

# Andrés Sáez

## List of Publications by Year in descending order

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118  
papers

2,165  
citations

186209

28  
h-index

276775

41  
g-index

119  
all docs

119  
docs citations

119  
times ranked

1192  
citing authors

#	ARTICLE	IF	CITATIONS
1	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
2	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
3	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
4	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
5	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
6	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
7	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
8	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
9	Motion-based design of vibrating civil engineering structures under uncertainty conditions. <i>Structural Concrete</i> , 2020, 21, 2339-2352.	1.5	5
10	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
11	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
12	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
13	Crack-induced electrical resistivity changes in cracked CNT-reinforced composites. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 106, 102470.	2.1	9
14	Advanced modeling of lead-free piezocomposites: The role of nonlocal and nonlinear effects. <i>Composite Structures</i> , 2020, 238, 111967.	3.1	7
15	Size dependent electro-elastic enhancement in geometrically anisotropic lead-free piezocomposites. <i>International Journal of Mechanical Sciences</i> , 2020, 182, 105745.	3.6	10
16	An XFEM-based numerical scheme to compute crack-induced electrical resistivity changes in cracked CNT-reinforced composites using ANSYS. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	0
17	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
18	Buckling design of submerged arches via shape parameterization. <i>Computational and Mathematical Methods</i> , 2019, 1, e1057.	0.3	5

#	ARTICLE	IF	CITATIONS
19	Crack-face frictional contact modelling in cracked piezoelectric materials. Computational Mechanics, 2019, 64, 1655-1667.	2.2	7
20	Lead-free piezocomposites with CNT-modified matrices: Accounting for agglomerations and molecular defects. Composite Structures, 2019, 224, 111033.	3.1	21
21	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
22	Effect of Vinyl Flooring on the Modal Properties of a Steel Footbridge. Applied Sciences (Switzerland), 2019, 9, 1374.	1.3	6
23	Improving the performance of lead-free piezoelectric composites by using polycrystalline inclusions and tuning the dielectric matrix environment. Smart Materials and Structures, 2019, 28, 075032.	1.8	22
24	Crack Surface Frictional Contact Modeling in Fractured Fiber-Reinforced Composites. Journal of Multiscale Modeling, 2019, 10, 1841005.	1.0	1
25	Lateral crowd-structure interaction model to analyse the change of the modal properties of footbridges. Structural Control and Health Monitoring, 2019, 26, e2356.	1.9	6
26	Modal parameter identification of a spectator-grandstand interaction model under different rhythmic activities. Advances in Structural Engineering, 2019, 22, 2061-2075.	1.2	3
27	Determining the Best Pareto-solution in a Multi-Objective Approach for Model Updating. IABSE Symposium Report, 2019, , .	0.0	5
28	Probabilistic Finite Element Model Updating of Civil Engineering Structures: A Comparative Study. , 2019, , .		2
29	A Hybrid UKF-MAG Algorithm for Finite Element Model Updating of Historical Constructions. , 2019, , .		0
30	Finite Element Model Updating of a Grandstand as Basis to Assess its Vibration Serviceability Limit State. , 2019, , .		0
31	Bending and free vibration analysis of functionally graded graphene vs. carbon nanotube reinforced composite plates. Composite Structures, 2018, 186, 123-138.	3.1	142
32	Motion-Based Design of Passive Damping Devices to Mitigate Wind-Induced Vibrations in Stay Cables. Vibration, 2018, 1, 269-289.	0.9	8
33	Crack Surface Frictional Contact Modelling in Piezoelectric Materials. Key Engineering Materials, 2018, 774, 607-612.	0.4	0
34	Assessment of the deterioration of concrete structures using a finite element model. , 2018, , 235-260.		0
35	MWCNT/epoxy strip-like sensors for buckling detection in beam-like structures. Thin-Walled Structures, 2018, 133, 27-41.	2.7	17
36	Crack detection and localization in RC beams through smart MWCNT/epoxy strip-like strain sensors. Smart Materials and Structures, 2018, 27, 115022.	1.8	21

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37	Piezoelectric and Magneto-electro-elastic Frictional Contact Modelling. Computational and Experimental Methods in Structures, 2018, , 357-396.	0.2	0
38	Recent Advances in the Serviceability Assessment of Footbridges Under Pedestrian-Induced Vibrations. , 2018, , .		1
39	CNT-polymer nanocomposites under frictional contact conditions. Composites Part B: Engineering, 2018, 154, 114-127.	5.9	22
40	3D mixed micromechanics-FEM modeling of piezoresistive carbon nanotube smart concrete. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 396-423.	3.4	52
41	Structural safety assessment of geometrically complex masonry vaults by non-linear analysis. The Chapel of the WÄ¼rzburg Residence (Germany). Engineering Structures, 2017, 140, 1-13.	2.6	34
42	Dynamic crack analysis in piezoelectric solids under time-harmonic loadings with a symmetric Galerkin boundary element method. Engineering Analysis With Boundary Elements, 2017, 84, 141-153.	2.0	15
43	Eshelby-Mori-Tanaka approach for post-buckling analysis of axially compressed functionally graded CNT/polymer composite cylindrical panels. Composites Part B: Engineering, 2017, 128, 208-224.	5.9	54
44	Controlling the Human-Induced Longitudinal Vibrations of a Nielsen-Truss Footbridge Via the Modification of Its Natural Frequencies. International Journal of Structural Stability and Dynamics, 2017, 17, 1750061.	1.5	12
45	Buckling analysis of functionally graded carbon nanotube-reinforced curved panels under axial compression and shear. Composites Part B: Engineering, 2017, 108, 243-256.	5.9	64
46	Motion-based optimum design of a slender steel footbridge and assessment of its dynamic behaviour. International Journal of Steel Structures, 2017, 17, 1459-1470.	0.6	4
47	Robust Optimum Design of Tuned Mass Dampers to Mitigate Pedestrian-Induced Vibrations Using Multi-Objective Genetic Algorithms. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2017, 27, 492-501.	0.5	15
48	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
49	Dynamic Crack Analysis in Functionally Graded Piezoelectric Materials by a Time-Domain BEM. Key Engineering Materials, 2016, 713, 342-345.	0.4	0
50	Boundary element analysis of the frictionless indentation of piezoelectric films. European Journal of Computational Mechanics, 2016, 25, 24-37.	0.6	3
51	Metamodel-based approach for stochastic free vibration analysis of functionally graded carbon nanotube reinforced plates. Composite Structures, 2016, 152, 183-198.	3.1	47
52	3D explicit-BEM fracture analysis for materials with anisotropic multifield coupling. Applied Mathematical Modelling, 2016, 40, 2897-2912.	2.2	15
53	3D coupled multifield magneto-electro-elastic contact modelling. International Journal of Mechanical Sciences, 2016, 114, 35-51.	3.6	19
54	Indentation response of piezoelectric films under frictional contact. International Journal of Engineering Science, 2016, 107, 36-53.	2.7	27

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55	A Dual BEM Formulation for Thermo-Magneto-Piezo-Electric 2D Fracture Problems. Key Engineering Materials, 2016, 713, 46-49.	0.4	0
56	International conference on boundary element and meshless techniques XVI. European Journal of Computational Mechanics, 2016, 25, 1-1.	0.6	1
57	A high-order theory of a thermoelastic beams and its application to the MEMS/NEMS analysis and simulations. Archive of Applied Mechanics, 2016, 86, 1255-1272.	1.2	28
58	Model Updating for the Selection of an Ancient Bridge Retrofitting Method in Almeria, Spain. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2016, 26, 17-26.	0.5	9
59	Quasistatic Electro-Elastic Contact Modeling Using the Boundary Element Method. Key Engineering Materials, 2016, 681, 185-196.	0.4	1
60	Vertical Crowd-Structure Interaction Model to Analyze the Change of the Modal Properties of a Footbridge. Journal of Bridge Engineering, 2016, 21, .	1.4	32
61	Control of structural intervention in the area of the Roman Theatre of Cadiz (Spain) by using non-destructive techniques. Construction and Building Materials, 2015, 101, 572-583.	3.2	7
62	3D BEM for orthotropic frictional contact of piezoelectric bodies. Computational Mechanics, 2015, 56, 491-502.	2.2	20
63	High-order theory for arched structures and its application for the study of the electrostatically actuated MEMS devices. Archive of Applied Mechanics, 2014, 84, 1037-1055.	1.2	23
64	A formalism for anisotropic heat transfer phenomena: Foundations and Green's functions. International Journal of Heat and Mass Transfer, 2014, 75, 399-409.	2.5	7
65	Assessment of the Dynamic Behaviour of Palmas Altas Footbridge at Seville (Spain). , 2014, , .		0
66	A direct pedestrian-structure interaction model to characterize the human induced vibrations on slender footbridges. Informes De La Construccion, 2014, 66, m007.	0.1	13
67	The influences of non-linear electrical, magnetic and mechanical boundary conditions on the dynamic intensity factors of magneto-electroelastic solids. Engineering Fracture Mechanics, 2013, 97, 297-313.	2.0	11
68	Analysis of FRP composites under frictional contact conditions. International Journal of Solids and Structures, 2013, 50, 3947-3959.	1.3	16
69	Damage identification in multifield materials using neural networks. Inverse Problems in Science and Engineering, 2013, 21, 929-944.	1.2	6
70	Crack identification in magneto-electroelastic materials using neural networks, self-organizing algorithms and boundary element method. Computers and Structures, 2013, 125, 187-199.	2.4	9
71	Unique and Explicit Formulas for Green's Function in Three-Dimensional Anisotropic Linear Elasticity. Journal of Applied Mechanics, Transactions ASME, 2013, 80, .	1.1	11
72	La restauración del templo parroquial de San Dionisio (Jerez de la Frontera, España). La inyección como método de reparación de estructuras de fábrica. Informes De La Construccion, 2013, 65, 5-16.	0.1	5

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73	New anisotropic crack-tip enrichment functions for the extended finite element method. Computational Mechanics, 2012, 50, 591-601.	2.2	39
74	Analysis of anisotropic Kirchhoff plates using a novel hypersingular BEM. Computational Mechanics, 2012, 49, 629-641.	2.2	7
75	Transient dynamic crack analysis in linear magneto-electroelastic solids by a hypersingular time-domain BEM. European Journal of Mechanics, A/Solids, 2012, 32, 118-130.	2.1	31
76	Dual BEM analysis of different crack face boundary conditions in 2D magneto-electroelastic solids. European Journal of Mechanics, A/Solids, 2012, 31, 152-162.	2.1	25
77	Fracture analysis of plane piezoelectric/piezomagnetic multiphase composites under transient loading. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2931-2942.	3.4	14
78	Dynamic crack analysis in piezoelectric solids with non-linear electrical and mechanical boundary conditions by a time-domain BEM. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 2848-2858.	3.4	32
79	Multiple pole residue approach for 3D BEM analysis of mathematical degenerate and non-degenerate materials. International Journal for Numerical Methods in Engineering, 2011, 86, 1125-1143.	1.5	10
80	Fracture in magneto-electroelastic materials using the extended finite element method. International Journal for Numerical Methods in Engineering, 2011, 88, 1238-1259.	1.5	40
81	3D frictional contact of anisotropic solids using BEM. European Journal of Mechanics, A/Solids, 2011, 30, 95-104.	2.1	23
82	Recent Advances and Emerging Applications of the Boundary Element Method. Applied Mechanics Reviews, 2011, 64, .	4.5	121
83	A 2D time-domain collocation-Galerkin BEM for dynamic crack analysis in piezoelectric solids. Engineering Analysis With Boundary Elements, 2010, 34, 377-387.	2.0	36
84	Analysis of cracked magneto-electroelastic composites under time-harmonic loading. International Journal of Solids and Structures, 2010, 47, 71-80.	1.3	31
85	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
86	Seismic Hazard and Nonlinear Dynamic Analyses: Avoiding Collapse in Architectural Heritage. Advanced Materials Research, 2010, 133-134, 591-596.	0.3	1
87	Three-dimensional Green's function and its derivative for materials with general anisotropic magneto-electro-elastic coupling. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2010, 466, 515-537.	1.0	43
88	On two hypersingular time-domain BEM for dynamic crack analysis in 2D anisotropic elastic solids. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 2812-2824.	3.4	13
89	Dynamic analysis of interfacial crack problems in anisotropic bi-materials by a time-domain BEM. Engineering Fracture Mechanics, 2009, 76, 1996-2010.	2.0	14
90	Dynamic crack interactions in magneto-electroelastic composite materials. International Journal of Fracture, 2009, 157, 119-130.	1.1	12

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91	Assessment of ancient masonry slender towers under seismic loading: dynamic characterization of the Cuatrovititas tower. WIT Transactions on the Built Environment, 2009, , .	0.0	3
92	Structural consolidation of the Apostle Santiago's church in Jerez de la Frontera (Cádiz, Spain). , 2009, , .		0
93	2-D transient dynamic analysis of cracked piezoelectric solids by a time-domain BEM. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 3108-3121.	3.4	52
94	Time-harmonic Green's functions for anisotropic magnetoelastoelectricity. International Journal of Solids and Structures, 2008, 45, 144-158.	1.3	32
95	Dynamic 3D axisymmetric problems in continuously non-homogeneous piezoelectric solids. International Journal of Solids and Structures, 2008, 45, 4523-4542.	1.3	29
96	A two-dimensional time-domain boundary element method for dynamic crack problems in anisotropic solids. Engineering Fracture Mechanics, 2008, 75, 1412-1430.	2.0	36
97	Fracture Analysis of Magnetoelastoelectric Composite Materials. Key Engineering Materials, 2007, 348-349, 69-72.	0.4	1
98	Fracture of magnetoelastoelectric composite materials using boundary element method (BEM). Theoretical and Applied Fracture Mechanics, 2007, 47, 192-204.	2.1	76
99	Time-Domain BEM Analysis of Cracked Piezoelectric Solids under Impact Loading. , 2007, , 206-218.		1
100	Two-dimensional time-harmonic BEM for cracked anisotropic solids. Engineering Analysis With Boundary Elements, 2006, 30, 88-99.	2.0	29
101	Hypersingular BEM for dynamic fracture in 2-D piezoelectric solids. Computer Methods in Applied Mechanics and Engineering, 2006, 196, 235-246.	3.4	33
102	Anisotropic and piezoelectric materials fracture analysis by BEM. Computers and Structures, 2005, 83, 804-820.	2.4	72
103	Traction boundary elements for cracks in anisotropic solids. Engineering Analysis With Boundary Elements, 2004, 28, 667-676.	2.0	39
104	Dynamic crack problems in three-dimensional transversely isotropic solids. Engineering Analysis With Boundary Elements, 2001, 25, 203-210.	2.0	18
105	General traction BE formulation and implementation for 2-D anisotropic media. , 2001, , 449-451.		0
106	Far field dynamic Green's functions for BEM in transversely isotropic solids. Wave Motion, 2000, 32, 113-123.	1.0	18
107	BEM analysis of wave scattering in transversely isotropic solids. International Journal for Numerical Methods in Engineering, 1999, 44, 1283-1300.	1.5	35
108	A singular element for three-dimensional fracture mechanics analysis. Engineering Analysis With Boundary Elements, 1997, 20, 275-285.	2.0	30

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109	Three-dimensional fracture analysis in transversely isotropic solids. <i>Engineering Analysis With Boundary Elements</i> , 1997, 20, 287-298.	2.0	34
110	Hypersingular quarter-point boundary elements for crack problems. <i>International Journal for Numerical Methods in Engineering</i> , 1995, 38, 1681-1701.	1.5	68
111	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
112	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
113	Cracks in Magnetoelastoelectric Solids under Impact Loading. <i>Key Engineering Materials</i> , 0, 417-418, 377-380.	0.4	0
114	Damage Detection in Piezoceramics via BEM. <i>Key Engineering Materials</i> , 0, 417-418, 381-384.	0.4	1
115	Semi-Permeable Cracks in Magnetoelastoelectric Solids under Impact Loading. <i>Key Engineering Materials</i> , 0, 488-489, 751-754.	0.4	1
116	Dynamic Crack Analysis in Layered Piezoelectric Composites under Time-Harmonic Loading. <i>Key Engineering Materials</i> , 0, 577-578, 449-452.	0.4	0
117	Transient Dynamic Analysis of Cracked Multi-field Solids with Consideration of Crack-Face Contact and Semi-Permeable Electric/Magnetic Boundary Conditions. <i>Key Engineering Materials</i> , 0, 618, 123-150.	0.4	0
118	Boundary Element Analysis of Wave Scattering in Transversely Isotropic Solids. , 0, , .		0