

# Andrés Sáez

## List of Publications by Year in descending order

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118  
papers

2,165  
citations

185998

28  
h-index

276539

41  
g-index

119  
all docs

119  
docs citations

119  
times ranked

1192  
citing authors

#	ARTICLE	IF	CITATIONS
1	Bending and free vibration analysis of functionally graded graphene vs. carbon nanotube reinforced composite plates. <i>Composite Structures</i> , 2018, 186, 123-138.	3.1	142
2	Recent Advances and Emerging Applications of the Boundary Element Method. <i>Applied Mechanics Reviews</i> , 2011, 64, .	4.5	121
3	Fracture of magneto-electroelastic composite materials using boundary element method (BEM). <i>Theoretical and Applied Fracture Mechanics</i> , 2007, 47, 192-204.	2.1	76
4	Anisotropic and piezoelectric materials fracture analysis by BEM. <i>Computers and Structures</i> , 2005, 83, 804-820.	2.4	72
5	Hypersingular quarter-point boundary elements for crack problems. <i>International Journal for Numerical Methods in Engineering</i> , 1995, 38, 1681-1701.	1.5	68
6	Buckling analysis of functionally graded carbon nanotube-reinforced curved panels under axial compression and shear. <i>Composites Part B: Engineering</i> , 2017, 108, 243-256.	5.9	64
7	Eshelby-Mori-Tanaka approach for post-buckling analysis of axially compressed functionally graded CNT/polymer composite cylindrical panels. <i>Composites Part B: Engineering</i> , 2017, 128, 208-224.	5.9	54
8	2-D transient dynamic analysis of cracked piezoelectric solids by a time-domain BEM. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 3108-3121.	3.4	52
9	3D mixed micromechanics-FEM modeling of piezoresistive carbon nanotube smart concrete. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2018, 340, 396-423.	3.4	52
10	Metamodel-based approach for stochastic free vibration analysis of functionally graded carbon nanotube reinforced plates. <i>Composite Structures</i> , 2016, 152, 183-198.	3.1	47
11	Three-dimensional Green's function and its derivative for materials with general anisotropic magneto-electro-elastic coupling. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010, 466, 515-537.	1.0	43
12	Fracture in magneto-electroelastic materials using the extended finite element method. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 88, 1238-1259.	1.5	40
13	A comparative study of three boundary element approaches to transient dynamic crack problems. <i>Engineering Analysis With Boundary Elements</i> , 1994, 13, 11-19.	2.0	39
14	Traction boundary elements for cracks in anisotropic solids. <i>Engineering Analysis With Boundary Elements</i> , 2004, 28, 667-676.	2.0	39
15	New anisotropic crack-tip enrichment functions for the extended finite element method. <i>Computational Mechanics</i> , 2012, 50, 591-601.	2.2	39
16	A two-dimensional time-domain boundary element method for dynamic crack problems in anisotropic solids. <i>Engineering Fracture Mechanics</i> , 2008, 75, 1412-1430.	2.0	36
17	A 2D time-domain collocation-Galerkin BEM for dynamic crack analysis in piezoelectric solids. <i>Engineering Analysis With Boundary Elements</i> , 2010, 34, 377-387.	2.0	36
18	BEM analysis of wave scattering in transversely isotropic solids. <i>International Journal for Numerical Methods in Engineering</i> , 1999, 44, 1283-1300.	1.5	35

#	ARTICLE	IF	CITATIONS
19	Three-dimensional fracture analysis in transversely isotropic solids. <i>Engineering Analysis With Boundary Elements</i> , 1997, 20, 287-298.	2.0	34
20	Structural safety assessment of geometrically complex masonry vaults by non-linear analysis. The Chapel of the W�rzburg Residence (Germany). <i>Engineering Structures</i> , 2017, 140, 1-13.	2.6	34
21	Hypersingular BEM for dynamic fracture in 2-D piezoelectric solids. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2006, 196, 235-246.	3.4	33
22	Time-harmonic Green's functions for anisotropic magnetoelasticity. <i>International Journal of Solids and Structures</i> , 2008, 45, 144-158.	1.3	32
23	Dynamic crack analysis in piezoelectric solids with non-linear electrical and mechanical boundary conditions by a time-domain BEM. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 2848-2858.	3.4	32
24	Vertical Crowd-Structure Interaction Model to Analyze the Change of the Modal Properties of a Footbridge. <i>Journal of Bridge Engineering</i> , 2016, 21, .	1.4	32
25	Analysis of cracked magnetoelastic composites under time-harmonic loading. <i>International Journal of Solids and Structures</i> , 2010, 47, 71-80.	1.3	31
26	Transient dynamic crack analysis in linear magnetoelastic solids by a hypersingular time-domain BEM. <i>European Journal of Mechanics, A/Solids</i> , 2012, 32, 118-130.	2.1	31
27	A singular element for three-dimensional fracture mechanics analysis. <i>Engineering Analysis With Boundary Elements</i> , 1997, 20, 275-285.	2.0	30
28	Two-dimensional time-harmonic BEM for cracked anisotropic solids. <i>Engineering Analysis With Boundary Elements</i> , 2006, 30, 88-99.	2.0	29
29	Dynamic 3D axisymmetric problems in continuously non-homogeneous piezoelectric solids. <i>International Journal of Solids and Structures</i> , 2008, 45, 4523-4542.	1.3	29
30	A high-order theory of a thermoelastic beams and its application to the MEMS/NEMS analysis and simulations. <i>Archive of Applied Mechanics</i> , 2016, 86, 1255-1272.	1.2	28
31	Indentation response of piezoelectric films under frictional contact. <i>International Journal of Engineering Science</i> , 2016, 107, 36-53.	2.7	27
32	Dual BEM analysis of different crack face boundary conditions in 2D magnetoelastic solids. <i>European Journal of Mechanics, A/Solids</i> , 2012, 31, 152-162.	2.1	25
33	Design of polymeric auxetic matrices for improved mechanical coupling in lead-free piezocomposites. <i>Smart Materials and Structures</i> , 2020, 29, 054002.	1.8	24
34	3D frictional contact of anisotropic solids using BEM. <i>European Journal of Mechanics, A/Solids</i> , 2011, 30, 95-104.	2.1	23
35	High-order theory for arched structures and its application for the study of the electrostatically actuated MEMS devices. <i>Archive of Applied Mechanics</i> , 2014, 84, 1037-1055.	1.2	23
36	CNT-polymer nanocomposites under frictional contact conditions. <i>Composites Part B: Engineering</i> , 2018, 154, 114-127.	5.9	22

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37	Improving the performance of lead-free piezoelectric composites by using polycrystalline inclusions and tuning the dielectric matrix environment. <i>Smart Materials and Structures</i> , 2019, 28, 075032.	1.8	22
38	A collaborative machine learning-optimization algorithm to improve the finite element model updating of civil engineering structures. <i>Engineering Structures</i> , 2020, 225, 111327.	2.6	22
39	Crack detection and localization in RC beams through smart MWCNT/epoxy strip-like strain sensors. <i>Smart Materials and Structures</i> , 2018, 27, 115022.	1.8	21
40	Lead-free piezocomposites with CNT-modified matrices: Accounting for agglomerations and molecular defects. <i>Composite Structures</i> , 2019, 224, 111033.	3.1	21
41	Finite-element-model updating of civil engineering structures using a hybrid UKF-HS algorithm. <i>Structure and Infrastructure Engineering</i> , 2021, 17, 620-637.	2.0	21
42	3D BEM for orthotropic frictional contact of piezoelectric bodies. <i>Computational Mechanics</i> , 2015, 56, 491-502.	2.2	20
43	3D coupled multifield magneto-electro-elastic contact modelling. <i>International Journal of Mechanical Sciences</i> , 2016, 114, 35-51.	3.6	19
44	Far field dynamic Green's functions for BEM in transversely isotropic solids. <i>Wave Motion</i> , 2000, 32, 113-123.	1.0	18
45	Dynamic crack problems in three-dimensional transversely isotropic solids. <i>Engineering Analysis With Boundary Elements</i> , 2001, 25, 203-210.	2.0	18
46	Design of lead-free PVDF/CNT/BaTiO <sub>3</sub> piezocomposites for sensing and energy harvesting: the role of polycrystallinity, nanoadditives, and anisotropy. <i>Smart Materials and Structures</i> , 2020, 29, 015021.	1.8	18
47	MWCNT/epoxy strip-like sensors for buckling detection in beam-like structures. <i>Thin-Walled Structures</i> , 2018, 133, 27-41.	2.7	17
48	Analysis of FRP composites under frictional contact conditions. <i>International Journal of Solids and Structures</i> , 2013, 50, 3947-3959.	1.3	16
49	3D explicit-BEM fracture analysis for materials with anisotropic multifield coupling. <i>Applied Mathematical Modelling</i> , 2016, 40, 2897-2912.	2.2	15
50	Dynamic crack analysis in piezoelectric solids under time-harmonic loadings with a symmetric Galerkin boundary element method. <i>Engineering Analysis With Boundary Elements</i> , 2017, 84, 141-153.	2.0	15
51	Robust Optimum Design of Tuned Mass Dampers to Mitigate Pedestrian-Induced Vibrations Using Multi-Objective Genetic Algorithms. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2017, 27, 492-501.	0.5	15
52	Dynamic analysis of interfacial crack problems in anisotropic bi-materials by a time-domain BEM. <i>Engineering Fracture Mechanics</i> , 2009, 76, 1996-2010.	2.0	14
53	Fracture analysis of plane piezoelectric/piezomagnetic multiphase composites under transient loading. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2011, 200, 2931-2942.	3.4	14
54	Design of nano-modified PVDF matrices for lead-free piezocomposites: Graphene vs carbon nanotube nano-additions. <i>Mechanics of Materials</i> , 2020, 142, 103275.	1.7	14

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55	On two hypersingular time-domain BEM for dynamic crack analysis in 2D anisotropic elastic solids. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009, 198, 2812-2824.	3.4	13
56	A direct pedestrian-structure interaction model to characterize the human induced vibrations on slender footbridges. <i>Informes De La Construccion</i> , 2014, 66, m007.	0.1	13
57	Dynamic crack interactions in magnetoelastoelectric composite materials. <i>International Journal of Fracture</i> , 2009, 157, 119-130.	1.1	12
58	Controlling the Human-Induced Longitudinal Vibrations of a Nielsen-Truss Footbridge Via the Modification of Its Natural Frequencies. <i>International Journal of Structural Stability and Dynamics</i> , 2017, 17, 1750061.	1.5	12
59	The influences of non-linear electrical, magnetic and mechanical boundary conditions on the dynamic intensity factors of magnetoelastoelectric solids. <i>Engineering Fracture Mechanics</i> , 2013, 97, 297-313.	2.0	11
60	Unique and Explicit Formulas for Green's Function in Three-Dimensional Anisotropic Linear Elasticity. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2013, 80, .	1.1	11
61	Multiple pole residue approach for 3D BEM analysis of mathematical degenerate and non-degenerate materials. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 86, 1125-1143.	1.5	10
62	Size dependent electro-elastic enhancement in geometrically anisotropic lead-free piezocomposites. <i>International Journal of Mechanical Sciences</i> , 2020, 182, 105745.	3.6	10
63	Crack identification in magnetoelastoelectric materials using neural networks, self-organizing algorithms and boundary element method. <i>Computers and Structures</i> , 2013, 125, 187-199.	2.4	9
64	Model Updating for the Selection of an Ancient Bridge Retrofitting Method in Almeria, Spain. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2016, 26, 17-26.	0.5	9
65	Crack-induced electrical resistivity changes in cracked CNT-reinforced composites. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 106, 102470.	2.1	9
66	Motion-Based Design of Passive Damping Devices to Mitigate Wind-Induced Vibrations in Stay Cables. <i>Vibration</i> , 2018, 1, 269-289.	0.9	8
67	Maximum Likelihood Finite-Element Model Updating of Civil Engineering Structures Using Nature-Inspired Computational Algorithms. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2021, 31, 326-338.	0.5	8
68	Multiscale design of nanoengineered matrices for lead-free piezocomposites: Improved performance via controlling auxeticity and anisotropy. <i>Composite Structures</i> , 2021, 255, 112909.	3.1	8
69	XFEM crack growth virtual monitoring in self-sensing CNT reinforced polymer nanocomposite plates using ANSYS. <i>Composite Structures</i> , 2022, 284, 115137.	3.1	8
70	Analysis of anisotropic Kirchhoff plates using a novel hypersingular BEM. <i>Computational Mechanics</i> , 2012, 49, 629-641.	2.2	7
71	A formalism for anisotropic heat transfer phenomena: Foundations and Green's functions. <i>International Journal of Heat and Mass Transfer</i> , 2014, 75, 399-409.	2.5	7
72	Control of structural intervention in the area of the Roman Theatre of Cadiz (Spain) by using non-destructive techniques. <i>Construction and Building Materials</i> , 2015, 101, 572-583.	3.2	7

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73	Crack-face frictional contact modelling in cracked piezoelectric materials. <i>Computational Mechanics</i> , 2019, 64, 1655-1667.	2.2	7
74	Advanced modeling of lead-free piezocomposites: The role of nonlocal and nonlinear effects. <i>Composite Structures</i> , 2020, 238, 111967.	3.1	7
75	Damage identification in multifield materials using neural networks. <i>Inverse Problems in Science and Engineering</i> , 2013, 21, 929-944.	1.2	6
76	Effect of Vinyl Flooring on the Modal Properties of a Steel Footbridge. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1374.	1.3	6
77	Lateral crowd-structure interaction model to analyse the change of the modal properties of footbridges. <i>Structural Control and Health Monitoring</i> , 2019, 26, e2356.	1.9	6
78	The Repair of the Structure of Santiago's Church (Jerez De La Frontera, Spain) Using Grout-Injection. <i>International Journal of Architectural Heritage</i> , 2019, 13, 1234-1251.	1.7	5
79	Buckling design of submerged arches via shape parameterization. <i>Computational and Mathematical Methods</i> , 2019, 1, e1057.	0.3	5
80	Analytical expressions to estimate the effective piezoelectric tensor of a textured polycrystal for any crystal symmetry. <i>Mechanics of Materials</i> , 2020, 151, 103604.	1.7	5
81	Motion-based design of vibrating civil engineering structures under uncertainty conditions. <i>Structural Concrete</i> , 2020, 21, 2339-2352.	1.5	5
82	Determining the Best Pareto-solution in a Multi-Objective Approach for Model Updating. <i>IABSE Symposium Report</i> , 2019, , .	0.0	5
83	La restauración del templo parroquial de San Dionisio (Jerez de la Frontera, España). La inyección como método de reparación de estructuras de fábrica. <i>Informes De La Construcción</i> , 2013, 65, 5-16.	0.1	5
84	Motion-based optimum design of a slender steel footbridge and assessment of its dynamic behaviour. <i>International Journal of Steel Structures</i> , 2017, 17, 1459-1470.	0.6	4
85	Motion-Based Design of Passive Damping Systems to Reduce Wind-Induced Vibrations of Stay Cables under Uncertainty Conditions. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 1740.	1.3	4
86	3-D Elastodynamic Green's Functions for BEM Applications to Anisotropic Solids. <i>Solid Mechanics and Its Applications</i> , 1995, , 307-320.	0.1	4
87	Boundary element analysis of the frictionless indentation of piezoelectric films. <i>European Journal of Computational Mechanics</i> , 2016, 25, 24-37.	0.6	3
88	Modal parameter identification of a spectator-grandstand interaction model under different rhythmic activities. <i>Advances in Structural Engineering</i> , 2019, 22, 2061-2075.	1.2	3
89	Parameter identification of the dynamic Winkler soil-structure interaction model using a hybrid unscented Kalman filter-multi-objective harmony search algorithm. <i>Advances in Structural Engineering</i> , 2020, 23, 2653-2668.	1.2	3
90	Assessment of ancient masonry slender towers under seismic loading: dynamic characterization of the Cuatrovitae tower. <i>WIT Transactions on the Built Environment</i> , 2009, , .	0.0	3

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91	Probabilistic Finite Element Model Updating of Civil Engineering Structures: A Comparative Study. , 2019, , .		2
92	Fracture Analysis of Magneto-electroelastic Composite Materials. Key Engineering Materials, 2007, 348-349, 69-72.	0.4	1
93	Damage Detection in Piezoceramics via BEM. Key Engineering Materials, 0, 417-418, 381-384.	0.4	1
94	Seismic Hazard and Nonlinear Dynamic Analyses: Avoiding Collapse in Architectural Heritage. Advanced Materials Research, 2010, 133-134, 591-596.	0.3	1
95	Semi-Permeable Cracks in Magneto-electroelastic Solids under Impact Loading. Key Engineering Materials, 0, 488-489, 751-754.	0.4	1
96	International conference on boundary element and meshless techniques XVI. European Journal of Computational Mechanics, 2016, 25, 1-1.	0.6	1
97	Quasistatic Electro-Elastic Contact Modeling Using the Boundary Element Method. Key Engineering Materials, 2016, 681, 185-196.	0.4	1
98	Recent Advances in the Serviceability Assessment of Footbridges Under Pedestrian-Induced Vibrations. , 2018, , .		1
99	A fast and non-degenerate scheme for the evaluation of the 3D fundamental solution and its derivatives for fully anisotropic magneto-electro-elastic materials. Engineering Analysis With Boundary Elements, 2019, 105, 94-103.	2.0	1
100	Crack Surface Frictional Contact Modeling in Fractured Fiber-Reinforced Composites. Journal of Multiscale Modeling, 2019, 10, 1841005.	1.0	1
101	Time-Domain BEM Analysis of Cracked Piezoelectric Solids under Impact Loading. , 2007, , 206-218.		1
102	A crowd-structure interaction model to analyze the lateral lock-in phenomenon on footbridges. International Journal of Computational Methods and Experimental Measurements, 2017, 6, 764-771.	0.1	1
103	Cracks in Magneto-electroelastic Solids under Impact Loading. Key Engineering Materials, 0, 417-418, 377-380.	0.4	0
104	Transient dynamic analysis of cracked magneto-electroelastic composites by a hypersingular time-domain BEM. Proceedings in Applied Mathematics and Mechanics, 2010, 10, 139-140.	0.2	0
105	Dynamic Crack Analysis in Layered Piezoelectric Composites under Time-Harmonic Loading. Key Engineering Materials, 0, 577-578, 449-452.	0.4	0
106	Transient Dynamic Analysis of Cracked Multi-field Solids with Consideration of Crack-Face Contact and Semi-Permeable Electric/Magnetic Boundary Conditions. Key Engineering Materials, 0, 618, 123-150.	0.4	0
107	Assessment of the Dynamic Behaviour of Palmas Altas Footbridge at Seville (Spain). , 2014, , .		0
108	Dynamic Crack Analysis in Functionally Graded Piezoelectric Materials by a Time-Domain BEM. Key Engineering Materials, 2016, 713, 342-345.	0.4	0

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109	A Dual BEM Formulation for Thermo-Magneto-Piezo-Electric 2D Fracture Problems. Key Engineering Materials, 2016, 713, 46-49.	0.4	0
110	Crack Surface Frictional Contact Modelling in Piezoelectric Materials. Key Engineering Materials, 2018, 774, 607-612.	0.4	0
111	Assessment of the deterioration of concrete structures using a finite element model. , 2018, , 235-260.		0
112	Piezoelectric and Magneto-electro-elastic Frictional Contact Modelling. Computational and Experimental Methods in Structures, 2018, , 357-396.	0.2	0
113	General traction BE formulation and implementation for 2-D anisotropic media. , 2001, , 449-451.		0
114	Structural consolidation of the Apostle Santiago's church in Jerez de la Frontera (Cádiz, Spain). , 2009, , .		0
115	A Hybrid UKF-MAG Algorithm for Finite Element Model Updating of Historical Constructions. , 2019, , .		0
116	Finite Element Model Updating of a Grandstand as Basis to Assess its Vibration Serviceability Limit State. , 2019, , .		0
117	An XFEM-based numerical scheme to compute crack-induced electrical resistivity changes in cracked CNT-reinforced composites using ANSYS. AIP Conference Proceedings, 2020, , .	0.3	0
118	Boundary Element Analysis of Wave Scattering in Transversely Isotropic Solids. , 0, , .		0