

John Kim

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

185
papers

19,578
citations

55
h-index

139
g-index

205
ext. papers

22,185
ext. citations

3.5
avg, IF

6.73
L-index

#	Paper	IF	Citations
185	Superhydrophobic drag reduction in high-speed towing tank. <i>Journal of Fluid Mechanics</i> , 2021 , 908,	3.7	13
184	Navigator: Dynamic Multi-kernel Scheduling to Improve GPU Performance 2020 ,		2
183	Griffin: Hardware-Software Support for Efficient Page Migration in Multi-GPU Systems 2020 ,		4
182	Valkyrie 2020 ,		3
181	NeuMMU 2020 ,		4
180	Towards Interpersonal Assistants: Next-Generation Conversational Agents. <i>IEEE Pervasive Computing</i> , 2019 , 18, 21-31	1.3	5
179	DeepHiR 2019 ,		2
178	MGPUSim 2019 ,		16
177	Predictions of the effective slip length and drag reduction with a lubricated micro-groove surface in a turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 2019 , 874, 797-820	3.7	22
176	Practical and efficient incremental adaptive routing for HyperX networks 2019 ,		2
175	BebeCODE 2018 ,		7
174	TCEP: Traffic Consolidation for Energy-Proportional High-Radix Networks 2018 ,		2
173	2018 ,		4
172	Profiling DNN Workloads on a Volta-based DGX-1 System 2018 ,		12
171	SuperSim: Extensible Flit-Level Simulation of Large-Scale Interconnection Networks 2018 ,		3
170	PlayBetter 2017 ,		2
169	Footprint 2017 ,		4

168	Evaluation of Performance Unfairness in NUMA System Architecture. <i>IEEE Computer Architecture Letters</i> , 2017 , 16, 26-29	1.8	6
167	Itchtector 2017 ,		8
166	Accelerating Linked-list Traversal Through Near-Data Processing 2016 ,		17
165	TalkLIME 2016 ,		11
164	Design and Analysis of Hybrid Flow Control for Hierarchical Ring Network-on-Chip. <i>IEEE Transactions on Computers</i> , 2016 , 65, 480-494	2.5	6
163	Optimal disturbances in the near-wall region of turbulent channel flows. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	3
162	The Effects of Superhydrophobic Surfaces on Skin Friction Drag. <i>ERCOFTAC Series</i> , 2016 , 357-365	0.1	5
161	Effects of Robot and Computer-based Intervention on Learning Action Word Symbols of AAC for Children with Autism Spectrum Disorder. <i>Communication Sciences and Disorders</i> , 2016 , 21, 744-759	0.6	3
160	Adaptive and flexible key-value stores through soft data partitioning 2016 ,		2
159	UMH. <i>Transactions on Architecture and Code Optimization</i> , 2016 , 13, 1-25	1.3	11
158	Contention-based congestion management in large-scale networks 2016 ,		9
157	Automatically Exploiting Implicit Pipeline Parallelism from Multiple Dependent Kernels for GPUs 2016 ,		7
156	Large-scale motions in a turbulent channel flow with the slip boundary condition. <i>International Journal of Heat and Fluid Flow</i> , 2016 , 61, 96-107	2.4	20
155	2016 ,		9
154	Effects of the air layer of an idealized superhydrophobic surface on the slip length and skin-friction drag. <i>Journal of Fluid Mechanics</i> , 2016 , 790,	3.7	29
153	A high-order multi-zone cut-stencil method for numerical simulations of high-speed flows over complex geometries. <i>Journal of Computational Physics</i> , 2016 , 316, 652-681	4.1	3
152	Overcoming far-end congestion in large-scale networks 2015 ,		30
151	Energy-Efficient Dynamic Packet Downloading for Medical IoT Platforms. <i>IEEE Transactions on Industrial Informatics</i> , 2015 , 11, 1653-1659	11.9	37

150	Controller Synthesis for Periodic, Linear-Distributed Parameter Systems: Channel Flow Application. <i>Journal of Guidance, Control, and Dynamics</i> , 2015 , 38, 993-1000	2.1	
149	Lexical Representation of Emotions for High Functioning Autism(HFA) via Emotional Story Intervention using Smart Media 2015 ,		1
148	Mobile System Design for Scratch Recognition 2015 ,		4
147	Transportation-network-inspired network-on-chip 2014 ,		9
146	2014 ,		92
145	Mutually Aware Prefetcher and On-Chip Network Designs for Multi-Cores. <i>IEEE Transactions on Computers</i> , 2014 , 63, 2316-2329	2.5	2
144	Energy-efficient scheduling for memory-intensive GPGPU workloads 2014 ,		2
143	Galaxy 2014 ,		28
142	Numerical Simulation of High-Speed Flows Over Complex Geometries with a High-Order Multi-Zone Cut-Cell Method 2014 ,		1
141	Robot-based augmentative and alternative communication for nonverbal children with communication disorders 2014 ,		8
140	Multi-GPU System Design with Memory Networks 2014 ,		28
139	TalkBetter 2014 ,		30
138	Security Vulnerability in Processor-Interconnect Router Design 2014 ,		4
137	Microbank: Architecting Through-Silicon Interposer-Based Main Memory Systems 2014 ,		15
136	Low-Overhead Network-on-Chip Support for Location-Oblivious Task Placement. <i>IEEE Transactions on Computers</i> , 2014 , 63, 1487-1500	2.5	9
135	Extending bufferless on-chip networks to high-throughput workloads 2014 ,		5
134	LOX Framework: Designing Human Computation Games to Update Street Views. <i>Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering</i> , 2014 , 233-251	0.2	1
133	A detailed and flexible cycle-accurate Network-on-Chip simulator 2013 ,		304

132	Clumsy Flow Control for High-Throughput Bufferless On-Chip Networks. <i>IEEE Computer Architecture Letters</i> , 2013 , 12, 47-50	1.8	21
131	A numerical study of the effects of superhydrophobic surface on skin-friction drag in turbulent channel flow. <i>Physics of Fluids</i> , 2013 , 25, 110815	4.4	122
130	Preface to Special Topic: Directions in computational physics Selected papers from a symposium honoring Parviz Moin upon his 60th birthday. <i>Physics of Fluids</i> , 2013 , 25, 110701	4.4	
129	Memory-centric system interconnect design with Hybrid Memory Cubes 2013 ,		5
128	Scalable high-radix router microarchitecture using a network switch organization. <i>Transactions on Architecture and Code Optimization</i> , 2013 , 10, 1-25	1.3	6
127	Scheduling in heterogeneous computing environments for proximity queries. <i>IEEE Transactions on Visualization and Computer Graphics</i> , 2013 , 19, 1513-25	4	4
126	Designing on-chip networks for throughput accelerators. <i>Transactions on Architecture and Code Optimization</i> , 2013 , 10, 1-35	1.3	7
125	Guest Editorial New Interconnect Technologies in On-Chip Communication. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2012 , 2, 121-123	5.2	
124	Exploiting New Interconnect Technologies in On-Chip Communication. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2012 , 2, 124-136	5.2	23
123	Providing cost-effective on-chip network bandwidth in GPGPUs 2012 ,		20
122	Scalable on-chip network in power constrained manycore processors 2012 ,		2
121	Network within a network approach to create a scalable high-radix router microarchitecture 2012 ,		13
120	Progress in pipe and channel flow turbulence, 1961-2011. <i>Journal of Turbulence</i> , 2012 , 13, N45	2.1	18
119	The 14th biennial Center for Turbulence Research Summer Program. <i>Physics of Fluids</i> , 2012 , 24, 100501	4.4	
118	Reduced Balancing Transformations for Large Nonnormal State-Space Systems. <i>Journal of Guidance, Control, and Dynamics</i> , 2012 , 35, 129-137	2.1	3
117	Numerical Study of Hypersonic Flow Over an Isolated Roughness with a High-Order Cut-Cell Method 2011 ,		4
116	An Alternative Memory Access Scheduling in Manycore Accelerators 2011 ,		4
115	Physics and control of wall turbulence for drag reduction. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 1396-411	3	77

114	Leveraging torus topology with deadlock recovery for cost-efficient on-chip network 2011 ,		4
113	FeatherWeight 2011 ,		18
112	Near-wall dynamics of compressible boundary layers. <i>Physics of Fluids</i> , 2011 , 23, 065109	4.4	14
111	High Performance Datacenter Networks: Architectures, Algorithms, and Opportunities. <i>Synthesis Lectures on Computer Architecture</i> , 2011 , 6, 1-115	2.9	15
110	A numerical study of compressible turbulent boundary layers. <i>Physics of Fluids</i> , 2011 , 23, 015106	4.4	65
109	On-Chip Network Evaluation Framework 2010 ,		6
108	State-Space Approximations of the Orr-Sommerfeld System with Boundary Inputs and Outputs. <i>Journal of Guidance, Control, and Dynamics</i> , 2010 , 33, 794-802	2.1	3
107	On-chip network design considerations for compute accelerators 2010 ,		4
106	Approximating age-based arbitration in on-chip networks 2010 ,		2
105	Probabilistic Distance-Based Arbitration: Providing Equality of Service for Many-Core CMPs 2010 ,		28
104	Numerical Study of Hypersonic Receptivity with Thermochemical Non-Equilibrium on a Blunt Cone 2010 ,		9
103	FlexiShare: Channel sharing for an energy-efficient nanophotonic crossbar 2010 ,		113
102	Throughput-Effective On-Chip Networks for Manycore Accelerators 2010 ,		78
101	Efficient Topologies for Large-scale Cluster Networks 2010 ,		2
100	A Hybrid-Filter Approach to Turbulence Simulation. <i>Flow, Turbulence and Combustion</i> , 2010 , 85, 421-441	2.5	28
99	Exploring concentration and channel slicing in on-chip network router 2009 ,		32
98	Router microarchitecture and scalability of ring topology in on-chip networks 2009 ,		24
97	HPCCD: Hybrid Parallel Continuous Collision Detection using CPUs and GPUs. <i>Computer Graphics Forum</i> , 2009 , 28, 1791-1800	2.4	42

96	Low-cost router microarchitecture for on-chip networks 2009 ,		93
95	A Numerical Study of Purdue's Mach 6 Tunnel with a Roughness Element 2009 ,		7
94	Indirect adaptive routing on large scale interconnection networks 2009 ,		55
93	Firefly 2009 ,		180
92	Analyzing the impact of on-chip network traffic on program phases for CMPs 2009 ,		4
91	. <i>IEEE Micro</i> , 2009 , 29, 33-40	1.8	36
90	Achieving predictable performance through better memory controller placement in many-core CMPs 2009 ,		76
89	Cost-Efficient Dragonfly Topology for Large-Scale Systems 2009 ,		7
88	Control and system identification of a separated flow. <i>Physics of Fluids</i> , 2008 , 20, 101509	4.4	32
87	Technology-Driven, Highly-Scalable Dragonfly Topology 2008 ,		244
86	Stability of a channel flow subject to wall blowing and suction in the form of a traveling wave. <i>Physics of Fluids</i> , 2008 , 20, 101513	4.4	24
85	Flattened Butterfly Topology for On-Chip Networks 2007 ,		146
84	Flattened Butterfly Topology for On-Chip Networks. <i>IEEE Computer Architecture Letters</i> , 2007 , 6, 37-40	1.8	43
83	A Linear Systems Approach to Flow Control. <i>Annual Review of Fluid Mechanics</i> , 2007 , 39, 383-417	22	274
82	Effect of roughness on pressure fluctuations in a turbulent channel flow. <i>Physics of Fluids</i> , 2007 , 19, 028103	4.4	18
81	Flattened butterfly 2007 ,		180
80	Interconnect routing and scheduling---Adaptive routing in high-radix cros network 2006 ,		20
79	Sustained sub-laminar drag in a fully developed channel flow. <i>Journal of Fluid Mechanics</i> , 2006 , 558, 309-37	3.7	98

78	Analysis and Control of Boundary Layers: A Linear System Perspective. <i>Solid Mechanics and Its Applications</i> , 2006 , 301-312	0.4	
77	Effects of hydrophobic surface on stability and transition. <i>Physics of Fluids</i> , 2005 , 17, 108106	4.4	62
76	A singular value analysis of boundary layer control. <i>Physics of Fluids</i> , 2004 , 16, 1980-1988	4.4	35
75	Effects of hydrophobic surface on skin-friction drag. <i>Physics of Fluids</i> , 2004 , 16, L55-L58	4.4	231
74	Effect of Roughness on Wall-Bounded Turbulence. <i>Flow, Turbulence and Combustion</i> , 2004 , 72, 463-492	2.5	124
73	Direct numerical simulation of a decelerated wall-bounded turbulent shear flow. <i>Journal of Fluid Mechanics</i> , 2003 , 495, 1-18	3.7	26
72	Control of turbulent boundary layers. <i>Physics of Fluids</i> , 2003 , 15, 1093-1105	4.4	139
71	Control of the viscous sublayer for drag reduction. <i>Physics of Fluids</i> , 2002 , 14, 2523	4.4	44
70	Application of the Gooore Scheme to turbulence control for drag reduction (I). <i>Journal of Mechanical Science and Technology</i> , 2001 , 15, 1572-1579		1
69	Application of the Goore Scheme to turbulence control for drag reduction (II). <i>Journal of Mechanical Science and Technology</i> , 2001 , 15, 1580-1587		1
68	Application of reduced-order controller to turbulent flows for drag reduction. <i>Physics of Fluids</i> , 2001 , 13, 1321-1330	4.4	62
67	A linear process in wall-bounded turbulent shear flows. <i>Physics of Fluids</i> , 2000 , 12, 1885-1888	4.4	97
66	A numerical study of strained three-dimensional wall-bounded turbulence. <i>Journal of Fluid Mechanics</i> , 2000 , 416, 75-116	3.7	39
65	Near-wall turbulence structures in three-dimensional boundary layers. <i>International Journal of Heat and Fluid Flow</i> , 2000 , 21, 480-488	2.4	20
64	Turbulent boundary layer control utilizing the Lorentz force. <i>Physics of Fluids</i> , 2000 , 12, 631-649	4.4	162
63	Finite Dimensional Optimal Control of Poiseuille Flow. <i>Journal of Guidance, Control, and Dynamics</i> , 1999 , 22, 340-348	2.1	36
62	Direct numerical simulation of turbulent channel flow up to $Re_{\tau} = 590$. <i>Physics of Fluids</i> , 1999 , 11, 943-945	4.4	1811
61	Active control of turbulent boundary layers for drag reduction 1999 , 142-152		4

60	Active Control of Turbulent Boundary Layers for Drag Reduction. <i>Fluid Mechanics and Its Applications</i> , 1999 , 329-336	0.2	1
59	Taming Near-Wall Streamwise Vortices: A Modus Operandi for Boundary Layer Control. <i>Fluid Mechanics and Its Applications</i> , 1999 , 3-14	0.2	1
58	Skin-friction Drag Reduction Via Robust Reduced-order Linear Feedback Control. <i>International Journal of Computational Fluid Dynamics</i> , 1998 , 11, 79-92	1.2	34
57	Control of streamwise vortices with uniform magnetic fluxes. <i>Physics of Fluids</i> , 1998 , 10, 1997-2005	4.4	11
56	Suboptimal control of turbulent channel flow for drag reduction. <i>Journal of Fluid Mechanics</i> , 1998 , 358, 245-258	3.7	148
55	How streamwise rolls and streaks self-sustain in a shear flow. II 1998 ,		5
54	TAMING TURBULENCE 1998 , 907-913		
53	On the effects of nonequilibrium on the subgrid-scale stresses. <i>Physics of Fluids</i> , 1997 , 9, 2740-2748	4.4	16
52	Coherent structures near the wall in a turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 1997 , 332, 185-214	3.7	469
51	A systems theory approach to the feedback stabilization of infinitesimal and finite-amplitude disturbances in plane Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 1997 , 332, 157-184	3.7	148
50	Application of neural networks to turbulence control for drag reduction. <i>Physics of Fluids</i> , 1997 , 9, 1740-1747	4.4	202
49	Direct numerical simulation of turbulent flow over a backward-facing step. <i>Journal of Fluid Mechanics</i> , 1997 , 330, 349-374	3.7	724
48	Tackling Turbulence with Supercomputers. <i>Scientific American</i> , 1997 , 276, 62-68	0.5	82
47	A numerical study of three-dimensional wall-bounded flows. <i>International Journal of Heat and Fluid Flow</i> , 1996 , 17, 333-342	2.4	34
46	Direct numerical simulation of strained three-dimensional wall-bounded flows. <i>Experimental Thermal and Fluid Science</i> , 1996 , 13, 239-251	3	7
45	Two-point velocity and vorticity correlations for axisymmetric turbulence. <i>Physics of Fluids</i> , 1996 , 8, 838-840	4.4	2
44	A numerical study of turbulent supersonic isothermal-wall channel flow. <i>Journal of Fluid Mechanics</i> , 1995 , 305, 159-183	3.7	291
43	Regeneration mechanisms of near-wall turbulence structures. <i>Journal of Fluid Mechanics</i> , 1995 , 287, 317-348	3.7	640

42	A numerical study of local isotropy of turbulence. <i>Physics of Fluids</i> , 1994 , 6, 834-841	4.4	38
41	Moderating effects of prior knowledge on the perceived diagnosticity of beliefs derived from implicit versus explicit product claims. <i>Journal of Business Research</i> , 1994 , 29, 219-224	8.7	39
40	Low-Reynolds-number effects on near-wall turbulence. <i>Journal of Fluid Mechanics</i> , 1994 , 276, 61-80	3.7	88
39	Active turbulence control for drag reduction in wall-bounded flows. <i>Journal of Fluid Mechanics</i> , 1994 , 262, 75-110	3.7	491
38	Direct numerical simulation of turbulent flow over riblets. <i>Journal of Fluid Mechanics</i> , 1993 , 255, 503	3.7	459
37	Feedback control for unsteady flow and its application to the stochastic Burgers equation. <i>Journal of Fluid Mechanics</i> , 1993 , 253, 509	3.7	160
36	Isotropy of the small scales of turbulence at low Reynolds number. <i>Journal of Fluid Mechanics</i> , 1993 , 251, 219-238	3.7	66
35	Propagation velocity of perturbations in turbulent channel flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1993 , 5, 695-706		162
34	On the Origin of Streaks in Turbulent Shear Flows 1993 , 37-49		20
33	Impact of consumers' confidence in judgements about missing information on product evaluations. <i>Journal of Business Research</i> , 1992 , 25, 215-229	8.7	17
32	The dimension of attractors underlying periodic turbulent Poiseuille flow. <i>Journal of Fluid Mechanics</i> , 1992 , 242, 1-29	3.7	91
31	Low-Reynolds-number effects in a fully developed turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 1992 , 236, 579-605	3.7	187
30	Numerical investigation of instability and transition in rotating plane Poiseuille flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991 , 3, 633-641		19
29	On the effect of riblets in fully developed laminar channel flows. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991 , 3, 1892-1896		38
28	An Eddy Viscosity Calculation Method for a Turbulent Duct Flow. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 1991 , 113, 616-619	2.1	7
27	Similarity between turbulent kinetic energy and temperature spectra in the near-wall region. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991 , 3, 989-991		3
26	On turbulent spots in plane Poiseuille flow. <i>Journal of Fluid Mechanics Digital Archive</i> , 1991 , 228, 183		12
25	Evolution and dynamics of shear-layer structures in near-wall turbulence. <i>Journal of Fluid Mechanics</i> , 1991 , 224, 579-599	3.7	115

24	Some characteristics of small-scale turbulence in a turbulent duct flow. <i>Journal of Fluid Mechanics</i> , 1991 , 233, 369-388	3.7	131
23	Turbulent Characteristics inside a Turbulent Spot in a Plane Poiseuille Flow 1991 , 155-165		1
22	Structure of turbulence at high shear rate. <i>Journal of Fluid Mechanics</i> , 1990 , 216, 561-583	3.7	286
21	On the secondary instability in plane Poiseuille flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989 , 1, 775-777		17
20	On the structure of pressure fluctuations in simulated turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 1989 , 205, 421	3.7	203
19	Near-wall k-epsilon turbulence modeling. <i>AIAA Journal</i> , 1989 , 27, 1068-1073	2.1	61
18	New approximate boundary conditions for large eddy simulations of wall-bounded flows. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989 , 1, 1061-1068		207
17	On the shape and dynamics of wall structures in turbulent channel flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1989 , 1, 764-766		51
16	Reynolds-stress and dissipation-rate budgets in a turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 1988 , 194, 15	3.7	557
15	The Impact of Inferences on Product Evaluations: Replication and Extension. <i>Journal of Marketing Research</i> , 1988 , 25, 308	5.2	13
14	Evolution of a Vortical Structure Associated with the Bursting Event in a Channel Flow 1987 , 221-233		9
13	Scaling of the bursting frequency in turbulent boundary layers at low Reynolds numbers. <i>Physics of Fluids</i> , 1987 , 30, 3326		24
12	Numerical simulations of turbulent spots in plane Poiseuille and boundary-layer flow. <i>Physics of Fluids</i> , 1987 , 30, 2914		61
11	Steady flow past sudden expansions at large Reynolds number. II. Navier-Stokes solutions for the cascade expansion. <i>Physics of Fluids</i> , 1987 , 30, 7		20
10	Turbulence statistics in fully developed channel flow at low Reynolds number. <i>Journal of Fluid Mechanics</i> , 1987 , 177, 133-166	3.7	3384
9	Evolution of a curved vortex filament into a vortex ring. <i>Physics of Fluids</i> , 1986 , 29, 955		75
8	The structure of the vorticity field in turbulent channel flow. Part 2. Study of ensemble-averaged fields. <i>Journal of Fluid Mechanics</i> , 1986 , 162, 339	3.7	128
7	Numerical Investigation of a Vortical Structure in a Wall-Bounded Shear Flow 1986 , 177-180		

6	Application of a fractional-step method to incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , 1985 , 59, 308-323	4.1	2119
5	Turbulence structures associated with the bursting event. <i>Physics of Fluids</i> , 1985 , 28, 52-58		48
4	The structure of the vorticity field in turbulent channel flow. Part 1. Analysis of instantaneous fields and statistical correlations. <i>Journal of Fluid Mechanics</i> , 1985 , 155, 441	3.7	193
3	On the structure of wall-bounded turbulent flows. <i>Physics of Fluids</i> , 1983 , 26, 2088		71
2	Numerical investigation of turbulent channel flow. <i>Journal of Fluid Mechanics</i> , 1982 , 118, 341	3.7	850
1	On the numerical solution of time-dependent viscous incompressible fluid flows involving solid boundaries. <i>Journal of Computational Physics</i> , 1980 , 35, 381-392	4.1	124