## Inderjit Chopra

List of Publications by Year in descending order

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160	5,280	36	66
papers	citations	h-index	g-index
162	162	162	1631 citing authors
all docs	docs citations	times ranked	

#	Article	IF	CITATIONS
1	Review of State of Art of Smart Structures and Integrated Systems. AIAA Journal, 2002, 40, 2145-2187.	2.6	703
2	Formulation and Evaluation of an Analytical Model for Composite Boxâ€Beams. Journal of the American Helicopter Society, 1991, 36, 23-35.	0.8	225
3	Thin-walled composite beams under bending, torsional, and extensional loads. Journal of Aircraft, 1990, 27, 619-626.	2.4	209
4	Basic Understanding of Airfoil Characteristics at Low Reynolds Numbers (104–105). Journal of Aircraft, 2018, 55, 1050-1061.	2.4	179
5	Status of Application of Smart Structures Technology to Rotorcraft Systems. Journal of the American Helicopter Society, 2000, 45, 228-252.	0.8	149
6	Experimental and theoretical analysis of composite I-beams with elastic couplings. AIAA Journal, 1991, 29, 2197-2206.	2.6	129
7	Aeroelastic Stability Analysis of a Composite Rotor Blade. Journal of the American Helicopter Society, 1985, 30, 57-67.	0.8	127
8	Assessment of Composite Rotor Blade Modeling Techniques. Journal of the American Helicopter Society, 1999, 44, 188-205.	0.8	115
9	Insect-Based Hover-Capable Flapping Wings for Micro Air Vehicles: Experiments and Analysis. AIAA Journal, 2008, 46, 2115-2135.	2.6	108
10	Experimental-theoretical investigation of the vibration characteristics of rotating composite box beams. Journal of Aircraft, 1992, 29, 657-664.	2.4	101
11	Refined Structural Model for Thin- and Thick-Walled Composite Rotor Blades. AIAA Journal, 2002, 40, 105-116.	2.6	97
12	Structural modeling of composite beams with induced-strain actuators. AIAA Journal, 1993, 31, 1692-1701.	2.6	87
13	Hover Performance of a Micro Air Vehicle: Rotors at Low Reynolds Number. Journal of the American Helicopter Society, 2007, 52, 254-262.	0.8	80
14	In-flight tracking of helicopter rotor blades using shape memory alloy actuators. Smart Materials and Structures, 2001, 10, 104-111.	3.5	78
15	Structural response of composite beams and blades with elastic couplings. Composites Part B: Engineering, 1992, 2, 347-374.	0.6	77
16	Rotors with Trailing Edge Flaps: Analysis and Comparison with Experimental Data. Journal of the American Helicopter Society, 1998, 43, 319-332.	0.8	73
17	Design of piezostack-driven trailing-edge flap actuator for helicopter rotors. Smart Materials and Structures, 2001, 10, 15-24.	3.5	73
18	Hover Testing of Smart Rotor with Induced-Strain Actuation of Blade Twist. AIAA Journal, 1997, 35, 6-16.	2.6	72

#	Article	IF	CITATIONS
19	Bending and torsion models of beams with induced-strain actuators. Smart Materials and Structures, 1996, 5, 98-113.	3.5	70
20	Induced strain actuation of composite beams and rotor blades with embedded piezoceramic elements. Smart Materials and Structures, 1996, 5, 35-48.	3.5	70
21	Improving the Aerodynamic Performance of Micro-Air-Vehicle-Scale Cycloidal Rotor: An Experimental Approach. Journal of Aircraft, 2010, 47, 1117-1125.	2.4	64
22	Structural behavior of two-cell composite rotor blades with elastic couplings. AIAA Journal, 1992, 30, 2914-2921.	2.6	62
23	Application of Higher Harmonic Control to Rotors Operating at High Speed and Thrust. Journal of the American Helicopter Society, 1990, 35, 78-89.	0.8	59
24	Finite Element Analysis for Bearingless Rotor Blade Aeroelasticity. Journal of the American Helicopter Society, 1984, 29, 42-51.	0.8	57
25	Refined Structural Dynamics Model for Composite Rotor Blades. AIAA Journal, 2001, 39, 339-348.	2.6	56
26	Performance of a Cycloidal Rotor Concept for Micro Air Vehicle Applications. Journal of the American Helicopter Society, 2010, 55, 22002-2200214.	0.8	56
27	Aeroelastic Stability Analysis of a Composite Bearingless Rotor Blade. Journal of the American Helicopter Society, 1986, 31, 29-35.	0.8	55
28	Aeroelastic Response, Loads, and Stability of a Composite Rotor in Forward Flight. AIAA Journal, 1993, 31, 1265-1273.	2.6	53
29	Wind Tunnel Test of a Smart Rotor Model with Individual Blade Twist Control. Journal of Intelligent Material Systems and Structures, 1997, 8, 414-425.	2.5	51
30	Review of Rotor Loads Prediction with the Emergence of Rotorcraft CFD. Journal of the American Helicopter Society, 2007, 52, 287.	0.8	50
31	Hover Performance of a Small-Scale Helicopter Rotor for Flying on Mars. Journal of Aircraft, 2016, 53, 1160-1167.	2.4	47
32	Effect of Rotor Geometry and Blade Kinematics on Cycloidal Rotor Hover Performance. Journal of Aircraft, 2013, 50, 1340-1352.	2.4	42
33	Aeroelastic Analysis of a Micro-Air-Vehicle-Scale Cycloidal Rotor in Hover. AIAA Journal, 2011, 49, 2430-2443.	2.6	41
34	Aeroelastic optimization of a helicopter rotor with two-cell composite blades. AIAA Journal, 1996, 34, 835-841.	2.6	40
35	Analysis of a bending-torsion coupled actuator for a smart rotor with active blade tips. Smart Materials and Structures, 2001, 10, 35-52.	3.5	40
36	Investigation of the Dynamic Characteristics of a Piezohydraulic Actuator. Journal of Intelligent Material Systems and Structures, 2005, 16, 481-492.	2.5	38

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37	Design of high force, high displacement actuators for helicopter rotors. Smart Materials and Structures, 1996, 5, 58-67.	3.5	37
38	Aeroelastic optimization of a helicopter rotor with composite coupling. Journal of Aircraft, 1995, 32, 1326-1334.	2.4	36
39	Aeroelastic Stability Analysis of a Composite Bearingless Rotor Blade. Journal of the American Helicopter Society, 1986, 31, 29-35.	0.8	35
40	A Parametric Design Study for Actively Controlled Trailing Edge Flaps. Journal of the American Helicopter Society, 1998, 43, 110.	0.8	34
41	Modeling piezoceramic actuation of beams in torsion. AIAA Journal, 1996, 34, 2582-2589.	2.6	32
42	An Analytical Model for a Nonlinear Elastomeric Lag Damper and Its Effect on Aeromechanical Stability in Hover. Journal of the American Helicopter Society, 1994, 39, 59-69.	0.8	31
43	Design, Performance and Testing of a Quad Rotor Biplane Micro Air Vehicle for Multi Role Missions. International Journal of Micro Air Vehicles, 2014, 6, 155-173.	1.3	30
44	Effect of Flow Curvature on Forward Flight Performance of a Micro-Air-Vehicle-Scale Cycloidal-Rotor. AIAA Journal, 2014, 52, 1159-1169.	2.6	30
45	Air and Ground Resonance of Helicopters with Elastically Tailored Composite Rotor Blades. Journal of the American Helicopter Society, 1993, 38, 50-61.	0.8	29
46	Advances in the development of an intelligent helicopter rotor employing smart trailing-edge flaps. Smart Materials and Structures, 1996, 5, 11-25.	3.5	29
47	Experimental Investigation of Micro Air Vehicle Scale Helicopter Rotor in Hover. International Journal of Micro Air Vehicles, 2015, 7, 231-255.	1.3	28
48	Aeroelastic Analysis of Swept, Anhedral, and Tapered Tip Rotor Blades. Journal of the American Helicopter Society, 1992, 37, 15-30.	0.8	27
49	Experimental Optimization of MAV-Scale Cycloidal Rotor Performance. Journal of the American Helicopter Society, 2011, 56, 22005-2200511.	0.8	27
50	Torsional actuation with extension-torsion composite coupling and a magnetostrictive actuator. AIAA Journal, 1995, 33, 723-729.	2.6	26
51	Swashplateless Helicopter Rotor with Trailing-Edge Flaps. Journal of Aircraft, 2004, 41, 208-214.	2.4	26
52	Computational Fluid Dynamicsâ€"Computational Structural Dynamics Analysis of Active Control of Helicopter Rotor for Performance Improvement. Journal of the American Helicopter Society, 2010, 55, 042004.	0.8	26
53	Formulation and Evaluation of An Analytical Model for Composite Box-Beams. , 1990, , .		25
54	<title>Feasibility study to build a smart rotor: trailing edge flap actuation</title> ., 1993, 1917, 225.		25

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55	Aeroelastic Tailoring of Composite Couplings and Blade Geometry of a Helicopter Rotor Using Optimization Methods. Journal of the American Helicopter Society, 1997, 42, 218-228.	0.8	25
56	Trailing Edge Flap Activated by a Piezo-Induced Bending-Torsion Coupled Beam. Journal of the American Helicopter Society, 1999, 44, 3-15.	0.8	25
57	Aeroelastic Stability of Trailing-Edge Flap Helicopter Rotors. Journal of the American Helicopter Society, 2003, 48, 236-243.	0.8	24
58	Modeling and Experimental Characterization of SMA Torsional Actuators. Journal of Intelligent Material Systems and Structures, 2007, 18, 29-38.	2.5	24
59	Design and testing of a helicopter rotor model with smart trailing edge flaps. , 1994, , .		23
60	Aeroelastic Analysis of a Composite Bearingless Rotor in Forward Flight Using an Improved Warping Model. Journal of the American Helicopter Society, 1995, 40, 80-91.	0.8	23
61	Analysis and Testing of a Froude Scaled Helicopter Rotor with Piezoelectric Bender Actuated Trailing Edge Flaps. Journal of Intelligent Material Systems and Structures, 1997, 8, 555-570.	2.5	23
62	Wind-Tunnel Testing of Rotor with Individually Controlled Trailing-Edge Flaps for Vibration Reduction. Journal of Aircraft, 2008, 45, 868-879.	2.4	23
63	Hover Testing of Active Rotor Blade-Tips Using a Piezo-Induced Bending-Torsion Coupled Beam. Journal of Intelligent Material Systems and Structures, 1998, 9, 963-974.	2.5	22
64	Aeroelastic Optimization of an Advanced Geometry Helicopter Rotor. Journal of the American Helicopter Society, 1996, 41, 18-28.	0.8	21
65	Design, Development, and Testing of a Shrouded Single-Rotor Micro Air Vehicle with Antitorque Vanes. Journal of the American Helicopter Society, 2011, 56, 12008-1200811.	0.8	21
66	Swashplateless Helicopter Rotor System with Trailing-Edge Flaps for Flight and Vibration Controls. Journal of Aircraft, 2006, 43, 346-352.	2.4	20
67	Rotor Loads Prediction Utilizing a Coupled Aeroelastic Analysis with Refined Aerodynamic Modeling. Journal of the American Helicopter Society, 1991, 36, 58-67.	0.8	19
68	Development of a Micro Twin-Rotor Cyclocopter Capable of Autonomous Hover. Journal of Aircraft, 2014, 51, 672-676.	2.4	19
69	Design, development, and flight testing of a high endurance micro quadrotor helicopter. International Journal of Micro Air Vehicles, 2016, 8, 155-169.	1.3	18
70	Design Issues of a High-Stroke, On-Blade Piezostack Actuator for a Helicopter Rotor with Trailing-Edge Flaps. Journal of Intelligent Material Systems and Structures, 2000, 11, 328-342.	2.5	17
71	Hover Tests of Micro Aerial Vehicle-Scale Shrouded Rotors, Part I: Performance Characteristics. Journal of the American Helicopter Society, 2009, 54, 12001-1200128.	0.8	17
72	Design, Development, and Flight Test of a Small-Scale Cyclogyro UAV Utilizing a Novel Cam-Based Passive Blade Pitching Mechanism. International Journal of Micro Air Vehicles, 2013, 5, 145-162.	1.3	17

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73	Analytical-experimental investigation of free-vibration characteristics of rotating composite I-beams. Journal of Aircraft, 1993, 30, 927-934.	2.4	16
74	<title>Feasibility study to build a smart rotor: induced-strain actuation of airfoil twisting using piezoceramic crystals</title> ., 1993, 1917, 238.		16
75	Adaptive Neurocontrol of Simulated Rotor Vibrations Using Trailing Edge Flaps. Journal of Intelligent Material Systems and Structures, 1999, 10, 855-871.	2.5	16
76	Closed-Loop Test of a Rotor with Individually Controlled Trailing-Edge Flaps for Vibration Reduction. Journal of the American Helicopter Society, 2010, 55, 12009-1200912.	0.8	16
77	Design and Performance of a Quad-Shrouded Rotor Micro Air Vehicle. Journal of Aircraft, 2014, 51, 779-791.	2.4	16
78	High-Fidelity Aeromechanical Analysis of Coaxial Mars Helicopter. Journal of Aircraft, 2021, 58, 609-623.	2.4	15
79	<title>Design and static testing of a trailing-edge flap actuator with piezostacks for a rotor blade</title> ., 1998, 3329, 321.		14
80	Aeroelastic Modeling of Trailing-Edge-Flap Helicopter Rotors Including Actuator Dynamics. Journal of Aircraft, 2004, 41, 1465-1472.	2.4	14
81	Design and testing of a bidirectional magnetostrictive-hydraulic hybrid actuator., 2004, 5390, 483.		14
82	Performance, Flight Testing of a Shrouded Rotor Micro Air Vehicle in Edgewise Gusts. Journal of Aircraft, 2012, 49, 193-205.	2.4	14
83	Identification of Flight Dynamics of a Cylcocopter Micro Air Vehicle in Hover. Journal of Aircraft, 2015, 52, 116-129.	2.4	14
84	Investigation of active materials as driving elements of a hydraulic hybrid actuator., 2005,,.		13
85	Examination of Rotor Loads due to On-Blade Active Controls for Performance Enhancement. Journal of Aircraft, 2010, 47, 2049-2066.	2.4	13
86	Perimeter-Based Polar Scan Matching (PB-PSM) for 2D Laser Odometry. Journal of Intelligent and Robotic Systems: Theory and Applications, 2015, 80, 231-254.	3.4	13
87	Aeroelastic response and blade loads of a composite rotor in forwardflight. , $1992, \ldots$		12
88	<title>Development of a smart moving blade tip activated by a piezo-induced bending-torsion coupled beam</title> ., 1996, 2717, 63.		12
89	Flow field studies on a micro-air-vehicle-scale cycloidal rotor in forward flight. Experiments in Fluids, 2014, 55, 1.	2.4	12
90	Experimental and Computational Analysis of Rigid Flapping Wings for Micro Air Vehicles. Journal of Aircraft, 2015, 52, 1161-1178.	2.4	12

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91	Computational investigation of insect-based flapping wings for micro air vehicle applications. International Journal of Micro Air Vehicles, 2016, 8, 64-78.	1.3	12
92	Circulation Control Airfoils in an Unsteady Flow. Journal of the American Helicopter Society, 1988, 33, 28-37.	0.8	10
93	Blade Response Calculations Using Threeâ€Dimensional Aerodynamic Modeling. Journal of the American Helicopter Society, 1991, 36, 68-77.	0.8	10
94	Hover Test of Mach-Scale Active Twist Rotor Using Piezo-Bending-Torsion Actuators. Journal of Aircraft, 2002, 39, 678-688.	2.4	10
95	Individual Blade Control Methodology for a Rotor with Dissimilar Blades. Journal of the American Helicopter Society, 2003, 48, 176-185.	0.8	10
96	Wind Tunnel Test of Five Sets of Mach Scale Composite Tailored Rotor with Flap-Bending/Torsion Couplings for Vibration Reduction. Journal of the American Helicopter Society, 2008, 53, 215.	0.8	10
97	Aeroelastic Analysis of a MAV-Scale Cycloidal Rotor. , 2010, , .		10
98	Design and Testing of a Quad Shrouded Rotor Micro Air Vehicle in Hover. , 2012, , .		10
99	Flowfield measurements of reverse flow on a high advance ratio rotor. Experiments in Fluids, 2018, 59, 1.	2.4	10
100	Performance Analysis and Optimization of a Vertical-Axis Wind Turbine with a High Tip-Speed Ratio. Energies, 2021, 14, 996.	3.1	10
101	EFFECT OF MODELING TECHNIQUES IN THE COUPLED ROTOR-BODY VIBRATION ANALYSIS. , 1993, , .		10
102	<code><title>Shape&lt;/code&gt; memory alloy actuators for in-flight tracking of helicopter rotor blades &lt;code&gt;</title>.</code> , 1998, , .		9
103	Aeroelastic modeling of trailing-edge flaps with smart material actuators. , 2000, , .		9
104	Development of Mach Scale Rotors with Tailored Composite Coupling for Vibration Reduction. Journal of Aircraft, 2006, 43, 922-931.	2.4	9
105	Investigation of Trailing-Edge Flap Gap Effects on Rotor Performance Using High-Fidelity Analysis. Journal of Aircraft, 2013, 50, 140-151.	2.4	9
106	Experimental and theoretical analysis of composite l-beams with elastic couplings. , 1991, , .		8
107	Design and spin testing of an active trailing edge flap actuated with piezostacks. , 1999, , .		8
108	<title>Development and validation of a refined piezostack-actuated trailing-edge flap actuator for a helicopter rotor</title> ., 1999,,.		8

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109	<title>Fundamental understanding of piezoelectric strain sensors</title> ., 1999,,.		8
110	Open-loop hover and wind tunnel testing of Mach-scaled rotor with trailing-edge flaps. , 2001, , .		8
111	Robust Individual Blade Control Algorithm for a Dissimilar Rotor. Journal of Guidance, Control, and Dynamics, 2002, 25, 915-923.	2.8	8
112	Experiments on Rigid Wing Undergoing Hover-Capable Flapping Kinematics at Micro-Air-Vehicle-Scale Reynolds Numbers. AIAA Journal, 2016, 54, 1145-1157.	2.6	8
113	Aeroelastic Stability Investigation of a Composite Hingeless Rotor in Hover. Journal of Aircraft, 1998, 35, 791-797.	2.4	7
114	Hover testing of an active rotor blade tip and structural analysis of the actuator beam. , 1998, , .		7
115	<title>Fundamental behavior of piezoceramic sheet actuators</title> ., 1998, 3329, 626.		7
116	$$ $$ $$ $$ $$ $$ $$ $$ $$		7
117	Characterization of SMA Torsional Actuators for Active Twist of Tilt Rotor Blades., 2002,,.		7
118	Hover Tests of Micro Aerial Vehicle-Scale Shrouded Rotors, Part II: Flow Field Measurements. Journal of the American Helicopter Society, 2009, 54, 12002-1200226.	0.8	7
119	Performance of Swashplateless Helicopter Rotor with Trailing-Edge Flaps for Primary Flight Control. Journal of the American Helicopter Society, 2010, 55, 042005.	0.8	7
120	Experimental Studies to Understand the Hover and Forward Flight Performance of a MAV-Scale Flapping Wing Concept. Journal of the American Helicopter Society, 2012, 57, 1-11.	0.8	7
121	Rotation-Frequency-Driven Extension–Torsion Coupled Self-Twisting Rotor Blades. Journal of Aircraft, 2018, 55, 1929-1941.	2.4	7
122	Analysis and testing of Mach scaled rotor model with piezoelectric bender actuated trailing-edge flaps for helicopter vibration control. , $1999$ , , .		6
123	Aeroelastic stability of smart trailing-edge flap helicopter rotors. , 2001, , .		6
124	Aeromechanics and Control of a Shrouded Rotor Micro Air Vehicle in Hover and in Edgewise Flow. Journal of the American Helicopter Society, 2011, 56, 1-14.	0.8	6
125	Experimental and Computational Studies to Understand the Role of Flow Curvature Effects on the Aerodynamic Performance of a MAV-Scale Cycloidal Rotor in Forward Flight., 2012,,.		6
126	Gramian Analysis of a Shrouded Rotor Micro Air Vehicle in Hover. Journal of Guidance, Control, and Dynamics, 2014, 37, 1684-1691.	2.8	6

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127	Aeromechanical Stability of A Bearingless Composite Rotor In Forward Flight., 1993,,.		6
128	Helicopter Response to Atmospheric Turbulence in Forward Flight. Journal of the American Helicopter Society, 1990, 35, 51-59.	0.8	6
129	Hover Test of a Mach-Scale Rotor Model with Active Blade Tips. Journal of the American Helicopter Society, 2002, 47, 273.	0.8	5
130	Actuation Requirements for a Swashplateless Helicopter Control System., 2002, , .		5
131	Experimental Investigation of Performance of a Wing-Propeller System for a Quad-Rotor-Biplane Micro Air Vehicle. , 2013, , .		5
132	Refined lightweight inertial navigation system for micro air vehicle applications. International Journal of Micro Air Vehicles, 2017, 9, 124-135.	1.3	5
133	In-flight tracking of helicopter rotor blades using shape memory alloy actuators. , 1999, , .		5
134	Wind tunnel testing of a smart rotor with induced-strain actuation of blade twist. , 1996, , .		4
135	Swashplateless Helicopter Rotor System with Active Trailing-Edge Flaps for Primary and Vibration Controls., 2004,,.		4
136	Piezobimorph Actuated Servotab for Controlling a Trailing Edge Flap., 2005,,.		4
137	Three-Dimensional Strains on Twisted and Swept Composite Rotor Blades in Vacuum. Journal of Aircraft, 2021, 58, 1-16.	2.4	4
138	<title>Design of a bidirectional piezoelectric actuator for blade trailing-edge flap</title> ., 2001, 4327, 36.		3
139	Performance Modeling of a Piezohydraulic Actuator. , 2003, , .		3
140	Experimental Optimization and Performance Analysis of a MAV Scale Cycloidal Rotor., 2011,,.		3
141	Aeroelastic Analysis of Avian-Based Flexible Flapping Wings for Micro Air Vehicles. Journal of the American Helicopter Society, 2015, 60, 1-18.	0.8	3
142	Unsteady Aerodynamic Characteristics of Pitching Flat Plates at Low Reynolds Numbers. Journal of Aircraft, 2021, 58, 917-934.	2.4	3
143	Multi-objective optimization of a composite helicopter rotor. , 1994, , .		3
144	An analytical model for composite box-beams including thermal effects. , 1991, , .		2

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145	Design and analysis trends of helicopter rotor systems. Sadhana - Academy Proceedings in Engineering Sciences, 1994, 19, 427-466.	1.3	2
146	Aeroelastic stability testing and validation of a composite hingeless rotor in hover. , 1996, , .		2
147	<title>Design and testing of a piezostack-actuated leading-edge flap</title> ., 1999,,.		2
148	Review of state-of-art of smart structures and integrated systems. , 2001, , .		2
149	Methodology for In-Flight Tracking of Helicopter Rotor Blades Using Shape Memory Alloy Actuators. Journal of the American Helicopter Society, 2004, 49, 192-200.	0.8	2
150	High-Fidelity Aeromechanics of Future Mars Helicopters. , 2020, , .		2
151	Coupled Aeroelastic Study of a Flexible Micro Air Vehicle-Scale Flapping Wing in Hovering Flight. Journal of Aircraft, 0, , 1-19.	2.4	2
152	A refined structural dynamics model for composite rotor blades., 1999,,.		2
153	Investigation of Trailing-Edge Flap Gap Effects on Rotor Performance Using CFD-CSD Coupling., 2012,,		2
154	Design and Hover Test of Low Vibration Mach Scale Rotor with Twisted Composite Tailored Blade. , $2003,  \ldots$		1
155	Structural Dynamics Analysis of Thin-Walled, Pretwisted Composite Blades with Spanwise Taper. , 2008, , .		1
156	Basic Understanding of Unsteady Airfoil Aerodynamics at Low Reynolds Numbers. , 2018, , .		1
157	Analysis of Elastically Coupled Non-Uniform Thin-Walled Composite Beams with Pretwist and Taper. , 2007, , .		0
158	Applications of Active Materials in Integrated Systems. , 0, , 739-896.		0
159	Hingeless Rotor Aeroelastic Stability Analysis with Refined Aerodynamic Modeling. Journal of the American Helicopter Society, 1991, 36, 48-56.	0.8	0
160	Compact Piezo-Hydraulic Hybrid Actuator. , 2017, , 70-81.		0