Kyoung-Tak Kang

List of Publications by Year
in descending order

117	2,097	331670	289244
papers	citations	21 h-index	40 g-index

119	119	119	1929
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Infrapatellar fat pad-derived mesenchymal stem cell therapy for knee osteoarthritis. Knee, 2012, 19, 902-907.	1.6	327
2	A prospective, randomized, controlled trial of robotâ€assisted vs freehand pedicle screw fixation in spine surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2017, 13, e1779.	2.3	168
3	Biomechanical comparison of fixedâ€and mobileâ€bearing for unicomparmental knee arthroplasty using finite element analysis. Journal of Orthopaedic Research, 2014, 32, 338-345.	2.3	76
4	Influence of Increased Posterior Tibial Slope in Total Knee Arthroplasty on Knee Joint Biomechanics: A Computational Simulation Study. Journal of Arthroplasty, 2018, 33, 572-579.	3.1	70
5	Graft Extrusion Related to the Position of Allograft inÂLateral Meniscal Allograft Transplantation: Biomechanical Comparison Between Parapatellar and Transpatellar Approaches Using Finite ElementÂAnalysis. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2015, 31, 2380-2391.e2.	2.7	62
6	Total knee arthroplasty application of polyetheretherketone and carbon-fiber-reinforced polyetheretherketone: A review. Materials Science and Engineering C, 2019, 100, 70-81.	7.3	62
7	Importance of joint line preservation in unicompartmental knee arthroplasty: Finite element analysis. Journal of Orthopaedic Research, 2017, 35, 347-352.	2.3	53
8	The influence of facet joint orientation and tropism on the stress at the adjacent segment after lumbar fusion surgery: a biomechanical analysis. Spine Journal, 2015, 15, 1841-1847.	1.3	50
9	Probabilistic evaluation of the material properties of the in vivo subjectâ€specific articular surface using a computational model. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2017, 105, 1390-1400.	3.4	47
10	Biomechanical Analysis of Fusion Segment Rigidity Upon Stress at Both the Fusion and Adjacent Segments: A Comparison between Unilateral and Bilateral Pedicle Screw Fixation. Yonsei Medical Journal, 2014, 55, 1386.	2.2	43
11	Finite Element Analysis of the Biomechanical Effects of 3 Posterolateral Corner Reconstruction Techniques for the Knee Joint. Arthroscopy - Journal of Arthroscopic and Related Surgery, 2017, 33, 1537-1550.	2.7	42
12	Computational model-based probabilistic analysis of in vivo material properties for ligament stiffness using the laxity test and computed tomography. Journal of Materials Science: Materials in Medicine, 2016, 27, 183.	3.6	38
13	Optimal mechanical properties of a scaffold for cartilage regeneration using finite element analysis. Journal of Tissue Engineering, 2019, 10, 204173141983213.	5.5	38
14	The increase in posterior tibial slope provides a positive biomechanical effect in posterior-stabilized total knee arthroplasty. Knee Surgery, Sports Traumatology, Arthroscopy, 2018, 26, 3188-3195.	4.2	34
15	Biomechanical advantages of robot-assisted pedicle screw fixation in posterior lumbar interbody fusion compared with freehand technique in a prospective randomized controlled trialâ€"perspective for patient-specific finite element analysis. Spine Journal, 2017, 17, 671-680.	1.3	31
16	The significance of pain catastrophizing in clinical manifestations of patients with lumbar spinal stenosis: mediation analysis with bootstrapping. Spine Journal, 2015, 15, 238-246.	1.3	29
17	Femoral component alignment in unicompartmental knee arthroplasty leads to biomechanical change in contact stress and collateral ligament force in knee joint. Archives of Orthopaedic and Trauma Surgery, 2018, 138, 563-572.	2.4	27
18	Wear predictions for UHMWPE material with various surface properties used on the femoral component in total knee arthroplasty: a computational simulation study. Journal of Materials Science: Materials in Medicine, 2017, 28, 105.	3.6	26

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19	Comparative study of 1â€year clinical and radiological outcomes using robotâ€assisted pedicle screw fixation and freehand technique in posterior lumbar interbody fusion: A prospective, randomized controlled trial. International Journal of Medical Robotics and Computer Assisted Surgery, 2018, 14, e1917.	2.3	25
20	Patient-specific instrumentation development in TKA: 1st and 2nd generation designs in comparison with conventional instrumentation. Archives of Orthopaedic and Trauma Surgery, 2017, 137, 111-118.	2.4	22
21	Tibiofemoral conformity variation offers changed kinematics and wear performance of customized posterior-stabilized total knee arthroplasty. Knee Surgery, Sports Traumatology, Arthroscopy, 2019, 27, 1213-1223.	4.2	22
22	Flexed femoral component improves kinematics and biomechanical effect in posterior stabilized total knee arthroplasty. Knee Surgery, Sports Traumatology, Arthroscopy, 2019, 27, 1174-1181.	4.2	21
23	Gender-related morphological differences in sulcus angle and condylar height for the femoral trochlea using magnetic resonance imaging. Knee Surgery, Sports Traumatology, Arthroscopy, 2019, 27, 3560-3566.	4.2	21
24	Effect of joint line preservation on mobile-type bearing unicompartmental knee arthroplasty: finite element analysis. Australasian Physical and Engineering Sciences in Medicine, 2018, 41, 201-208.	1.3	20
25	Effect of femoral component position on biomechanical outcomes of unicompartmental knee arthroplasty. Knee, 2018, 25, 491-498.	1.6	20
26	Prediction of Wear on Tibial Inserts Made of UHMWPE, PEEK, and CFR-PEEK in Total Knee Arthroplasty Using Finite-Element Analysis. Lubricants, 2019, 7, 30.	2.9	20
27	Biomechanical and Clinical Effect of Patient-Specific or Customized Knee Implants: A Review. Journal of Clinical Medicine, 2020, 9, 1559.	2.4	20
28	Biomechanical analysis of lumbar decompression surgery in relation to degenerative changes in the lumbar spine â€“ Validated finite element analysis. Computers in Biology and Medicine, 2017, 89, 512-519.	7.0	19
29	Design optimization of high tibial osteotomy plates using finite element analysis for improved biomechanical effect. Journal of Orthopaedic Surgery and Research, 2019, 14, 219.	2.3	19
30	Gender differences in morphology exist in posterior condylar offsets of the knee in Korean population. Knee Surgery, Sports Traumatology, Arthroscopy, 2019, 27, 1628-1634.	4.2	18
31	Comparing an instrumented posterior fixation system with rigid and semi-flexible rods using finite element analysis. International Journal of Precision Engineering and Manufacturing, 2015, 16, 163-170.	2.2	16
32	Failure of Pelvic Compensation in Patients With Severe Positive Sagittal Imbalance. Spine, 2019, 44, E759-E765.	2.0	16
33	Morphometry of femoral rotation for total knee prosthesis according to gender in a Korean population using three-dimensional magnetic resonance imaging. Knee, 2016, 23, 975-980.	1.6	15
34	Effect of Post-Cam Design for Normal Knee Joint Kinematic, Ligament, and Quadriceps Force in Patient-Specific Posterior-Stabilized Total Knee Arthroplasty by Using Finite Element Analysis. BioMed Research International, 2018, 2018, 1-11.	1.9	15
35	Comparison of Kinematics in Cruciate Retaining and Posterior Stabilized for Fixed and Rotating Platform Mobile-Bearing Total Knee Arthroplasty with respect to Different Posterior Tibial Slope. BioMed Research International, 2018, 2018, 1-11.	1.9	15
36	Finite element analysis for the biomechanical effect of tibial insert materials in total knee arthroplasty. Composite Structures, 2018, 201, 141-150.	5.8	15

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37	The anterolateral ligament is a secondary stabilizer in the knee joint. Bone and Joint Research, 2019, 8, 509-517.	3.6	14
38	Medial unicompartmental knee arthroplasty to patients with a ligamentous deficiency can cause biomechanically poor outcomes. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 2846-2853.	4.2	14
39	In vivo evaluation of the subject-specific finite element model for knee joint cartilage contact area. International Journal of Precision Engineering and Manufacturing, 2015, 16, 1171-1177.	2.2	13
40	Finite Element Analysis for Comparison of Spinous Process Osteotomies Technique with Conventional Laminectomy as Lumbar Decompression Procedure. Yonsei Medical Journal, 2015, 56, 146.	2.2	13
41	The Effect of Femoral Cutting Guide Design Improvements for Patient-Specific Instruments. BioMed Research International, 2015, 2015, 1-8.	1.9	12
42	Indirect effects of decompression surgery on glycemic homeostasis in patients with Type 2 diabetes mellitus and lumbar spinal stenosis. Spine Journal, 2015, 15, 25-33.	1.3	12
43	Malpositioning of Prosthesis: Patient-specific Total Knee Arthroplasty Versus Standard Off-the-Shelf Total Knee Arthroplasty. Journal of the American Academy of Orthopaedic Surgeons Global Research and Reviews, 2017, 1, e020.	0.7	12
44	Biomechanical Effects of Posterior Condylar Offset and Posterior Tibial Slope on Quadriceps Force and Joint Contact Forces in Posterior-Stabilized Total Knee Arthroplasty. BioMed Research International, 2017, 2017, 1-12.	1.9	12
45	Effect of geometric variations on tibiofemoral surface and post-cam design of normal knee kinematics restoration. Journal of Experimental Orthopaedics, 2018, 5, 53.	1.8	12
46	Biomechanical influence of lateral meniscal allograft transplantation on knee joint mechanics during the gait cycle. Journal of Orthopaedic Surgery and Research, 2019, 14, 300.	2.3	12
47	Biomechanical evaluation of the influence of posterolateral corner structures on cruciate ligaments forces during simulated gait and squatting. PLoS ONE, 2019, 14, e0214496.	2.5	12
48	Optimal Design of Patient-Specific Total Knee Arthroplasty for Improvement in Wear Performance. Journal of Clinical Medicine, 2019, 8, 2023.	2.4	12
49	Probabilistic Approach for Determining the Material Properties of Meniscal AttachmentsIn VivoUsing Magnetic Resonance Imaging and a Finite Element Model. Journal of Computational Biology, 2015, 22, 1097-1107.	1.6	11
50	Biomechanical influence of deficient posterolateral corner structures on knee joint kinematics: A computational study. Journal of Orthopaedic Research, 2018, 36, 2202-2209.	2.3	11
51	Preservation of femoral and tibial coronal alignment to improve biomechanical effects of medial unicompartment knee arthroplasty: Computational study. Bio-Medical Materials and Engineering, 2018, 29, 651-664.	0.6	11
52	Effects of posterior condylar offset and posterior tibial slope on mobile-bearing total knee arthroplasty using computational simulation. Knee, 2018, 25, 903-914.	1.6	11
53	Biomechanical effects of posterior tibial slope on unicompartmental knee arthroplasty using finite element analysis. Bio-Medical Materials and Engineering, 2019, 30, 133-144.	0.6	11
54	Computational analysis of customized cruciate retaining total knee arthroplasty restoration of native knee joint biomechanics. Artificial Organs, 2019, 43, 504-514.	1.9	11

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55	Anatomy-mimetic design preserves natural kinematics of knee joint in patient-specific mobile-bearing unicompartmental knee arthroplasty. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 1465-1472.	4.2	11
56	Prediction of wear performance in femoral and tibial conformity in patient-specific cruciate-retaining total knee arthroplasty. Journal of Orthopaedic Surgery and Research, 2020, 15, 24.	2.3	11
57	Effects of measurement methods for tibial rotation axis on the morphometry in Korean populations by gender. Knee, 2017, 24, 23-30.	1.6	10
58	Validation of a computational knee joint model using an alignment method for the knee laxity test and computed tomography. Bio-Medical Materials and Engineering, 2017, 28, 417-429.	0.6	10
59	Gender differences exist in rotational anatomy of the distal femur in osteoarthritic knees using MRI. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 2990-2997.	4.2	10
60	Biomechanical effect of a lateral hinge fracture for a medial opening wedge high tibial osteotomy: finite element study. Journal of Orthopaedic Surgery and Research, 2020, 15, 63.	2.3	10
61	Biomechanical effect with respect to the sagittal positioning of the femoral component in unicompartmental knee arthroplasty. Bio-Medical Materials and Engineering, 2019, 30, 171-182.	0.6	9
62	Morphologic difference and size mismatch in the medial and lateral tibial condyles exist with respect to gender for unicompartmental knee arthroplasty in the Korean population. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 1789-1796.	4.2	9
63	Biomechanical effect of tibial slope on the stability of medial unicompartmental knee arthroplasty in posterior cruciate ligament-deficient knees. Bone and Joint Research, 2020, 9, 593-600.	3.6	9
64	Morphometric study of gender difference in osteoarthritis posterior tibial slope using three-dimensional magnetic resonance imaging. Surgical and Radiologic Anatomy, 2020, 42, 667-672.	1.2	9
65	Analysis of pelvic compensation for dynamic sagittal imbalance using motion analysis. European Spine Journal, 2020, 29, 428-437.	2.2	9
66	Patient-specific design for articular surface conformity to preserve normal knee mechanics in posterior stabilized total knee arthroplasty. Bio-Medical Materials and Engineering, 2018, 29, 401-414.	0.6	8
67	Biomechanical Effect of UHMWPE and CFR-PEEK Insert on Tibial Component in Unicompartmental Knee Replacement in Different Varus and Valgus Alignments. Materials, 2019, 12, 3345.	2.9	8
68	Reduction in tibiofemoral conformity in lateral unicompartmental knee arthroplasty is more representative of normal knee kinematics. Bone and Joint Research, 2019, 8, 593-600.	3.6	8
69	Comparison of the biomechanical effect of posterior condylar offset and kinematics between posterior cruciate-retaining and posterior-stabilized total knee arthroplasty. Knee, 2019, 26, 250-257.	1.6	8
70	Effect of the presence of the articular cartilage on the femoral component rotation in total knee arthroplasty in female and varus osteoarthritis knees. Journal of Orthopaedic Surgery and Research, 2020, 15, 499.	2.3	8
71	Multiâ€objective design optimization of high tibial osteotomy for improvement of biomechanical effect by using finite element analysis. Journal of Orthopaedic Research, 2018, 36, 2956-2965.	2.3	7
72	Comparison of the Pullout Strength of Pedicle Screws According to the Thread Design for Various Degrees of Bone Quality. Applied Sciences (Switzerland), 2019, 9, 1525.	2.5	7

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73	Evaluation of tibial rotational axis in total knee arthroplasty using magnetic resonance imaging. Scientific Reports, 2020, 10, 14068.	3.3	7
74	Femoral trochlear morphology is associated with anterior cruciate ligament injury in skeletally immature patients. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 3969-3977.	4.2	7
75	Finite Element Study on the Preservation of Normal Knee Kinematics with Respect to the Prosthetic Design in Patient-Specific Medial Unicompartmental Knee Arthroplasty. BioMed Research International, 2020, 2020, 1-9.	1.9	7
76	Influence of Variation in Sagittal Placement of the Femoral Component after Cruciate-Retaining Total Knee Arthroplasty. Journal of Knee Surgery, 2021, 34, 444-451.	1.6	7
77	Finite element analysis of the influence of the posterior tibial slope on mobile-bearing unicompartmental knee arthroplasty. Knee, 2021, 29, 116-125.	1.6	7
78	The influence of the number of holes in the open wedge high tibial osteotomy on knee biomechanics using finite element analysis. Orthopaedics and Traumatology: Surgery and Research, 2021, 107, 102884.	2.0	7
79	Quantitative Accessibility of Delamination in Composite Using Lamb Wave by Experiments and FEA. Advanced Composite Materials, 2011, 20, 361-373.	1.9	6
80	Biomechanical evaluation of opening-wedge high tibial osteotomy with composite materials using finite-element analysis. Knee, 2018, 25, 977-987.	1.6	6
81	Computational wear prediction of insert conformity and material on mobile-bearing unicompartmental knee arthroplasty. Bone and Joint Research, 2019, 8, 563-569.	3.6	6
82	Kinematic Alignment in Cruciate Retaining Implants Improves the Biomechanical Function in Total Knee Arthroplasty during Gait and Deep Knee Bend. Journal of Knee Surgery, 2020, 33, 284-293.	1.6	6
83	Effects of contact stress on patellarfemoral joint and quadriceps force in fixed and mobile-bearing medial unicompartmental knee arthroplasty. Journal of Orthopaedic Surgery and Research, 2020, 15, 517.	2.3	6
84	Gait cycle comparions of cruciate sacrifice for total knee design.-explicit finite element. International Journal of Precision Engineering and Manufacturing, 2012, 13, 2043-2049.	2.2	5
85	Contribution of catastrophizing to disability and pain intensity after osteoporotic vertebral compression fracture. Journal of Orthopaedic Science, 2016, 21, 299-305.	1.1	5
86	The posterior cortical axis as an alternative reference for femoral component placement in total knee arthroplasty. Journal of Orthopaedic Surgery and Research, 2020, 15, 603.	2.3	5
87	Anatomic Differences in the Sagittal Knee Joint Are Associated With ACL Injury: Results From a Skeletally Immature Korean Population. Orthopaedic Journal of Sports Medicine, 2021, 9, 232596712199479.	1.7	5
88	The Effect of Patient-Specific Instrumentation Incorporating an Extramedullary Tibial Guide on Operative Efficiency for Total Knee Arthroplasty. BioMed Research International, 2017, 2017, 1-7.	1.9	4
89	Biomechanical Evaluation of the Effect of Mesenchymal Stem Cells on Cartilage Regeneration in Knee Joint Osteoarthritis. Applied Sciences (Switzerland), 2019, 9, 1868.	2.5	4
90	Difference in coronal curvature of the medial and lateral femoral condyle morphology by gender in implant design for total knee arthroplasty. Surgical and Radiologic Anatomy, 2020, 42, 649-655.	1.2	4

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91	Gender difference exists in sagittal curvature of the distal femoral condyle morphology for osteoarthritic population. Knee Surgery, Sports Traumatology, Arthroscopy, 2020, 28, 3740-3746.	4.2	4
92	Gender Differences in Patellar Positions among the Korean Population. Applied Sciences (Switzerland), 2020, 10, 8842.	2.5	4
93	Analysis of Gender Differences in the Rotational Alignment of the Distal Femur in Kinematically Aligned and Mechanically Aligned Total Knee Arthroplasty. Journal of Clinical Medicine, 2021, 10, 3691.	2.4	4
94	Correlation of Femoral Trochlear Dysplasia With Anterior Cruciate Ligament Injury in Skeletally Immature Patients. Orthopaedic Journal of Sports Medicine, 2021, 9, 232596712110226.	1.7	4
95	Influence of Preservation of Normal Knee Contact Stress on Other Compartments with respect to the Tibial Insert Design for Unicompartmental Knee Arthroplasty. Applied Bionics and Biomechanics, 2019, 2019, 1-9.	1.1	3
96	Restoration of normal knee kinematics with respect to tibial insert design in mobile bearing lateral unicompartmental arthroplasty using computational simulation. Bone and Joint Research, 2020, 9, 421-428.	3.6	3
97	Effects of the material properties of a focal knee articular prosthetic on the human knee joint using computational simulation. Knee, 2020, 27, 1484-1491.	1.6	3
98	Gender difference in bowing of the sagittal femoral morphology measurement using magnetic resonance imaging. Surgical and Radiologic Anatomy, 2020, 42, 1231-1236.	1.2	3
99	Effects of the Anterolateral Ligament and Anterior Cruciate Ligament on Knee Joint Mechanics: A Biomechanical Study Using Computational Modeling. Orthopaedic Journal of Sports Medicine, 2022, 10, 232596712210849.	1.7	3
100	Biomechanical effect of anatomical tibial component design on load distribution of medial proximal tibial bone in total knee arthroplasty. Bone and Joint Research, 2022, 11, 252-259.	3.6	3
101	Finite element analysis of femoral component sagittal alignment in mobile-bearing total knee arthroplasty. Bio-Medical Materials and Engineering, 2022, 33, 195-207.	0.6	3
102	The biomechanical effect of tibiofemoral conformity design for patient-specific cruciate retainging total knee arthroplasty using computational simulation. Journal of Experimental Orthopaedics, 2019, 6, 23.	1.8	2
103	Computational biomechanics of knee joint arthroplasty : a review. Mechanical Engineering Reviews, 2020, 7, 19-00338-19-00338.	4.7	2
104	The non-linear FEM analysis of different connection lengths of internal connection abutment. The Journal of Korean Academy of Prosthodontics, 2016, 54, 110.	0.1	1
105	Biomechanical analysis of a changed posterior condylar offset under deep knee bend loading in cruciate-retaining total knee arthroplasty. Bio-Medical Materials and Engineering, 2019, 30, 157-169.	0.6	1
106	Effect of insert material on forces on quadriceps, collateral ligament, and patellar tendon after rotating platform mobile-bearing total knee arthroplasty. Asian Journal of Surgery, 2020, 43, 742-749.	0.4	1
107	Biomechanical simulation for cartilage regeneration of knee joint osteoarthritis with composite scaffold using ply angle optimization. Journal of Biomaterials Applications, 2020, 34, 1019-1027.	2.4	1
108	Biomechanical Effect of Various Tibial Bearing Materials in Uni-Compartmental Knee Arthroplasty Using Finite Element Analysis. Applied Sciences (Switzerland), 2020, 10, 6487.	2.5	1

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109	Gender-Based Quantitative Analysis of the Grand Piano Sign in Mechanically Aligned Total Knee Arthroplasty in Asians. Journal of Clinical Medicine, 2021, 10, 1969.	2.4	1
110	The femoral trochlear anterior line is a better alternative intra-operative reference compared to femoral anterior tangent line for femoral rotation in both genders in total knee arthroplasty. Journal of Experimental Orthopaedics, 2020, 7, 43.	1.8	1
111	Improvement in Gait Pattern and its Relationship With Preoperative Pelvic Compensation After Surgery in Patients With Sagittal Plane Deformity. Spine, 2021, 46, E56-E64.	2.0	1
112	Computational analysis of tibial slope adjustment with fixed-bearing medial unicompartmental knee arthroplasty in ACL- and PCL-deficient models. Bone and Joint Research, 2022, 11, 494-502.	3.6	1
113	THE RELATION BETWEEN ROTATION DEFORMITY AND NERVE ROOT STRESS IN LUMBAR SCOLIOSIS. International Journal of Modern Physics B, 2010, 24, 2803-2808.	2.0	0
114	Effect of post-cam design on the kinematics and contact stress of posterior-stabilized total knee arthroplasty. Bio-Medical Materials and Engineering, 2021, 32, 323-332.	0.6	0
115	Influence du nombre de trous dans lâ€™ostÃ©otomie tibiale par ouverture interne sur la biomÃ©canique du genou Ã lâ€™aide dâ€™une analyse par Ã©lÃ©ments finis. Revue De Chirurgie Orthopedique Et Traumatologique 2021, 107, 527.	0.0	0
116	Existence of Gender-Based Difference in Morphology of Convex Lateral Tibial Plateau in Korean Population Primary Knee Joint Osteoarthritis. BioMed Research International, 2021, 2021, 1-5.	1.9	0
117	Volumetric Assessment of Fusion Mass and Its Clinical Correlations in Posterior Lumbar Interbody Fusion Depending on the Type of Bone Graft. Journal of Korean Society of Spine Surgery, 2020, 27, 39.	0.0	0