

# Amit Roy Chowdhury

## List of Publications by Year in descending order

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64  
papers

831  
citations

471509

17  
h-index

580821

25  
g-index

65  
all docs

65  
docs citations

65  
times ranked

805  
citing authors

#	ARTICLE	IF	CITATIONS
1	Design of patient specific dental implant using FE analysis and computational intelligence techniques. Applied Soft Computing Journal, 2018, 65, 272-279.	7.2	58
2	Effect of two-level pedicle-screw fixation with different rod materials on lumbar spine: A finite element study. Journal of Orthopaedic Science, 2018, 23, 258-265.	1.1	47
3	Alginate-honey bioinks with improved cell responses for applications as bioprinted tissue engineered constructs. Journal of Materials Research, 2018, 33, 2029-2039.	2.6	47
4	Mechanochemical synthesis of nanocrystalline hydroxyapatite from Mercenaria clam shells and phosphoric acid. Biomedical Physics and Engineering Express, 2017, 3, 015010.	1.2	44
5	Strontium doped hydroxyapatite from Mercenaria clam shells: Synthesis, mechanical and bioactivity study. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 90, 328-336.	3.1	43
6	Chemometric analysis of integrated FTIR and Raman spectra obtained by non-invasive exfoliative cytology for the screening of oral cancer. Analyst, The, 2019, 144, 1309-1325.	3.5	37
7	Finite element and experimental analysis to select patient's bone condition specific porous dental implant, fabricated using additive manufacturing. Computers in Biology and Medicine, 2020, 124, 103839.	7.0	36
8	Understanding compressive deformation behavior of porous Ti using finite element analysis. Materials Science and Engineering C, 2016, 64, 436-443.	7.3	32
9	A comparison of stress distributions for different surgical procedures, screw dimensions and orientations for a Temporomandibular joint implant. Journal of Biomechanics, 2011, 44, 2584-2587.	2.1	27
10	A comparative assessment of poly(vinylidene fluoride)/conducting polymer electrospun nanofiber membranes for biomedical applications. Journal of Applied Polymer Science, 2020, 137, 49115.	2.6	27
11	Design factors of lumbar pedicle screws under bending load: A finite element analysis. Biocybernetics and Biomedical Engineering, 2019, 39, 52-62.	5.9	25
12	Alginate-poly(amino acid) extrusion printed scaffolds for tissue engineering applications. International Journal of Polymeric Materials and Polymeric Biomaterials, 2020, 69, 65-72.	3.4	22
13	Effects of body configuration on pelvic injury in backward fall simulation using 3D finite element models of pelvis-femur-soft tissue complex. Journal of Biomechanics, 2009, 42, 1475-1482.	2.1	21
14	Bioprinting of radiopaque constructs for tissue engineering and understanding degradation behavior by use of Micro-CT. Bioactive Materials, 2020, 5, 569-576.	15.6	21
15	Three-dimensional finite element simulation of pelvic fracture during side impact with pelvis-femur-soft tissue complex. International Journal of Crashworthiness, 2008, 13, 313-329.	1.9	20
16	Force modeling to develop a novel method for fabrication of hollow channels inside a gel structure. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2020, 234, 223-231.	1.8	19
17	Biomechanical Analysis to Probe Role of Bone Condition and Subject Weight in Stiffness Customization of Femoral Stem for Improved Periprosthetic Biomechanical Response. Journal of Biomechanical Engineering, 2020, 142, .	1.3	18
18	Bioink formulations to ameliorate bioprinting-induced loss of cellular viability. Biointerphases, 2019, 14, 051006.	1.6	17

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19	Optimization of Spinal Implant Screw for Lower Vertebra through Finite Element Studies. Journal of Long-Term Effects of Medical Implants, 2014, 24, 99-108.	0.7	15
20	Analysis of surgical needle insertion modeling and viscoelastic tissue material interaction for minimally invasive surgery (MIS). Materials Today: Proceedings, 2022, 57, 259-264.	1.8	15
21	Pore Geometry Optimization of Titanium (Ti6Al4V) Alloy, for Its Application in the Fabrication of Customized Hip Implants. International Journal of Biomaterials, 2014, 2014, 1-12.	2.4	13
22	Isolation and mass spectrometry based hydroxyproline mapping of type II collagen derived from Capra hircus ear cartilage. Communications Biology, 2019, 2, 146.	4.4	13
23	Design of patient specific bone stiffness mimicking scaffold. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2021, 235, 1453-1462.	1.8	11
24	Design and manufacturing of biomimetic porous metal implants. Journal of Materials Research, 2021, 36, 3952-3962.	2.6	11
25	Computational FEM Application on Percutaneous Nephrolithotomy (PCNL) Minimum Invasive Surgery Through Needle Insertion Process. Advances in Mechatronics and Mechanical Engineering, 2022, , 210-222.	1.0	11
26	Experimental Study of the Robotically Controlled Surgical Needle Insertion for Analysis of the Minimum Invasive Process. Lecture Notes in Electrical Engineering, 2022, , 473-482.	0.4	11
27	Structural and Mechanical Behavior of Mechanochemically Synthesized Nanocrystalline Hydroxyapatite from Mercenaria Clam Shells. Transactions of the Indian Ceramic Society, 2020, 79, 175-181.	1.0	10
28	Tannic acid-crosslinked chitosan matrices enhance osteogenic differentiation and modulate epigenetic status of cultured cells over glutaraldehyde crosslinking. Soft Materials, 2022, 20, 149-160.	1.7	10
29	Computational intelligence based design of implant for varying bone conditions. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3191.	2.1	9
30	Experimental Analysis the Tissue Deformation of Needle Insertion Process in Tissue Engineering. , 2020, , .		9
31	Artificial Intervertebral Disc Replacement to Provide Dynamic Stability to the Lumbar Spine: A Finite Element Study. Journal of Long-Term Effects of Medical Implants, 2018, 28, 101-109.	0.7	9
32	Effect of Plate Geometry Modifications to Reduce Stress Shielding during Healing Stages for Tibial Fracture Fixation. Journal of Long-Term Effects of Medical Implants, 2018, 28, 131-140.	0.7	8
33	Design of Patient Specific Spinal Implant (Pedicule Screw Fixation) using FE Analysis and Soft Computing Techniques. Current Medical Imaging, 2020, 16, 371-382.	0.8	8
34	Study and Application of Machine Learning Methods in Modern Additive Manufacturing Processes. Advances in Computational Intelligence and Robotics Book Series, 2022, , 75-95.	0.4	8
35	The Study of the Epidemiology and Clinical Features of the Novel Coronavirus (COVID-19). Health Information Systems and the Advancement of Medical Practice in Developing Countries, 2021, , 25-39.	0.1	7
36	Study of Different Additive Manufacturing Processes and Emergent Applications in Modern Healthcare. Advances in Chemical and Materials Engineering Book Series, 2022, , 239-259.	0.3	7

#	ARTICLE	IF	CITATIONS
37	The Impact of 3D Printing Technology on the COVID-19 Pandemic. <i>Advances in Healthcare Information Systems and Administration Book Series</i> , 2022, , 135-154.	0.2	6
38	Evaluation of Directional Strength of SWCNT Reinforced Nanocomposites: A Finite Element Study. <i>Materials Today: Proceedings</i> , 2018, 5, 20528-20534.	1.8	5
39	Factors Affecting Diffuse Axonal Injury under Blunt Impact and Proposal for a Head Injury Criteria: A Finite Element Analysis. <i>Critical Reviews in Biomedical Engineering</i> , 2018, 46, 289-310.	0.9	5
40	Assessment of Jaw Bone Quality for Designing Patient-Specific Dental Implant Using Computed Tomography Data. <i>Journal of Long-Term Effects of Medical Implants</i> , 2021, 31, 49-58.	0.7	5
41	Restoration Mechanism and Sub-Structural Characteristics of Duplex Stainless Steel with an Initial Equiaxed Austenite Morphology during Post-Deformation Annealing. <i>Key Engineering Materials</i> , 0, 882, 64-73.	0.4	5
42	Honeycomb incorporated nanofibre reduces replicative senescence of umbilical cord derived mesenchymal stem cells. <i>IET Nanobiotechnology</i> , 2020, 14, 870-880.	3.8	5
43	Finite element analysis of the influence of cyclic strain on cells anchored to substrates with varying properties. <i>Medical and Biological Engineering and Computing</i> , 2022, 60, 171-187.	2.8	5
44	Fabrication of Ti-6Al-4V Porous Scaffolds Using Selective Laser Melting (SLM) and Mechanical Compression Test for Biomedical Applications. <i>Journal of the Institution of Engineers (India): Series D</i> , 2022, 103, 181-190.	1.0	5
45	Clinico-pathological significance of Drp1 dysregulation and its correlation to apoptosis in oral cancer patients. <i>Mitochondrion</i> , 2020, 52, 115-124.	3.4	4
46	Measurement of strain in the rod for lumbar pedicle screw fixation: An experimental and finite element study. <i>Biomedical Physics and Engineering Express</i> , 2020, 6, 065035.	1.2	4
47	Computational Study of In-Vitro Ureter Urine Flow in DJ Stent. <i>Advances in Mechatronics and Mechanical Engineering</i> , 2022, , 198-209.	1.0	4
48	Modelling of Porous Titanium and Understanding Its Mechanical Behavior Using Micro-Computed Tomography. <i>Journal of Materials Engineering and Performance</i> , 2022, 31, 8160-8168.	2.5	4
49	Influence of implant parameters on biomechanical stability of TMJ replacement: A finite element analysis. <i>International Journal of Artificial Organs</i> , 0, , 039139882211079.	1.4	4
50	Probing the Influence of Hybrid Thread Design on Biomechanical Response of Dental Implants: Finite Element Study and Experimental Validation. <i>Journal of Biomechanical Engineering</i> , 2023, 145, .	1.3	4
51	The Study of Traditional Medicine for the Treatment of COVID-19. <i>Advances in Medical Diagnosis, Treatment, and Care</i> , 2022, , 221-241.	0.1	3
52	Leveraging Substrate Stiffness to Promote Stem Cell Asymmetric Division via Mechanotransduction – Polarity Protein Axis and Its Bayesian Regression Analysis. <i>Rejuvenation Research</i> , 2022, 25, 59-69.	1.8	3
53	A Micro-Scale Non-Linear Finite Element Model to Optimize the Mechanical Behavior of Bioprinted Constructs. <i>3D Printing and Additive Manufacturing</i> , 2022, 9, 490-502.	2.9	3
54	Probing combinational influence of design variables on bone biomechanical response around dental implant supported fixed prosthesis. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2022, 110, 2338-2352.	3.4	3

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55	Synthesis and characterization of Sr-doped HAp-incorporated polyether ether ketone composite. Journal of Composite Materials, 2020, 54, 287-298.	2.4	2
56	Temporomandibular Joint Disorder and Biomechanical Simulation of the Replacement: A Literature Review on Various Surgical and Nonsurgical Methods, and Development of the Finite Element Method Approach in the Treatment. Journal of Engineering and Science in Medical Diagnostics and Therapy, 2022, 5, .	0.5	2
57	Damage modeling of MWCNT reinforced Carbon/Epoxy composite using different failure criteria: a comparative study. Applied Physics A: Materials Science and Processing, 2022, 128, .	2.3	2
58	Calcination Temperature-Dependent Structural and Photoluminescence Properties of Hydroxyapatite Derived from Labeo Rohita Fish Scales. Journal of the Institution of Engineers (India): Series D, 2020, 101, 223-232.	1.0	1
59	Optimal selection of dental implant for different bone conditions based on the mechanical response. Acta of Bioengineering and Biomechanics, 2017, 19, 11-20.	0.4	1
60	Electromagnetic Response of Bones Adjacent to the Dental Root Before and After Dental Implantation. Journal of Long-Term Effects of Medical Implants, 2018, 28, 161-168.	0.7	0
61	Cell-Laden Alginate Hydrogel Modelling using Three-Dimensional (3D) Microscale Finite Element Technique. Journal of the Institution of Engineers (India): Series C, 0, , 1.	1.2	0
62	Mechanical response at peri-implant mandibular bone for variation of pore characteristics of implants: A Finite Element Study. Acta of Bioengineering and Biomechanics, 2019, 21, 83-93.	0.4	0
63	Modelling cell deformations in bioprinting process using a multicompartment-smooth particle hydrodynamics approach. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2022, , 095441192210897.	1.8	0
64	Effect of Heat Treatment on Compressive Behavior of Selectively Laser Melted Ti64 Scaffolds. Journal of the Institution of Engineers (India): Series D, 0, , .	1.0	0