2.0	16
27	Hemiarthroplasty of hip joint: An experimental validation using porcine acetabulum. Journal of Biomechanics, 2011, 44, 1536-1542.	2.1	16
28	Finite Element Analysis of Patella Alta: A Patellofemoral Instability Model. Iowa orthopaedic journal, The, 2017, 37, 101-108.	0.5	16
29	Feature-based multiblock finite element mesh generation. CAD Computer Aided Design, 2010, 42, 1108-1116.	2.7	15
30	Biomechanical analysis of anterior versus posterior instrumentation following a thoracolumbar corpectomy. Journal of Neurosurgery: Spine, 2014, 21, 577-581.	1.7	14
31	Measurement of in vivo spinal cord displacement and strain fields of healthy and myelopathic cervical spinal cord. Journal of Neurosurgery: Spine, 2019, 31, 53-59.	1.7	14
32	Vertebral Endplate Morphology Follows Bone Remodeling Principles. Spine, 2007, 32, E667-E673.	2.0	13
33	Biomechanical Analysis of the Intact and Destabilized Sheep Cervical Spine. Spine, 2012, 37, E957-E963.	2.0	13
34	Volume of Brain Herniation After Decompressive Craniectomy in Patients with Traumatic Brain Injury. World Neurosurgery, 2018, 118, e414-e421.	1.3	13
35	Biomechanical evaluation of medial patellofemoral ligament reconstruction. Iowa orthopaedic journal, The, 2013, 33, 64-9.	0.5	13
36	The effect of multi-level laminoplasty and laminectomy on the biomechanics of the cervical spine: a finite element study. Iowa orthopaedic journal, The, 2014, 34, 150-7.	0.5	13

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37	EM Segmentation of the Distal Femur and Proximal Tibia: A High-Throughput Approach to Anatomic Surface Generation. Annals of Biomedical Engineering, 2011, 39, 1555-1562.	2.5	12
38	Postoperative Analysis of Patients Who Received the Universal 2 Total Wrist Implant System. Journal of Applied Biomechanics, 2012, 28, 466-472.	0.8	12
39	Biomechanical Studies of a Dynamized Anterior Thoracolumbar Implant. Spine, 2000, 25, 306-309.	2.0	11
40	A Finite Element Analysis of Medial Patellofemoral Ligament Reconstruction. Iowa orthopaedic journal, The, 2015, 35, 13-9.	0.5	8
41	Toward the Development of Virtual Surgical Tools to Aid Orthopaedic FE Analyses. Eurasip Journal on Advances in Signal Processing, 2009, 2010, 1902931-1902937.	1.7	7
42	Sheep cervical spine biomechanics: a finite element study. Iowa orthopaedic journal, The, 2014, 34, 137-43.	0.5	7
43	Electromyographic study of postural adaptation during mandibular advancement. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 35-37.	1.6	6
44	Surgically oriented measurements for three-dimensional characterization of tunnel placement in anterior cruciate ligament reconstruction. Computer Aided Surgery, 2012, 17, 221-231.	1.8	6
45	Finite-Element Study of the Performance Characteristics of an Intradural Spinal Cord Stimulator. Journal of Medical Devices, Transactions of the ASME, 2014, 8, .	0.7	6
46	Cervical laminoplasty construct stability: an experimental and finite element investigation. Iowa orthopaedic journal, The, 2011, 31, 207-14.	0.5	6
47	Advancements in Spine FE Mesh Development: Toward Patient-Specific Models. Studies in Mechanobiology, Tissue Engineering and Biomaterials, 2011, , 75-101.	1.0	3
48	Vertebroplasty plus short segment pedicle screw fixation in a burst fracture model in cadaveric spines. Journal of Clinical Neuroscience, 2015, 22, 883-888.	1.5	3
49	Ia-FEMesh: anatomic FE models--a check of mesh accuracy and validity. Iowa orthopaedic journal, The, 2009, 29, 48-54.	0.5	3
50	Gaussian curvature analysis allows for automatic block placement in multi-block hexahedral meshing. Computer Methods in Biomechanics and Biomedical Engineering, 2011, 14, 893-904.	1.6	2
51	Hexahedral meshing of subject-specific anatomic structures using mapped building blocks. Computer Methods in Biomechanics and Biomedical Engineering, 2013, 16, 602-611.	1.6	2
52	Growing multiblock structures: a semi-automated approach to block placement for multiblock hexahedral meshing. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 1043-1052.	1.6	1
53	Comparison of Displacement-Based and Force-Based Mapped Meshing. , 2008, 2008, 629.		0