Adrian Bejan

List of Publications by Citations

685 papers	26,227 citations	73 h-index	136 g-index
750 ext. papers	28,830 ext. citations	3.6 avg, IF	7.75 L-index

#	Paper	IF	Citations
685	Entropy generation minimization: The new thermodynamics of finite-size devices and finite-time processes. *Journal of Applied Physics*, **1996**, 79, 1191-1218	2.5	1256
684	A Study of Entropy Generation in Fundamental Convective Heat Transfer. *Journal of Heat Transfer*, **1979**, 101, 718-725	1.8	938
683	Constructal-theory network of conducting paths for cooling a heat generating volume. *International Journal of Heat and Mass Transfer*, **1997**, 40, 799-816	4.9	600
682	Convection in Porous Media **2013**,		523
681	Convection in Porous Media **1999**,		492
680	Convection in Porous Media **1992**,		465
679	**2013**,		462
678	Second law analysis in heat transfer. *Energy*, **1980**, 5, 720-732	7.9	433
677	Constructal theory of generation of configuration in nature and engineering. *Journal of Applied Physics*, **2006**, 100, 041301	2.5	339
676	Second-Law Analysis in Heat Transfer and Thermal Design. *Advances in Heat Transfer*, **1982**, 1-58	1.9	327
675	The Heatline Visualization of Convective Heat Transfer. *Journal of Heat Transfer*, **1983**, 105, 916-919	1.8	322
674	**2008**,		290
673	Fundamentals of exergy analysis, entropy generation minimization, and the generation of flow architecture. *International Journal of Energy Research*, **2002**, 26, 0-43	4.5	271
672	Heat and mass transfer by natural convection in a porous medium. *International Journal of Heat and Mass Transfer*, **1985**, 28, 909-918	4.9	230
671	The Concept of Irreversibility in Heat Exchanger Design: Counterflow Heat Exchangers for Gas-to-Gas Applications. *Journal of Heat Transfer*, **1977**, 99, 374-380	1.8	227
670	Theory of heat transfer-irreversible power plants. *International Journal of Heat and Mass Transfer*, **1988**, 31, 1211-1219	4.9	223
669	Convection in Porous Media **2017**,		209

668	The constructal law and the evolution of design in nature. *Physics of Life Reviews*, **2011**, 8, 209-40	2.1	209
667	The optimal spacing of parallel plates cooled by forced convection. *International Journal of Heat and Mass Transfer*, **1992**, 35, 3259-3264	4.9	208
666	Natural convection with combined heat and mass transfer buoyancy effects in a porous medium. *International Journal of Heat and Mass Transfer*, **1985**, 28, 1597-1611	4.9	206
665	Constructal law of design and evolution: Physics, biology, technology, and society. *Journal of Applied Physics*, **2013**, 113, 151301	2.5	205
664	General criterion for rating heat-exchanger performance. *International Journal of Heat and Mass Transfer*, **1978**, 21, 655-658	4.9	191
663	Porous and Complex Flow Structures in Modern Technologies **2004**,		185
662	The constructal law and the thermodynamics of flow systems with configuration. *International Journal of Heat and Mass Transfer*, **2004**, 47, 3203-3214	4.9	184
661	The constructal law of design and evolution in nature. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2010**, 365, 1335-47	5.8	176
660	Unifying constructal theory for scale effects in running, swimming and flying. *Journal of Experimental Biology*, **2006**, 209, 238-48	3	175
659	Theory of heat transfer-irreversible refrigeration plants. *International Journal of Heat and Mass Transfer*, **1989**, 32, 1631-1639	4.9	175
658	Scaling theory of melting with natural convection in an enclosure. *International Journal of Heat and Mass Transfer*, **1988**, 31, 1221-1235	4.9	174
657	On the boundary layer regime in a vertical enclosure filled with a porous medium. *Letters in Heat and Mass Transfer*, **1979**, 6, 93-102		174
656	Constructal tree networks for heat transfer. *Journal of Applied Physics*, **1997**, 82, 89-100	2.5	165
655	Street network theory of organization in nature. *Journal of Advanced Transportation*, **1996**, 30, 85-107	1.9	164
654	The thermodynamic design of heat and mass transfer processes and devices. *International Journal of Heat and Fluid Flow*, **1987**, 8, 258-276	2.4	163
653	The resonance of natural convection in an enclosure heated periodically from the side. *International Journal of Heat and Mass Transfer*, **1993**, 36, 2027-2038	4.9	158
652	**2016**,		157
651	Optimal tree-shaped networks for fluid flow in a disc-shaped body. *International Journal of Heat and Mass Transfer*, **2002**, 45, 4911-4924	4.9	148

650	Thermodynamic optimization of geometry: T- and Y-shaped constructs of fluid streams. *International Journal of Thermal Sciences*, **2000**, 39, 949-960	4.1	146
649	Second Law Analysis and Synthesis of Solar Collector Systems. *Journal of Solar Energy Engineering, Transactions of the ASME*, **1981**, 103, 23-28	2.3	145
648	Mass and heat transfer by natural convection in a vertical slot filled with porous medium. *International Journal of Heat and Mass Transfer*, **1986**, 29, 403-415	4.9	143
647	Optimal distribution of discrete heat sources on a wall with natural convection. *International Journal of Heat and Mass Transfer*, **2004**, 47, 203-214	4.9	139
646	Constructal T-shaped fins. *International Journal of Heat and Mass Transfer*, **2000**, 43, 2101-2115	4.9	135
645	Method of entropy generation minimization, or modeling and optimization based on combined heat transfer and thermodynamics. *International Journal of Thermal Sciences*, **1996**, 35, 637-646		131
644	Constructal design for cooling a disc-shaped area by conduction. *International Journal of Heat and Mass Transfer*, **2002**, 45, 1643-1652	4.9	128
643	Entropy Generation Through Heat and Fluid Flow. *Journal of Applied Mechanics, Transactions ASME*, **1983**, 50, 475-475	2.7	128
642	Tree-shaped flow structures designed by minimizing path lengths. *International Journal of Heat and Mass Transfer*, **2002**, 45, 3299-3312	4.9	123
641	Deterministic Tree Networks for Fluid Flow: Geometry for Minimal Flow Resistance Between a Volume and One Point. *Fractals*, **1997**, 05, 685-695	3.2	119
640	Combined Heat and Mass Transfer by Natural Convection in a Vertical Enclosure. *Journal of Heat Transfer*, **1987**, 109, 104-112	1.8	117
639	Two Thermodynamic Optima in the Design of Sensible Heat Units for Energy Storage. *Journal of Heat Transfer*, **1978**, 100, 708-712	1.8	114
638	Convective trees of fluid channels for volumetric cooling. *International Journal of Heat and Mass Transfer*, **2000**, 43, 3105-3118	4.9	113
637	The fluid dynamics of an attic space. *Journal of Fluid Mechanics*, **1983**, 131, 251	3.7	112
636	Fin Geometry for Minimum Entropy Generation in Forced Convection. *Journal of Heat Transfer*, **1982**, 104, 616-623	1.8	112
635	Laminar Natural Convection Heat Transfer in a Horizontal Cavity with Different End Temperatures. *Journal of Heat Transfer*, **1978**, 100, 641-647	1.8	108
634	The nondarcy regime for vertical boundary layer natural convection in a porous medium. *International Journal of Heat and Mass Transfer*, **1984**, 27, 717-722	4.9	107
633	Optimal allocation of a heat-exchanger inventory in heat driven refrigerators. *International Journal of Heat and Mass Transfer*, **1995**, 38, 2997-3004	4.9	106

632	Three-dimensional optimization of staggered finned circular and elliptic tubes in forced convection. *International Journal of Thermal Sciences*, **2004**, 43, 477-487	4.1	91
631	Optimal Arrays of Pin Fins and Plate Fins in Laminar Forced Convection. *Journal of Heat Transfer*, **1993**, 115, 75-81	1.8	90
630	Theory of heat transfer-irreversible power plants□. The optimal allocation of heat exchange equipment. *International Journal of Heat and Mass Transfer*, **1995**, 38, 433-444	4.9	90
629	The boundary layer regime in a porous layer with uniform heat flux from the side. *International Journal of Heat and Mass Transfer*, **1983**, 26, 1339-1346	4.9	90
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624	Constructal multi-scale tree-shaped heat exchangers. *Journal of Applied Physics*, **2004**, 96, 1709-1718	2.5	84
623	Constructal-theory tree networks of □onstant□ thermal resistance. *Journal of Applied Physics*, **1999**, 86, 1136-1144	2.5	84
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620	The optimal spacing of cylinders in free-stream cross-flow forced convection. *International Journal of Heat and Mass Transfer*, **1996**, 39, 311-317	4.9	80
619	The optimal spacing between horizontal cylinders in a fixed volume cooled by natural convection. *International Journal of Heat and Mass Transfer*, **1995**, 38, 2047-2055	4.9	79
618	The Boundary Layer Natural Convection Regime in a Rectangular Cavity With Uniform Heat Flux From the Side. *Journal of Heat Transfer*, **1984**, 106, 98-103	1.8	79
617	Svelteness, freedom to morph, and constructal multi-scale flow structures. *International Journal of Thermal Sciences*, **2005**, 44, 1123-1130	4.1	77
616	The constructal law of organization in nature: tree-shaped flows and body size. *Journal of Experimental Biology*, **2005**, 208, 1677-86	3	77
615	Conduction tree networks with loops for cooling a heat generating volume. *International Journal of Heat and Mass Transfer*, **2006**, 49, 2626-2635	4.9	76

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606	A synthesis of analytical results for natural convection heat transfer across rectangular enclosures. *International Journal of Heat and Mass Transfer*, **1980**, 23, 723-726	4.9	72
605	Vascularized materials: Tree-shaped flow architectures matched canopy to canopy. *Journal of Applied Physics*, **2006**, 100, 063525	2.5	71
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603	Constructal optimization of nonuniformly distributed tree-shaped flow structures for conduction. *International Journal of Heat and Mass Transfer*, **2001**, 44, 4185-4194	4.9	71
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600	Evolution in thermodynamics. *Applied Physics Reviews*, **2017**, 4, 011305	17.3	69
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597	Dendritic heat convection on a disc. *International Journal of Heat and Mass Transfer*, **2003**, 46, 4381-4391	4.9	66

596	Natural Convection Experiments in a Triangular Enclosure. *Journal of Heat Transfer*, **1983**, 105, 652-655	1.8	66
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588	Heterogeneous porous media as multiscale structures for maximum flow access. *Journal of Applied Physics*, **2006**, 100, 114909	2.5	63
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582	Experimental study of high-Rayleigh-number convection in a horizontal cavity with different end temperatures. *Journal of Fluid Mechanics*, **1981**, 109, 283-299	3.7	61
581	Streets tree networks and urban growth: Optimal geometry for quickest access between a finite-size volume and one point. *Physica A: Statistical Mechanics and Its Applications*, **1998**, 255, 211-217	3.3	60
580	Constructal multi-scale structure for maximal heat transfer density in natural convection. *International Journal of Heat and Fluid Flow*, **2005**, 26, 34-44	2.4	60
579	Thermodynamic Optimization of a Gas Turbine Power Plant With Pressure Drop Irreversibilities. *Journal of Energy Resources Technology, Transactions of the ASME*, **1998**, 120, 233-240	2.6	60

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577	Constructal trees of circular fins for conductive and convective heat transfer. *International Journal of Heat and Mass Transfer*, **1999**, 42, 3585-3597	4.9	59
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