

David P Thambiratnam

List of Publications by Year in descending order

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148
papers

3,825
citations

147786

31
h-index

155644

55
g-index

150
all docs

150
docs citations

150
times ranked

2389
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic computer simulation and energy absorption of foam-filled conical tubes under axial impact loading. Computers and Structures, 2009, 87, 186-197.	4.4	176
2	Dynamic energy absorption characteristics of foam-filled conical tubes under oblique impact loading. International Journal of Impact Engineering, 2010, 37, 475-488.	5.0	165
3	Dynamic simulation and energy absorption of tapered thin-walled tubes under oblique impact loading. International Journal of Impact Engineering, 2006, 32, 1595-1620.	5.0	156
4	Numerical simulation of axially loaded concrete columns under transverse impact and vulnerability assessment. International Journal of Impact Engineering, 2010, 37, 1100-1112.	5.0	153
5	A numerical study on the impact response and energy absorption of tapered thin-walled tubes. International Journal of Mechanical Sciences, 2004, 46, 201-216.	6.7	141
6	Computer simulation and energy absorption of tapered thin-walled rectangular tubes. Thin-Walled Structures, 2005, 43, 1225-1242.	5.3	141
7	DYNAMIC ANALYSIS OF BEAMS ON AN ELASTIC FOUNDATION SUBJECTED TO MOVING LOADS. Journal of Sound and Vibration, 1996, 198, 149-169.	3.9	135
8	Vibration based structural damage detection in flexural members using multi-criteria approach. Journal of Sound and Vibration, 2009, 323, 645-661.	3.9	121
9	Frequency response function based damage identification using principal component analysis and pattern recognition technique. Engineering Structures, 2014, 66, 116-128.	5.3	113
10	Structural damage detection method using frequency response functions. Structural Health Monitoring, 2014, 13, 418-429.	7.5	102
11	Blast and residual capacity analysis of reinforced concrete framed buildings. Engineering Structures, 2011, 33, 3483-3495.	5.3	91
12	Dynamic Response of Plates on Elastic Foundation to Moving Loads. Journal of Engineering Mechanics - ASCE, 2002, 128, 1016-1022.	2.9	69
13	Free vibration analysis of beams on elastic foundation. Computers and Structures, 1996, 60, 971-980.	4.4	68
14	Cyclic behaviour of concrete filled steel tubular column to steel beam connections. Engineering Structures, 2002, 24, 29-38.	5.3	67
15	Vibration characteristics and damage detection in a suspension bridge. Journal of Sound and Vibration, 2016, 375, 254-274.	3.9	64
16	Deflection response of plate on Winkler foundation to moving accelerated loads. Engineering Structures, 2001, 23, 1134-1141.	5.3	61
17	Base Plates Under Axial Loads and Moments. Journal of Structural Engineering, 1986, 112, 1166-1181.	3.4	56
18	Blast Response of Segmented Bored Tunnel using Coupled SPH-FE Method. Structures, 2015, 2, 58-71.	3.6	56

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19	Dynamic characteristics of steel-deck composite floors under human-induced loads. <i>Computers and Structures</i> , 2009, 87, 1067-1076.	4.4	51
20	Dynamic simulation of train-truck collision at level crossings. <i>Vehicle System Dynamics</i> , 2017, 55, 1-22.	3.7	49
21	Lateral impact derailment mechanisms, simulation and analysis. <i>International Journal of Impact Engineering</i> , 2016, 94, 36-49.	5.0	48
22	Correlation-Based Damage Detection for Complicated Truss Bridges Using Multi-Layer Genetic Algorithm. <i>Advances in Structural Engineering</i> , 2012, 15, 693-706.	2.4	46
23	Damage detection in steel-concrete composite bridge using vibration characteristics and artificial neural network. <i>Structure and Infrastructure Engineering</i> , 2020, 16, 1247-1261.	3.7	45
24	Influence of damping systems on building structures subject to seismic effects. <i>Engineering Structures</i> , 2004, 26, 1939-1956.	5.3	44
25	Blast response and safety evaluation of a composite column for use as key element in structural systems. <i>Engineering Structures</i> , 2014, 61, 31-43.	5.3	44
26	Damage detection in slab-on-girder bridges using vibration characteristics. <i>Structural Control and Health Monitoring</i> , 2013, 20, 1271-1290.	4.0	43
27	Dynamic response of twin circular tunnels due to incident SH-waves. <i>Earthquake Engineering and Structural Dynamics</i> , 1984, 12, 181-201.	4.4	41
28	Differential axial shortening and its effects in high rise buildings with composite concrete filled tube columns. <i>Construction and Building Materials</i> , 2017, 143, 659-672.	7.2	41
29	A numerical method to quantify differential axial shortening in concrete buildings. <i>Engineering Structures</i> , 2010, 32, 2310-2317.	5.3	40
30	Dynamic response of the train-track-bridge system subjected to derailment impacts. <i>Vehicle System Dynamics</i> , 2018, 56, 638-657.	3.7	40
31	Development of a cost-effective and flexible vibration DAQ system for long-term continuous structural health monitoring. <i>Mechanical Systems and Signal Processing</i> , 2015, 64-65, 313-324.	8.0	38
32	Blast response and failure analysis of pile foundations subjected to surface explosion. <i>Engineering Failure Analysis</i> , 2014, 39, 41-54.	4.0	33
33	Numerical investigation of CFRP strengthened RHS members under cyclic loading. <i>Structures</i> , 2020, 24, 610-626.	3.6	33
34	Seismic mitigation of steel modular building structures through innovative inter-modular connections. <i>Heliyon</i> , 2019, 5, e02751.	3.2	32
35	Performance and design of steel structures reinforced with FRP composites: A state-of-the-art review. <i>Engineering Failure Analysis</i> , 2022, 138, 106371.	4.0	32
36	Very sensitive fiber Bragg grating accelerometer using transverse forces with an easy over-range protection and low cross axial sensitivity. <i>Applied Optics</i> , 2013, 52, 6401.	1.8	31

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37	Behaviour of CFRP strengthened CHS members under monotonic and cyclic loading. Composite Structures, 2019, 220, 592-601.	5.8	28
38	FRP strengthened SHS beam-column connection under monotonic and large-deformation cyclic loading. Thin-Walled Structures, 2021, 161, 107518.	5.3	28
39	Dynamic performance characteristics of an innovative Hybrid Composite Floor Plate System under human-induced loads. Composite Structures, 2013, 96, 590-600.	5.8	27
40	Controlled Monte Carlo data generation for statistical damage identification employing Mahalanobis squared distance. Structural Health Monitoring, 2014, 13, 461-472.	7.5	27
41	Structural damage identification based on change in geometric modal strain energyâ€“eigenvalue ratio. Smart Materials and Structures, 2016, 25, 075032.	3.5	26
42	Vibration characteristics of shallow suspension bridge with pre-tensioned cables. Engineering Structures, 2005, 27, 1220-1233.	5.3	25
43	Field validation of controlled Monte Carlo data generation for statistical damage identification employing Mahalanobis squared distance. Structural Health Monitoring, 2014, 13, 473-488.	7.5	25
44	Performance of Buried Tunnels Subjected to Surface Blast Incorporating Fluid-Structure Interaction. Journal of Performance of Constructed Facilities, 2015, 29, .	2.0	25
45	Damage detection in a suspension bridge using modal flexibility method. Engineering Failure Analysis, 2020, 107, 104194.	4.0	25
46	Identification of acoustic emission wave modes for accurate source location in plate-like structures. Structural Control and Health Monitoring, 2012, 19, 187-198.	4.0	24
47	Reliability-based load-carrying capacity assessment of bridges using structural health monitoring and nonlinear analysis. Structural Health Monitoring, 2019, 18, 20-34.	7.5	24
48	Impact behaviour of carbon fibre reinforced polymer (CFRP) strengthened square hollow steel tubes: A numerical simulation. Thin-Walled Structures, 2018, 131, 245-257.	5.3	23
49	Soil-pile-superstructure interaction effects in seismically isolated bridges under combined vertical and horizontal strong ground motions. Soil Dynamics and Earthquake Engineering, 2019, 126, 105753.	3.8	23
50	Seismic fragility assessment of nonstructural components in unreinforced clay brick masonry buildings. Earthquake Engineering and Structural Dynamics, 2020, 49, 285-300.	4.4	23
51	Development of a vibration based method to update axial shortening of vertical load bearing elements in reinforced concrete buildings. Engineering Structures, 2013, 46, 49-61.	5.3	22
52	Flexural performance of an innovative Hybrid Composite Floor Plate System comprising Glassâ€“fibre Reinforced Cement, Polyurethane and steel laminate. Composite Structures, 2013, 95, 179-190.	5.8	21
53	Interaction of geometry and mechanical property of trapezoidal sedimentary basins with incident SH waves. Bulletin of Earthquake Engineering, 2016, 14, 2977-3002.	4.1	21
54	Deterioration assessment of buildings using an improved hybrid model updating approach and long-term health monitoring data. Structural Health Monitoring, 2019, 18, 5-19.	7.5	21

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55	Monotonic behaviour of composite column to beam connections. <i>Engineering Structures</i> , 2001, 23, 1152-1161.	5.3	19
56	Finite Element Analysis of Track Structures. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2008, 8, 467-476.	9.8	18
57	Response of segmented bored transit tunnels to surface blast. <i>Advances in Engineering Software</i> , 2015, 89, 77-89.	3.8	18
58	Vibration based baseline updating method to localize crack formation and propagation in reinforced concrete members. <i>Journal of Sound and Vibration</i> , 2015, 344, 258-276.	3.9	18
59	Axisymmetric free vibration analysis of conical shells. <i>Engineering Structures</i> , 1993, 15, 83-89.	5.3	17
60	Dynamic Response of a Rollover Protective Structure. <i>Computer-Aided Civil and Infrastructure Engineering</i> , 2008, 23, 448-464.	9.8	17
61	Fiber Bragg grating strain modulation based on nonlinear string transverse-force amplifier. <i>Optics Letters</i> , 2013, 38, 311.	3.3	17
62	Vibration-based dual-criteria approach for damage detection in arch bridges. <i>Structural Health Monitoring</i> , 2019, 18, 2004-2019.	7.5	17
63	Geometrically modified auxetic polyurethane foams and their potential application in impact mitigation of masonry structures. <i>Construction and Building Materials</i> , 2021, 311, 125170.	7.2	17
64	Dynamic performance of slender suspension footbridges under eccentric walking dynamic loads. <i>Journal of Sound and Vibration</i> , 2007, 303, 239-254.	3.9	16
65	Study on the cyclic bending behaviour of CFRP strengthened full-scale CHS members. <i>Structures</i> , 2020, 28, 741-756.	3.6	16
66	Structural health monitoring of bridges using acoustic emission technology. , 2009, , .		15
67	An extended probabilistic demand model with optimal intensity measures for seismic performance characterization of isolated bridges under coupled horizontal and vertical motions. <i>Bulletin of Earthquake Engineering</i> , 2021, 19, 2291-2323.	4.1	15
68	Performance of FRP strengthened full-scale simply-supported circular hollow steel members under monotonic and large-displacement cyclic loading. <i>Engineering Structures</i> , 2021, 242, 112522.	5.3	15
69	Structural behaviour of CFRP strengthened beam-column connections under monotonic and cyclic loading. <i>Structures</i> , 2021, 33, 2689-2699.	3.6	15
70	Computer analysis of column base plates. <i>Computers and Structures</i> , 1989, 33, 839-850.	4.4	14
71	Biaxial Fiber Bragg Grating Accelerometer Using Axial and Transverse Forces. <i>IEEE Photonics Technology Letters</i> , 2014, 26, 1549-1552.	2.5	14
72	Fluid-structure interaction analysis of full scale vehicle-barrier impact using coupled SPH-FEA. <i>Engineering Analysis With Boundary Elements</i> , 2014, 42, 26-36.	3.7	14

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73	Damage identification in a complex truss structure using modal characteristics correlation method and sensitivity-weighted search space. <i>Structural Health Monitoring</i> , 2019, 18, 49-65.	7.5	14
74	Investigation on the behaviour of CFRP strengthened CHS members under monotonic loading through finite element modelling. <i>Structures</i> , 2020, 28, 297-308.	3.6	14
75	Analysis of buckling failure in continuously welded railway tracks. <i>Engineering Failure Analysis</i> , 2021, 119, 104989.	4.0	14
76	Minimum weight design of conical concrete water tanks. <i>Computers and Structures</i> , 1988, 29, 699-704.	4.4	13
77	Finite element analysis of column base plates. <i>Computers and Structures</i> , 1990, 34, 215-223.	4.4	13
78	Microcomputer analysis of torsionally coupled multistorey buildings – I. Shear beam model. <i>Computers and Structures</i> , 1989, 32, 1175-1182.	4.4	12
79	Simplified procedure for seismic analysis of asymmetric buildings. <i>Computers and Structures</i> , 2001, 79, 2833-2845.	4.4	12
80	Blast Response and Failure Analysis of a Segmented Buried Tunnel. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2015, 25, 419-431.	0.8	12
81	Human Activity-Induced Vibration in Slender Structural Systems. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2012, 22, 238-245.	0.8	11
82	Structural Deterioration Detection Using Enhanced Autoregressive Residuals. <i>International Journal of Structural Stability and Dynamics</i> , 2018, 18, 1850160.	2.4	11
83	Thermal challenges of replacing jointed rails with CWR on steel railway bridges. <i>Journal of Constructional Steel Research</i> , 2021, 181, 106627.	3.9	11
84	Soil – Pile Interaction of Pile Embedded in Deep-Layered Marine Sediment under Seismic Excitation. <i>Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE)</i> , 2014, 24, 521-531.	0.8	10
85	Method development of damage detection in asymmetric buildings. <i>Journal of Sound and Vibration</i> , 2018, 413, 41-56.	3.9	10
86	Use of artificial neural network to evaluate the vibration mitigation performance of geofoam-filled trenches. <i>Soils and Foundations</i> , 2019, 59, 874-887.	3.1	10
87	Seismic Aggravation in Shallow Basins in Addition to One-dimensional Site Amplification. <i>Journal of Earthquake Engineering</i> , 2020, 24, 1477-1499.	2.5	10
88	Transient Response of Beam Under Initial Stress. <i>Journal of Engineering Mechanics - ASCE</i> , 1984, 110, 1544-1555.	2.9	9
89	Experimental verification of the modified spring-mass theory of fiber Bragg grating accelerometers using transverse forces. <i>Applied Optics</i> , 2014, 53, 1200.	1.8	9
90	Design Guidance for Blast-Resistant Glazing. <i>Journal of Architectural Engineering</i> , 2015, 21, .	1.6	9

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91	Response of sedimentary basin to obliquely incident SH waves. Bulletin of Earthquake Engineering, 2016, 14, 647-671.	4.1	9
92	Inherent Characteristics of 2D Alluvial Formations Subjected to In-Plane Motion. Journal of Earthquake Engineering, 2019, 23, 1512-1530.	2.5	9
93	OPTIMUM DESIGN OF BEAMS IN MULTI-STOREY STEEL FRAMES USING THE LRFD CRITERIA. Engineering Optimization, 1985, 9, 21-36.	2.6	8
94	Effective Discrimination of Acoustic Emission Source Signals for Structural Health Monitoring. Advances in Structural Engineering, 2012, 15, 707-716.	2.4	8
95	Effect of joint mechanism on vehicle redirection capability of water-filled road safety barrier systems. Accident Analysis and Prevention, 2014, 71, 60-71.	5.7	8
96	Fiber Bragg grating accelerometer based on a transversely rotating stick. Optik, 2015, 126, 4337-4341.	2.9	8
97	Numerical Investigation on the CFRP Strengthened Steel Frame under Earthquake. Materials Science Forum, 0, 995, 123-129.	0.3	8
98	Damage assessment in hyperbolic cooling towers using mode shape curvature and artificial neural networks. Engineering Failure Analysis, 2021, 129, 105728.	4.0	8
99	Minimum weight design of cylindrical water tanks. International Journal for Numerical Methods in Engineering, 1986, 23, 1679-1691.	2.8	7
100	Quantifying the edge-induced seismic aggravation in shallow basins relative to the 1D SH modelling. Soil Dynamics and Earthquake Engineering, 2018, 115, 402-412.	3.8	7
101	Effect of shape of concrete sleepers for mitigating of track buckling. Construction and Building Materials, 2021, 294, 123568.	7.2	7
102	Synergic identification of prestress force and moving load on prestressed concrete beam based on virtual distortion method. Smart Structures and Systems, 2016, 17, 917-933.	1.9	7
103	MAXIMIZATION OF NATURAL FREQUENCIES OF CYLINDRICAL SHELLS. Engineering Optimization, 1988, 13, 85-97.	2.6	6
104	Bef analogy for axisymmetrically loaded cylindrical shells. Computers and Structures, 1990, 34, 281-285.	4.4	6
105	Effects of asymmetry on the response of multistorey buildings to earthquakes. Engineering Structures, 1994, 16, 210-221.	5.3	6
106	Assessment of road-rail crossing collision derailments on curved tracks. Australian Journal of Structural Engineering, 2017, 18, 125-134.	1.1	6
107	Modelling techniques for structural evaluation for bridge assessment. Journal of Civil Structural Health Monitoring, 2018, 8, 271-283.	3.9	6
108	Coupled Horizontal and Vertical Component Analysis of Strong Ground Motions for Soil-Structure Systems: Application to a Bridge Pier with Soil-Structure Interaction. Journal of Earthquake Engineering, 2021, 25, 2202-2230.	2.5	6

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109	Performance of protective concrete runway pavement under aircraft impact loading. <i>Structure and Infrastructure Engineering</i> , 2020, 16, 1698-1710.	3.7	6
110	Synthetic Rating Procedures for Railway Bridges. <i>Journal of Bridge Engineering</i> , 2014, 19, 04014052.	2.9	5
111	Load deformation characteristics of shallow suspension footbridge with reverse profiled pre-tensioned cables. <i>Structural Engineering and Mechanics</i> , 2005, 21, 375-392.	1.0	5
112	Performance of CFRP strengthened full-scale SHS connections subjected to cyclic loading. <i>Thin-Walled Structures</i> , 2022, 175, 109211.	5.3	5
113	Optimal shapes of cylindrical concrete water tanks. <i>Computers and Structures</i> , 1987, 26, 805-810.	4.4	4
114	Health Monitoring of Buildings during Construction and Service Stages Using Vibration Characteristics. <i>Advances in Structural Engineering</i> , 2012, 15, 717-726.	2.4	4
115	Dynamics of Tire Crossing on a Gapped Road Surface. <i>Journal of Engineering Mechanics - ASCE</i> , 2018, 144, 04018013.	2.9	4
116	Damage detection of an innovative composite slab-girder pedestrian bridge using vibration characteristics. <i>Structure and Infrastructure Engineering</i> , 2022, 18, 807-823.	3.7	4
117	Lateral stability of CWR tracks in transition zones of open-deck steel bridges. <i>Structures</i> , 2021, 33, 897-915.	3.6	4
118	Condition monitoring and rating of bridge components in a rail or road network by using SHM systems within SRP. <i>Structural Monitoring and Maintenance</i> , 2015, 2, 199-211.	1.7	4
119	Maximum amplification of a string transverse-force amplifier in fiber Bragg grating accelerometers. <i>OSA Continuum</i> , 2019, 2, 938.	1.8	4
120	Dynamic Interaction of Inclusion-Soil-Foundation System. <i>Journal of Engineering Mechanics - ASCE</i> , 1984, 110, 252-272.	2.9	3
121	Structural Deterioration Localization Using Enhanced Autoregressive Time-Series Analysis. <i>International Journal of Structural Stability and Dynamics</i> , 2020, 20, 2042013.	2.4	3
122	Numerical study of pedestrian suspension bridge with innovative composite deck. <i>Heliyon</i> , 2020, 6, e04473.	3.2	3
123	Transition Zones of Steel Bridges as Hotspots for Track Buckling. <i>Journal of Performance of Constructed Facilities</i> , 2021, 35, .	2.0	3
124	Experimental and numerical evaluation of the compression behaviour of GFRP-wrapped infill materials. <i>Case Studies in Construction Materials</i> , 2021, 15, e00654.	1.7	3
125	Use of vibration characteristics to predict the axial deformation of columns. <i>Structural Engineering and Mechanics</i> , 2014, 50, 73-88.	1.0	3
126	Mitigation of track buckling in transition zones of steel bridges by geotextile reinforcement of the ballast layer. <i>Geotextiles and Geomembranes</i> , 2022, 50, 282-292.	4.6	3

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127	Transient waves in a rod subjected to impulsive end loading. Earthquake Engineering and Structural Dynamics, 1986, 14, 475-485.	4.4	2
128	Optimum design of conical shells for free vibration. Computers and Structures, 1988, 29, 133-140.	4.4	2
129	Coupling coefficient and lateral vibration of slender suspension footbridges. Computers and Structures, 2008, 86, 27-37.	4.4	2
130	Influence of Modal Mass Participation in Damage Detection of Cable Structures. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2016, 26, 301-311.	0.8	2
131	Structural performance evaluation of innovative composite pedestrian arch bridge. Structure and Infrastructure Engineering, 2021, 17, 74-85.	3.7	2
132	Effects of Wheel Defects on Dynamic Track Buckling in Transition Zones of Open-Deck Steel Bridges. Journal of Performance of Constructed Facilities, 2021, 35, 04021066.	2.0	2
133	Effects of modelling on the earthquake response of asymmetrical multistory buildings. Structural Engineering and Mechanics, 1994, 2, 211-225.	1.0	2
134	A new look at the restrictions on the speed and magnitude of train loads for bridge management. Structural Engineering and Mechanics, 2015, 53, 89-104.	1.0	2
135	Propagation of Axisymmetric Transients in a Rod. Journal of Engineering Mechanics - ASCE, 1987, 113, 843-860.	2.9	1
136	Scattering of plane SH-waves by underground cavities. Engineering Structures, 1990, 12, 215-221.	5.3	1
137	Response of Unreinforced Brick Masonry Wall Structures to Lateral Loads. , 2001, , 419-425.		1
138	Quantifying in-plane deformation of plate elements using vibration characteristics. Journal of Sound and Vibration, 2011, 330, 6407-6419.	3.9	1
139	Inclusion of Tapered Tubes in Enhancing the Crash Performance of Automotive Frontal Structures. Key Engineering Materials, 2013, 553, 1-6.	0.4	1
140	Significance of Structural Dynamics in Engineering Education in the New Millennium. International Journal of Quality Assurance in Engineering and Technology Education, 2014, 3, 28-42.	0.1	1
141	Effect of Soil Properties on the Response of Pile to Underground Explosion. Structural Engineering International: Journal of the International Association for Bridge and Structural Engineering (IABSE), 2014, 24, 361-370.	0.8	1
142	Structural Complexity in Structural Health Monitoring: Design of Laboratory Model and Test Plan. Lecture Notes in Mechanical Engineering, 2015, , 171-181.	0.4	1
143	Magneto-rheological and passive damper combinations for seismic mitigation of building structures. Earthquake and Structures, 2016, 11, 1001-1025.	1.0	1
144	Higher order flexural transients in a beam. International Journal of Engineering Science, 1983, 21, 51-60.	5.0	0

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145	Structural Health Monitoring -- Use of Mathematics and Computers. , 2014, , .		0
146	Shell structures in civil and mechanical engineering by Professor Alphose Zingoni, University of Cape Town, South Africa. Computers and Structures, 2018, 197, 70.	4.4	0
147	Significance of Structural Dynamics in Engineering Education in the New Millennium. , 2016, , 1554-1568.		0
148	Performance evaluation of improved flexible runway Pavement under aircraft loads. Australian Journal of Civil Engineering, 2023, 21, 1-19.	1.6	0