Jaime Dominguez

List of Publications by Year in descending order

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145 papers 2,805 citations

172386 29 h-index 254106 43 g-index

148 all docs

148 docs citations

148 times ranked 1427 citing authors

#	Article	IF	Citations
1	Nonlinear solutions for the steady state oscillations of a clamped–free rotating beam. European Journal of Mechanics, A/Solids, 2022, 91, 104413.	2.1	5
2	Fatigue behaviour of PBF additive manufactured TI6AL4V alloy after shot and laser peening. International Journal of Fatigue, 2022, 154, 106536.	2.8	39
3	A fretting fatigue model based on self-steered cracks. Theoretical and Applied Fracture Mechanics, 2022, 117, 103144.	2.1	8
4	3D contact effects in fretting fatigue tests. Theoretical and Applied Fracture Mechanics, 2022, 118, 103260.	2.1	6
5	Elastic Modulus of Woven Bone: Correlation with Evolution of Porosity and X-ray Greyscale. Annals of Biomedical Engineering, 2021, 49, 180-190.	1.3	2
6	Data-Driven Computational Simulation in Bone Mechanics. Annals of Biomedical Engineering, 2021, 49, 407-419.	1.3	6
7	Analytical and numerical study of the influence of different support types in the nonlinear vibrations of beams. European Journal of Mechanics, A/Solids, 2021, 85, 104113.	2.1	10
8	Mechanobiology of Bone Consolidation During Distraction Osteogenesis: Bone Lengthening Vs. Bone Transport. Annals of Biomedical Engineering, 2021, 49, 1209-1221.	1.3	7
9	Mechanical Influence of Surrounding Soft Tissue on Bone Regeneration Processes: A Bone Lengthening Study. Annals of Biomedical Engineering, 2021, 49, 642-652.	1.3	7
10	Self-adaptive diagnostic of radial fast-ion loss measurements on the ASDEX Upgrade tokamak (invited). Review of Scientific Instruments, 2021, 92, 053538.	0.6	3
11	Structural optimization of 3D-printed patient-specific ceramic scaffolds for in vivo bone regeneration in load-bearing defects. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 121, 104613.	1.5	16
12	Optimal shot peening residual stress profile for fatigue. Theoretical and Applied Fracture Mechanics, 2021, 116, 103109.	2.1	5
13	Experimental and numerical analysis of fatigue cracks emanating from internal defects in Ti6Al4V SLM. Procedia Structural Integrity, 2021, 34, 121-128.	0.3	4
14	Effect of shot peening residual stresses and surface roughness on fretting fatigue strength of Al 7075-T651. Tribology International, 2020, 142, 106004.	3.0	63
15	Fatigue and fracture analysis of a sevenâ€wire stainless steel strand under axial and bending loads. Fatigue and Fracture of Engineering Materials and Structures, 2020, 43, 149-161.	1.7	23
16	Comparison of the viscoelastic properties of human abdominal and breast adipose tissue and its incidence on breast reconstruction surgery. A pilot study. Clinical Biomechanics, 2020, 71, 37-44.	0.5	6
17	Numerical analysis of toroidal voids as stress relievers in shrink-fitted shafts. Tribology International, 2020, 143, 105996.	3.0	9
18	Real-Time Wireless Platform for In Vivo Monitoring of Bone Regeneration. Sensors, 2020, 20, 4591.	2.1	6

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19	A multiscale data-driven approach for bone tissue biomechanics. Computer Methods in Applied Mechanics and Engineering, 2020, 368, 113136.	3.4	14
20	Effect of surface treatment on the fatigue strength of additive manufactured Ti6Al4V alloy. Frattura Ed Integrita Strutturale, 2020, 14, 337-344.	0.5	16
21	Estimation of the opening load under variable amplitude loading. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 2194-2203.	1.7	3
22	Fretting-Fatigue Analysis of Shot-Peened Al 7075-T651 Test Specimens. Metals, 2019, 9, 586.	1.0	22
23	Comparison of methods for assigning the material properties of the distraction callus in computational models. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3227.	1.0	5
24	New fatigue device for testing cables: Design and results. Fatigue and Fracture of Engineering Materials and Structures, 2019, 42, 1826-1837.	1.7	10
25	First measurements of a magnetically driven fast-ion loss detector on ASDEX Upgrade. Journal of Instrumentation, 2019, 14, C11005-C11005.	0.5	6
26	On the prediction of the crack initiation path in fretting fatigue. Theoretical and Applied Fracture Mechanics, 2019, 99, 140-146.	2.1	14
27	Multiscale Characterisation of Cortical Bone Tissue. Applied Sciences (Switzerland), 2019, 9, 5228.	1.3	4
28	Comparison of different constitutive models to characterize the viscoelastic properties of human abdominal adipose tissue. A pilot study. Journal of the Mechanical Behavior of Biomedical Materials, 2018, 80, 293-302.	1.5	25
29	Nonlinear modelling and simulation of vibrocompaction processes. International Journal of Non-Linear Mechanics, 2018, 102, 101-111.	1.4	6
30	Simulation of thermal cycle aging process on fiber-reinforced polymers by extended finite element method. Journal of Composite Materials, 2018, 52, 1947-1958.	1.2	3
31	Internal voids as a stress reliever and palliative in fretting fatigue. Procedia Engineering, 2018, 213, 846-855.	1.2	3
32	Histological study of the docking site after bone transport. Temporal evolution in a sheep model. Injury, 2018, 49, 1987-1992.	0.7	8
33	Voids as stress relievers and a palliative in fretting. Fatigue and Fracture of Engineering Materials and Structures, 2018, 41, 2475-2484.	1.7	12
34	Comparison of the volumetric composition of lamellar bone and the woven bone of calluses. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2018, 232, 682-689.	1.0	4
35	First measurements of a scintillator based fast-ion loss detector near the ASDEX Upgrade divertor. Review of Scientific Instruments, 2018, 89, 101106.	0.6	12
36	Mechanical characterization via nanoindentation of the woven bone developed during bone transport. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 74, 236-244.	1.5	23

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37	Effect of freezing storage time on the elastic and viscous properties of the porcine TMJ disc. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 71, 314-319.	1.5	8
38	Nucleation and early crack path in fretting fatigue. International Journal of Fatigue, 2017, 100, 602-610.	2.8	32
39	Study of the Contribution of Nonlinear Normal Modes (NNMs) in Large Amplitude Oscillations of Simply Supported Beams. Procedia Engineering, 2017, 199, 625-630.	1.2	0
40	Non-linear vibrating systems excited by a nonideal energy source with a large slope characteristic. Mechanical Systems and Signal Processing, 2017, 96, 366-384.	4.4	8
41	Analysis of fretting fatigue initial crack path in Al7075-T651 using cylindrical contact. Tribology International, 2017, 108, 87-94.	3.0	38
42	Limit cycles in nonlinear vibrating systems excited by a nonideal energy source with a large slope characteristic. Nonlinear Dynamics, 2017, 87, 1377-1391.	2.7	6
43	A fast feedback controlled magnetic drive for the ASDEX Upgrade fast-ion loss detectors. Review of Scientific Instruments, 2016, 87, 11E705.	0.6	8
44	Two dimensional versus three dimensional modelling in fretting fatigue life prediction. Journal of Strain Analysis for Engineering Design, 2016, 51, 109-117.	1.0	21
45	Histological evolution of the regenerate during bone transport: an experimental study in sheep. Injury, 2016, 47, S7-S14.	0.7	11
46	Model of the distraction callus tissue behavior during bone transport based in experiments in vivo. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 419-430.	1.5	20
47	Estimations of fatigue life and variability under random loading in aluminum Al-2024T351 using strip yield models from NASGRO. International Journal of Fatigue, 2016, 91, 414-422.	2.8	26
48	Analysis of initial crack path in fretting fatigue. Frattura Ed Integrita Strutturale, 2016, 10, 38-45.	0.5	3
49	Crack Density Evaluation in Carbon Fibre Reinforced Polymers Aged by Thermal Cycling. Praktische Metallographie/Practical Metallography, 2016, 53, 125-143.	0.1	0
50	A polynomial hyperelastic model for the mixture of fat and glandular tissue in female breast. International Journal for Numerical Methods in Biomedical Engineering, 2015, 31, e02723.	1.0	5
51	In Vivo Gait Analysis During Bone Transport. Annals of Biomedical Engineering, 2015, 43, 2090-2100.	1.3	21
52	On the Use of NASGRO Software to Estimate Fatigue Crack Growth under Variable Amplitude Loading in Aluminium Alloy 2024-T351. Procedia Engineering, 2015, 101, 302-311.	1.2	11
53	In Vivo Mechanical Characterization of the Distraction Callus During Bone Consolidation. Annals of Biomedical Engineering, 2015, 43, 2663-2674.	1.3	30
54	Distraction osteogenesis device to estimate the axial stiffness of the callus in Vivo. Medical Engineering and Physics, 2015, 37, 969-978.	0.8	21

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55	Comparison of two multiaxial fatigue models applied to dental implants. Frattura Ed Integrita Strutturale, 2015, 9, 415-426.	0.5	1
56	Fracture mechanics approach to fretting fatigue behaviour of coated aluminium alloy components. Journal of Strain Analysis for Engineering Design, 2014, 49, 66-75.	1.0	7
57	Biomechanical design of Less Invasive Stabilization System femoral plates: Computational evaluation of the fracture environment. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2014, 228, 1043-1052.	1.0	8
58	Life Assessment in Fretting Fatigue. Key Engineering Materials, 2014, 618, 99-122.	0.4	2
59	Explicit equations for the half-plane sub-surface stress field under a flat rounded contact. Journal of Strain Analysis for Engineering Design, 2014, 49, 562-570.	1.0	10
60	Effect of the model's geometry in fretting fatigue life prediction. Frattura Ed Integrita Strutturale, 2014, 8, 109-117.	0.5	1
61	Fatigue life estimation in dental implants. Engineering Fracture Mechanics, 2014, 123, 34-43.	2.0	25
62	3D vs. 2D fatigue crack initiation and propagation in notched plates. International Journal of Fatigue, 2014, 58, 40-46.	2.8	23
63	On the application of a micromechanical small fatigue crack growth model to predict fretting fatigue life in AA7075-T6 under spherical contact. Tribology International, 2014, 76, 6-13.	3.0	6
64	A model to predict fretting fatigue life including residual stresses. Theoretical and Applied Fracture Mechanics, 2014, 73, 144-151.	2.1	32
65	Effect of non-uniform thickness of samples in stress relaxation tests under unconfined compression of samples of articular discs. Journal of Biomechanics, 2014, 47, 1526-1530.	0.9	5
66	A bone remodelling model including the effect of damage on the steering of BMUs. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 32, 99-112.	1.5	18
67	Explicit equations for sub-surface stress field in plane contacts. International Journal of Mechanical Sciences, 2013, 67, 53-58.	3.6	8
68	Analysis of the effect of a textured surface on fretting fatigue. Wear, 2013, 305, 23-35.	1.5	31
69	Elastic–plastic analysis of a punch and its equivalent notch under fretting conditions. International Journal of Mechanical Sciences, 2013, 66, 120-131.	3. 6	4
70	Two-parameter fatigue crack growth driving force: Successive blocking of the monotonic and cyclic plastic zones at microstructural barriers. International Journal of Fatigue, 2013, 46, 27-34.	2.8	17
71	Analytical solution for a cylindrical contact with reverse slip. Journal of Strain Analysis for Engineering Design, 2013, 48, 189-197.	1.0	10
72	Numerical simulation of a relaxation test designed to fit a quasi-linear viscoelastic model for temporomandibular joint discs. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2013, 227, 190-199.	1.0	11

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73	In-Silico Models as a Tool for the Design of Specific Treatments: Applications in Bone Regeneration. Lecture Notes in Computational Vision and Biomechanics, 2012, , 1-17.	0.5	3
74	A new method for obtaining the stress field in plane contacts. International Journal of Solids and Structures, 2012, 49, 3659-3665.	1.3	16
75	A lattice-based approach to model distraction osteogenesis. Journal of Biomechanics, 2012, 45, 2736-2742.	0.9	13
76	Experimental results in fretting fatigue with shot and laser peened Al 7075-T651 specimens. International Journal of Fatigue, 2012, 40, 143-153.	2.8	70
77	Influence of the Initiation Length in Predictions of Life in Fretting Fatigue. Strain, 2011, 47, e283.	1.4	7
78	A general model to estimate life in notches and fretting fatigue. Engineering Fracture Mechanics, 2011, 78, 1590-1601.	2.0	50
79	Effect of porosity and mineral content on the elastic constants of cortical bone: a multiscale approach. Biomechanics and Modeling in Mechanobiology, 2011, 10, 309-322.	1.4	47
80	Three-Dimensional Simulation of Mandibular Distraction Osteogenesis: Mechanobiological Analysis. Annals of Biomedical Engineering, 2011, 39, 35-43.	1.3	20
81	Fretting fatigue life prediction using the extended finite element method. International Journal of Mechanical Sciences, 2011, 53, 217-225.	3.6	39
82	Effect of the fixator stiffness on the young regenerate bone after bone transport: Computational approach. Journal of Biomechanics, 2011, 44, 917-923.	0.9	26
83	Numerical simulation of bone remodelling around dental implants. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2011, 225, 897-906.	1.0	15
84	Biomechanical response of a mandible in a patient affected with hemifacial microsomia before and after distraction osteogenesis. Medical Engineering and Physics, 2010, 32, 860-866.	0.8	13
85	Growth mixture model of distraction osteogenesis: effect of pre-traction stresses. Biomechanics and Modeling in Mechanobiology, 2010, 9, 103-115.	1.4	34
86	Brittle fracture of a crane hook. Engineering Failure Analysis, 2010, 17, 38-47.	1.8	11
87	On the estimation of fatigue life in notches differentiating the phases of crack initiation and propagation. Fatigue and Fracture of Engineering Materials and Structures, 2010, 33, 22-36.	1.7	20
88	An Interspecies Computational Study on Limb Lengthening. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2010, 224, 1245-1256.	1.0	18
89	The mechanical behaviour of a symmetrical punch with compound curvature. Journal of Strain Analysis for Engineering Design, 2010, 45, 209-222.	1.0	8
90	Analysis of crack evolution in fretting fatigue with spherical contact. Journal of Strain Analysis for Engineering Design, 2009, 44, 503-515.	1.0	6

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91	A bone remodelling model including the directional activity of BMUs. Biomechanics and Modeling in Mechanobiology, 2009, 8, 111-127.	1.4	33
92	Modeling distraction osteogenesis: analysis of the distraction rate. Biomechanics and Modeling in Mechanobiology, 2009, 8, 323-335.	1.4	45
93	A micromechanical model for small fatigue crack growth: an approach based on two threshold conditions. Fatigue and Fracture of Engineering Materials and Structures, 2009, 32, 515-524.	1.7	19
94	Fatigue failure assessment under stress gradients using small crack fatigue concepts. Engineering Failure Analysis, 2009, 16, 2646-2657.	1.8	9
95	On the role of bone damage in calcium homeostasis. Journal of Theoretical Biology, 2008, 254, 704-712.	0.8	28
96	Three-dimensional formulation of rigid-flexible multibody systems with flexible beam elements. Multibody System Dynamics, 2008, 20, 1-28.	1.7	60
97	On the use of multiaxial fatigue criteria for fretting fatigue life assessment. International Journal of Fatigue, 2008, 30, 32-44.	2.8	118
98	On the estimation of microstructural effects in the near-threshold fatigue of small cracks. Journal of Strain Analysis for Engineering Design, 2008, 43, 337-347.	1.0	9
99	Formulation of Three-Dimensional Rigid-Flexible Multibody Systems. , 2007, , 1091.		0
100	Influence of R ratio and stick zone eccentricity on the prediction of the fretting fatigue limit with spherical contact. International Journal of Fatigue, 2007, 29, 1208-1219.	2.8	11
101	Characterization of the contact between a punch and a half-infinite substrate in a fretting situation. International Journal of Mechanical Sciences, 2007, 49, 608-621.	3.6	9
102	Application of fracture mechanics to estimate fretting fatigue endurance curves. Engineering Fracture Mechanics, 2007, 74, 2168-2186.	2.0	43
103	Numerical estimation of bone density and elastic constants distribution in a human mandible. Journal of Biomechanics, 2007, 40, 828-836.	0.9	72
104	Prediction of the crack extension under fretting wear loading conditions. International Journal of Fatigue, 2006, 28, 1769-1779.	2.8	32
105	Propagation in fretting fatigue from a surface defect. Tribology International, 2006, 39, 1149-1157.	3.0	36
106	Stability and Bifurcation Analysis of a Spinning Space Tether. Journal of Nonlinear Science, 2006, 16, 507-542.	1.0	11
107	Numerical and experimental analysis of fatigue crack growth under random loading. International Journal of Fatigue, 2005, 27, 878-890.	2.8	12
108	A micromechanical approach to fatigue in small notches*. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 1035-1045.	1.7	19

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109	Analysis of the elastic punch-substrate contact under fretting: Monotonic and cyclic loading of the punch. International Journal of Mechanical Sciences, 2005, 47, 388-417.	3.6	4
110	Stability and Bifurcation Analysis of a Modified Geometrically Nonlinear Orthotropic Jeffcott Model with Internal Damping. Nonlinear Dynamics, 2005, 42, 137-163.	2.7	5
111	An Internal Damping Model for the Absolute Nodal Coordinate Formulation. Nonlinear Dynamics, 2005, 42, 347-369.	2.7	82
112	Study of the Geometric Stiffening Effect: Comparison of Different Formulations. Multibody System Dynamics, 2004, 11, 321-341.	1.7	53
113	Efficient Evaluation of the Elastic Forces and the Jacobian in the Absolute Nodal Coordinate Formulation. Nonlinear Dynamics, 2004, 35, 313-329.	2.7	118
114	Initiation criteria in fretting fatigue with spherical contact. International Journal of Fatigue, 2004, 26, 1253-1262.	2.8	16
115	Predicting the fretting fatigue limit for spherical contact. Engineering Failure Analysis, 2004, 11, 727-736.	1.8	16
116	Dynamic Analysis of a Light Structure in Outer Space: Short Electrodynamic Tether. Multibody System Dynamics, 2003, 10, 125-146.	1.7	11
117	Describing Rigid-Flexible Multibody Systems Using Absolute Coordinates. Nonlinear Dynamics, 2003, 34, 75-94.	2.7	76
118	The influence of underlying tension on partial slip in complete and nearly complete contacts. International Journal of Mechanical Sciences, 2003, 45, 757-773.	3.6	11
119	Reference motion in deformable bodies under rigid body motion and vibration. Part I: theory. Journal of Sound and Vibration, 2003, 264, 1045-1056.	2.1	7
120	Reference motion in deformable bodies under rigid body motion and vibration. Part II: evaluation of the coefficient of restitution for impacts. Journal of Sound and Vibration, 2003, 264, 1057-1072.	2.1	5
121	An experimental analysis of fatigue crack growth under random loading. International Journal of Fatigue, 2003, 25, 597-608.	2.8	28
122	The effect of a corner radius on an asymptotic solution to the fretting of complete contacts including the plastic process zone. Fatigue and Fracture of Engineering Materials and Structures, 2003, 26, 223-228.	1.7	1
123	A procedure for estimating the total life in fretting fatigue. Fatigue and Fracture of Engineering Materials and Structures, 2003, 26, 459-468.	1.7	54
124	On the estimation of fatigue failure under fretting conditions using notch methodologies. Fatigue and Fracture of Engineering Materials and Structures, 2003, 26, 469-478.	1.7	38
125	Compact formulation for modelling cracks in infinite solids using distributed dislocations. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 81-92.	0.7	12
126	Fretting fatigue in a spherical contact. Journal of Strain Analysis for Engineering Design, 2002, 37, 469-478.	1.0	14

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127	Title is missing!. Multibody System Dynamics, 2002, 7, 209-228.	1.7	3
128	Fatigue crack growth threshold conditions at notches. Part I: theory. Fatigue and Fracture of Engineering Materials and Structures, 2000, 23, 113-121.	1.7	59
129	Fatigue crack growth threshold conditions at notches. Part II: generalization and application to experimental results. Fatigue and Fracture of Engineering Materials and Structures, 2000, 23, 123-128.	1.7	31
130	A new numerical method for the dynamic analysis of impact loads in flexible beams. Mechanism and Machine Theory, 1999, 34, 765-780.	2.7	9
131	A statistical model for fatigue crack growth under random loads including retardation effects. Engineering Fracture Mechanics, 1999, 62, 351-369.	2.0	22
132	Cyclic variations in friction forces and contact stresses during fretting fatigue. Wear, 1998, 218, 43-53.	1.5	29
133	ON THE USE OF THE STRIP-YIELD MODEL TO PREDICT FATIGUE CRACK GROWTH UNDER IRREGULAR LOADING. Fatigue and Fracture of Engineering Materials and Structures, 1997, 20, 759-770.	1.7	10
134	CALCULATION OF THE STRESS INTENSITY FACTOR AND ESTIMATION OF ITS ERROR BY A SHAPE SENSITIVITY ANALYSIS. Fatigue and Fracture of Engineering Materials and Structures, 1997, 20, 813-828.	1.7	11
135	Effect of load histories on scatter of fatigue crack growth in aluminum alloy 2024-T351. Engineering Fracture Mechanics, 1997, 56, 65-76.	2.0	17
136	Geometrically non-linear formulation of flexible multibody systems in terms of beam elements: Geometric stiffness. Computers and Structures, 1996, 59, 1039-1050.	2.4	38
137	THE RANDOMNESS OF FATIGUE CRACK GROWTH UNDER CONSTANT-AMPLITUDE LOADS. Fatigue and Fracture of Engineering Materials and Structures, 1996, 19, 589-600.	1.7	13
138	Geometrically Nonlinear Formulations of Beams in Flexible Multibody Dynamics. Journal of Vibration and Acoustics, Transactions of the ASME, 1995, 117, 501-509.	1.0	89
139	Fatigue crack growth under variable amplitude loading. , 1994, , 955-997.		7
140	Effect of the loading spectrum and history length on fatigue life distribution under random loading. Engineering Fracture Mechanics, 1992, 42, 925-933.	2.0	11
141	A statistical approach to fatigue life predictions under random loading. International Journal of Fatigue, 1990, 12, 107-114.	2.8	15
142	Parametric analysis of gravity offshore structures: Part 1. Applied Ocean Research, 1981, 3, 98-101.	1.8	0
143	Parametric analysis of gravity offshore structures: Part 2. Applied Ocean Research, 1981, 3, 101-104.	1.8	2
144	Selecci \tilde{A}^3 n de competencias en ciberseguridad para la formaci \tilde{A}^3 n en la industria de defensa. Colecci \tilde{A}^3 n Jornadas Y Congresos, $0, , .$	0.0	0

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145	Time-Dependent Collagen Fibered Structure in the Early Distraction Callus: Imaging Characterization and Mathematical Modeling. Annals of Biomedical Engineering, 0, , .	1.3	0