

Avinash G Patwardhan

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8277268/publications.pdf>

Version: 2024-02-01

88
papers

2,817
citations

185998

28
h-index

182168

51
g-index

89
all docs

89
docs citations

89
times ranked

1558
citing authors

#	ARTICLE	IF	CITATIONS
1	A Follower Load Increases the Load-Carrying Capacity of the Lumbar Spine in Compression. Spine, 1999, 24, 1003-1009.	1.0	415
2	Test Protocols for Evaluation of Spinal Implants. Journal of Bone and Joint Surgery - Series A, 2006, 88, 103-109.	1.4	199
3	Novel model to analyze the effect of a large compressive follower pre-load on range of motions in a lumbar spine. Journal of Biomechanics, 2007, 40, 1326-1332.	0.9	189
4	Effect of compressive follower preload on the flexion-extension response of the human lumbar spine. Journal of Orthopaedic Research, 2003, 21, 540-546.	1.2	176
5	Load-Carrying Capacity of the Human Cervical Spine in Compression Is Increased Under a Follower Load. Spine, 2000, 25, 1548-1554.	1.0	161
6	Response of Charit® total disc replacement under physiologic loads: prosthesis component motion patterns. Spine Journal, 2005, 5, 590-599.	0.6	96
7	Cervical sagittal balance: a biomechanical perspective can help clinical practice. European Spine Journal, 2018, 27, 25-38.	1.0	90
8	The Natural History of the Cervical Foramen in Symptomatic and Asymptomatic Individuals Aged 20-60 Years as Measured by Magnetic Resonance Imaging. Spine, 1998, 23, 2180-2184.	1.0	71
9	Biomechanics of posterior dynamic stabilizing device (DIAM) after facetectomy and discectomy. Spine Journal, 2006, 6, 714-722.	0.6	67
10	Effect of Supplemental Translaminar Facet Screw Fixation on the Stability of Stand-Alone Anterior Lumbar Interbody Fusion Cages Under Physiologic Compressive Preloads. Spine, 2004, 29, 1731-1736.	1.0	64
11	Effect of Uncovertebral Joint Excision on the Motion Response of the Cervical Spine After Total Disc Replacement. Spine, 2007, 32, 2965-2969.	1.0	62
12	Disc Replacement Adjacent to Cervical Fusion. Spine, 2011, 36, 1932-1939.	1.0	59
13	Postural Consequences of Cervical Sagittal Imbalance. Spine, 2015, 40, 783-792.	1.0	56
14	A Frontal Plane Model of the Lumbar Spine Subjected to a Follower Load: Implications for the Role of Muscles. Journal of Biomechanical Engineering, 2001, 123, 212-217.	0.6	53
15	Effect of the Total Facet Arthroplasty System after complete laminectomy-facetectomy on the biomechanics of implanted and adjacent segments. Spine Journal, 2009, 9, 96-102.	0.6	49
16	Quality of motion considerations in numerical analysis of motion restoring implants of the spine. Clinical Biomechanics, 2008, 23, 536-544.	0.5	48
17	Effect of Two-Level Total Disc Replacement on Cervical Spine Kinematics. Spine, 2009, 34, E794-E799.	1.0	48
18	Effects of motion segment level, Pfirrmann intervertebral disc degeneration grade and gender on lumbar spine kinematics. Journal of Orthopaedic Research, 2016, 34, 1389-1398.	1.2	48

#	ARTICLE	IF	CITATIONS
19	A biomechanical comparison study of a modern fibular nail and distal fibular locking plate in AO/OTA 44C2 ankle fractures. <i>Journal of Orthopaedic Surgery and Research</i> , 2016, 11, 100.	0.9	48
20	Altered disc pressure profile after an osteoporotic vertebral fracture is a risk factor for adjacent vertebral body fracture. <i>European Spine Journal</i> , 2008, 17, 1522-1530.	1.0	41
21	Cervical Spine Muscle-Tendon Unit Length Differences Between Neutral and Forward Head Postures: Biomechanical Study Using Human Cadaveric Specimens. <i>Physical Therapy</i> , 2017, 97, 756-766.	1.1	40
22	COMPRESSIVE PRELOAD IMPROVES THE STABILITY OF ANTERIOR LUMBAR INTERBODY FUSION CAGE CONSTRUCTS. <i>Journal of Bone and Joint Surgery - Series A</i> , 2003, 85, 1749-1756.	1.4	39
23	Enhancing the Stability of Anterior Lumbar Interbody Fusion. <i>Spine</i> , 2008, 33, E38-E43.	1.0	37
24	What Is the Correlation of In Vivo Wear and Damage Patterns With In Vitro TDR Motion Response?. <i>Spine</i> , 2008, 33, 481-489.	1.0	36
25	Kinematics of Cervical Total Disc Replacement Adjacent to a Two-Level, Straight Versus Lordotic Fusion. <i>Spine</i> , 2011, 36, 1359-1366.	1.0	36
26	Flexion-Extension Response of the Thoracolumbar Spine Under Compressive Follower Preload. <i>Spine</i> , 2004, 29, E510-514.	1.0	34
27	Flexion and traction effect on C5-C6 foraminal space. <i>Archives of Physical Medicine and Rehabilitation</i> , 1998, 79, 1105-1109.	0.5	33
28	Restoring geometric and loading alignment of the thoracic spine with a vertebral compression fracture: effects of balloon (bone tamp) inflation and spinal extension. <i>Spine Journal</i> , 2005, 5, 45-54.	0.6	32
29	Biomechanical Effects of a Unilateral Approach to Minimally Invasive Lumbar Decompression. <i>PLoS ONE</i> , 2014, 9, e92611.	1.1	32
30	Anterior Cervical Discectomy and Fusion With a Locked Plate and Wedged Graft Effectively Stabilizes Flexion-Distracted Stage-3 Injury in the Lower Cervical Spine. <i>Spine</i> , 2009, 34, E9-E15.	1.0	28
31	Is Cervical Sagittal Imbalance a Risk Factor for Adjacent Segment Pathomechanics After Multilevel Fusion?. <i>Spine</i> , 2016, 41, E580-E588.	1.0	26
32	Prosthesis design influences segmental contribution to total cervical motion after cervical disc arthroplasty. <i>European Spine Journal</i> , 2020, 29, 2713-2721.	1.0	23
33	Biomechanics of Cervical Disc Arthroplasty—A Review of Concepts and Current Technology. <i>International Journal of Spine Surgery</i> , 2020, 14, S14-S28.	0.7	23
34	Effect of Increasing Implant Height on Lumbar Spine Kinematics and Foraminal Size Using the ProDisc-L Prosthesis. <i>Spine</i> , 2010, 35, 1777-1782.	1.0	20
35	Three-Dimensional Computed Tomography-Based Specimen-Specific Kinematic Model for Ex Vivo Assessment of Lumbar Neuroforaminal Space. <i>Spine</i> , 2015, 40, E814-E822.	1.0	18
36	Osteoinductivity and biomechanical assessment of a 3D printed demineralized bone matrix-ceramic composite in a rat spine fusion model. <i>Acta Biomaterialia</i> , 2021, 127, 146-158.	4.1	18

#	ARTICLE	IF	CITATIONS
37	Biomechanical evaluation of a low profile, anchored cervical interbody spacer device in the setting of progressive flexion-distraction injury of the cervical spine. <i>European Spine Journal</i> , 2013, 22, 135-141.	1.0	16
38	Biomechanics of an Expandable Lumbar Interbody Fusion Cage Deployed Through Transforaminal Approach. <i>International Journal of Spine Surgery</i> , 2018, 12, 520-527.	0.7	16
39	Biomechanical Characteristics of an Integrated Lumbar Interbody Fusion Device. <i>International Journal of Spine Surgery</i> , 2014, 8, 1.	0.7	16
40	Asymmetric Motion Distribution Between Components of a Mobile-Core Lumbar Disc Prosthesis. <i>Journal of Bone and Joint Surgery - Series A</i> , 2012, 94, 846-854.	1.4	15
41	Compressive Preload Reduces Segmental Flexion Instability After Progressive Destabilization of the Lumbar Spine. <i>Spine</i> , 2014, 39, E74-E81.	1.0	15
42	Bilateral posterior cervical cages provide biomechanical stability: assessment of stand-alone and supplemental fixation for anterior cervical discectomy and fusion. <i>Medical Devices: Evidence and Research</i> , 2016, Volume 9, 223-230.	0.4	14
43	Dimensions of the cervical neural foramen in conditions of spinal deformity: an ex vivo biomechanical investigation using specimen-specific CT imaging. <i>European Spine Journal</i> , 2016, 25, 2155-2165.	1.0	14
44	Loading of the lumbar spine during transition from standing to sitting: effect of fusion versus motion preservation at L4-L5 and L5-S1. <i>Spine Journal</i> , 2021, 21, 708-719.	0.6	13
45	Biomechanics of thoracolumbar burst fractures: Methods of induction and treatments. <i>Journal of Clinical Neuroscience</i> , 2014, 21, 2059-2064.	0.8	12
46	Kinematic assessment of an elastic-core cervical disc prosthesis in one and two-level constructs. <i>JOR Spine</i> , 2018, 1, e1040.	1.5	12
47	Biomechanics of an Expandable Lumbar Interbody Fusion Cage Deployed Through Transforaminal Approach. <i>International Journal of Spine Surgery</i> , 2017, 11, 24.	0.7	12
48	Parametric and cadaveric models of lumbar flexion instability and flexion restricting dynamic stabilization system. <i>European Spine Journal</i> , 2013, 22, 2710-2718.	1.0	9
49	Development of an attention-touch control for manual cervical distraction: a pilot randomized clinical trial for patients with neck pain. <i>Trials</i> , 2015, 16, 259.	0.7	9
50	Quantification of Shear Stresses Within a Transtibial Prosthetic Socket. <i>Foot and Ankle International</i> , 2014, 35, 779-782.	1.1	8
51	Does Resection of the Posterior Longitudinal Ligament Affect the Stability of Cervical Disc Arthroplasty?. <i>International Journal of Spine Surgery</i> , 2018, 12, 285-294.	0.7	8
52	Biomechanical Evaluation of a Low-Profile, Anchored Cervical Interbody Spacer Device at the Index Level or Adjacent to Plated Fusion. <i>Spine</i> , 2014, 39, E763-E769.	1.0	7
53	Biomechanical Stability Analysis of a Stand-alone Cage, Static and Rotational-dynamic Plate in a Two-level Cervical Fusion Construct. <i>Orthopaedic Surgery</i> , 2017, 9, 290-295.	0.7	7
54	Anatomic considerations in headaches associated with cervical sagittal imbalance: A cadaveric biomechanical study. <i>Journal of Clinical Neuroscience</i> , 2019, 65, 140-144.	0.8	7

#	ARTICLE	IF	CITATIONS
55	Biomechanical Analysis of Stand-alone Lateral Lumbar Interbody Fusion for Lumbar Adjacent Segment Disease. <i>Cureus</i> , 2019, 11, e6208.	0.2	7
56	Clinician proficiency in delivering manual treatment for neck pain within specified force ranges. <i>Spine Journal</i> , 2015, 15, 570-576.	0.6	6
57	Characterising acetabular component orientation with pelvic motion during total hip arthroplasty. <i>HIP International</i> , 2021, 31, 743-750.	0.9	6
58	Are Collapsed Cervical Discs Amenable to Total Disc Arthroplasty?. <i>Spine</i> , 2016, 41, 1866-1875.	1.0	5
59	Biomechanics of Cervical Disc Arthroplasty Devices. <i>Neurosurgery Clinics of North America</i> , 2021, 32, 493-504.	0.8	5
60	Kinematics of total facet replacement (TFAS-TL) with total disc replacement. <i>SAS Journal</i> , 2009, 3, 85-90.	1.3	4
61	Effect of prosthesis endplate lordosis angles on L5-S1 kinematics after disc arthroplasty. <i>European Spine Journal</i> , 2012, 21, 585-591.	1.0	4
62	A Biomechanical Comparison of Limited Open Versus Krackow Repair for Achilles Tendon Rupture. <i>Foot & Ankle Orthopaedics</i> , 2017, 2, 247301141771543.	0.1	4
63	Interpolation of three dimensional kinematics with dual-quaternions. <i>Journal of Biomechanics</i> , 2017, 51, 105-110.	0.9	4
64	The Effect of Proton Pump Inhibitors on Bone Formation in a Rat Spinal Arthrodesis Model. <i>Spine</i> , 2019, 44, E815-E822.	1.0	4
65	Motion response of a polycrystalline diamond adaptive axis of rotation cervical total disc arthroplasty. <i>Clinical Biomechanics</i> , 2019, 62, 34-41.	0.5	4
66	Intervertebral Disc Pressure Changes During a Chiropractic Procedure. , 1997, , .		4
67	P152. Limited Restoration of Primary and Coupled Motions in Lateral Bending and Axial Rotation after Total Disc Replacement: A Common Finding in Cervical Disc Prostheses. <i>Spine Journal</i> , 2009, 9, 192S-193S.	0.6	3
68	Relaxation Response of Lumbar Segments Undergoing Disc-Space Distraction. <i>Spine</i> , 2012, 37, 733-740.	1.0	3
69	Estimation of Trunk Muscle Forces Using a Bio-Inspired Control Strategy Implemented in a Neuro-Osteo-Ligamentous Finite Element Model of the Lumbar Spine. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020, 8, 949.	2.0	3
70	Effect of K-wire Reuse and Drill Mode on Heat Generation in Bone. <i>Hand</i> , 2023, 18, 314-319.	0.7	3
71	The M6 Artificial Cervical Disc. , 2008, , 272-276.		3
72	Development of Force-Feedback Technology for Training Clinicians to Deliver Manual Cervical Distraction. , 2013, , .		3

#	ARTICLE	IF	CITATIONS
73	TEST PROTOCOLS FOR EVALUATION OF SPINAL IMPLANTS. Journal of Bone and Joint Surgery - Series A, 2006, 88, 103-109.	1.4	3
74	Neutral cervical sagittal vertical axis and cervical lordosis vary with T1 tilt. Journal of Neurosurgery: Spine, 2020, 33, 158-164.	0.9	3
75	Effect of L4-Sacrum Fusion Alignment on Biomechanics of the Proximal Lumbar Segments in Sitting Postures. Spine Journal, 2017, 17, S118-S119.	0.6	2
76	L5 - S1 Segmental Kinematics After Facet Arthroplasty. International Journal of Spine Surgery, 2009, 3, 50-58.	0.7	2
77	P47. Increasing Compressive Preload Reduces the Segmental Instability Produced by Progressive Destabilization. Spine Journal, 2009, 9, 139S.	0.6	1
78	Neck Pain Participant's Perception of Traction Forces During Chiropractic Manual Cervical Distraction. , 2012, , .		1
79	Doctors of Chiropractic Proficiency in Delivering Prescribed Traction Forces During Manual Cervical Distraction of Neck Pain Patients. Journal of Alternative and Complementary Medicine, 2014, 20, A48-A49.	2.1	1
80	Unilateral absence of the neural arch in the subaxial cervical spine. Spine Journal, 2015, 15, e23-e24.	0.6	1
81	Thursday, September 27, 2018 3:35 PM - 5:05 PM Section on Motion Technology Abstract Presentations. Spine Journal, 2018, 18, S66-S67.	0.6	1
82	Effectiveness of cervical zero profile integrated cage with and without supplemental posterior Interfacet stabilization. Clinical Biomechanics, 2020, 78, 105078.	0.5	1
83	Biomechanical Comparison of Posterior and Transforaminal Interbody Fusion Constructs for the Degenerative Lumbar Spine. , 2002, , 397.		0
84	Computers in rehabilitative biomechanics. ACM SIGCAPH Computers and the Physically Handicapped, 1983, , 16-26.	0.1	0
85	An Experimental Model of Adult-Onset Slip Progression in Isthmic Spondylolisthesis. , 2001, , .		0
86	A Reliable and Accurate Method of Measuring Orthosis-Wearing Time. , 1999, , .		0
87	Intervertebral Disc Pressure Changes During Low Back Treatment Procedures. , 1998, , .		0
88	Stability of the Lumbar Spine Subjected to a Follower Load: Part I - Experimental Results. , 1998, , .		0