

# Hiroaki Nishi

## List of Publications by Year in descending order

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193  
papers

1,455  
citations

933447

10  
h-index

526287

27  
g-index

193  
all docs

193  
docs citations

193  
times ranked

942  
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrified Vehicles and the Smart Grid: The ITS Perspective. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 1388-1404.	8.0	117
2	Implementation of Bilateral Control System Based on Acceleration Control Using FPGA for Multi-DOF Haptic Endoscopic Surgery Robot. IEEE Transactions on Industrial Electronics, 2009, 56, 618-627.	7.9	107
3	Autonomous Decentralized Control for Formation of Multiple Mobile Robots Considering Ability of Robot. IEEE Transactions on Industrial Electronics, 2004, 51, 1272-1279.	7.9	99
4	Industrial Edge Computing: Enabling Embedded Intelligence. IEEE Industrial Electronics Magazine, 2019, 13, 48-56.	2.6	87
5	Recursive diagonal torus: an interconnection network for massively parallel computers. IEEE Transactions on Parallel and Distributed Systems, 2001, 12, 701-715.	5.6	54
6	Improvement of Performances in Bilateral Teleoperation by Using FPGA. IEEE Transactions on Industrial Electronics, 2007, 54, 1876-1884.	7.9	54
7	Collision Avoidance Method of Humanoid Robot With Arm Force. IEEE Industrial Electronics Magazine, 2007, 54, 1632-1641.	2.6	46
8	A Controller Design Method of Bilateral Control System. EPE Journal (European Power Electronics) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.7	33
9	A velocity measurement method for acceleration control. , 2005, , .		31
10	Hardware-based hash functions for network applications. , 2013, , .		31
11	A Controller Design Method of Decentralized Control System. IEEJ Transactions on Industry Applications, 2006, 126, 630-638.	0.2	25
12	Improvement of performance in bilateral teleoperation by using FPGA. , 0, , .		23
13	Distributed demand side management system for home energy management. , 2010, , .		23
14	MEMOnet: network interface plugged into a memory slot. , 0, , .		17
15	Proposal for home energy management system to survey individual thermal comfort range for HVAC control with little contribution from users. , 2015, , .		14
16	The IOT mediated built environment: A brief survey. , 2016, , .		14
17	Analysis of batteries in the built environment an overview on types and applications. , 2017, , .		14
18	KNIVES: Network based Demand and Supply Control System - Enhancement for Network and Environmental Affinity. , 2007, , .		13

#	ARTICLE	IF	CITATIONS
19	Construction of energy measuring system in a University for Cluster Energy Management System. , 2010, , .		13
20	Estimation of the number of people under controlled ventilation using a CO&lt;inf&gt;2&lt;/inf&gt; concentration sensor. , 2012, , .		13
21	Feasibility study of service-oriented architecture for smart grid communications. , 2013, , .		13
22	Effective metering data aggregation for smart grid communication infrastructure. , 2015, , .		13
23	KNIVES: A distributed demand side management system - Integration with ZigBee wireless sensor network and application -. , 2008, , .		12
24	Table-based scheduling method for distributed demand side management. , 2008, , .		11
25	Novel infrastructure with common API using docker for scaling the degree of platforms for smart community services. , 2017, , .		11
26	Information and communication platform for providing smart community services: System implementation and use case in Saitama city. , 2018, , .		10
27	100-Gb/s Physical-Layer Architecture for Next-Generation Ethernet. IEICE Transactions on Communications, 2006, E89-B, 696-703.	0.7	10
28	Title is missing!. Cluster Computing, 2002, 5, 7-17.	5.0	9
29	VCore-based design methodology. , 2003, , .		9
30	Haptic Endoscopic Surgery Robot Utilizing FPGA. , 2008, , .		9
31	Environmental-amenity aware controller for Demand Side Management. , 2010, , .		9
32	A practical case study of HVAC control with MET measuring in HEMS environment. , 2013, , .		9
33	Improving Road Traffic Management by A Model-Based Simulation. , 2018, , .		9
34	Indoor Occupancy Estimation via Location-Aware HMM: An IoT Approach. , 2018, , .		9
35	Optical interconnection as an IP macro of a CMOS library. , 0, , .		8
36	Performance evaluation of RHiNET 2/NI: a network interface for distributed parallel computing systems. , 2003, , .		8

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37	Network Bilateral Control System with Jitter Buffer. IEEJ Transactions on Industry Applications, 2006, 126, 1737-1738.	0.2	8
38	Cooperative distributed demand control by environmental sensor network - Estimating the number of people by CO <sub>2</sub> concentration -. , 2008, , .		8
39	Implementation and substantiation of energy management systems for terminal buildings. , 2011, , .		8
40	SoR-Based Programmable Network for Future Software-Defined Network. , 2013, , .		8
41	Disaggregation of Electric Appliance's Consumption Using Collected Data by Smart Metering System. Energy Procedia, 2015, 75, 2940-2945.	1.8	8
42	Effectiveness of Service-oriented Router for ISP-CDN Collaboration. Journal of Information Processing, 2017, 25, 45-55.	0.4	8
43	RHINET: a network for high performance parallel computing using locally distributed computers. , 0, , .		7
44	RHiNET-3/SW: an 80-Gbit/s high-speed network switch for distributed parallel computing. , 0, , .		7
45	Implementation of multirate acceleration control based bilateral control system including mode transformation on FPGA. , 2008, , .		7
46	Construction method of dynamic microgrid by using optimized grouping method. , 2010, , .		7
47	Hardware acceleration and data-utility improvement for low-latency privacy preserving mechanism. , 2012, , .		7
48	Real-time simulation of cooperative demand control method with batteries. , 2012, , .		7
49	SoR based request routing for future CDN. , 2012, , .		7
50	Service-oriented Router Simulation Module Implementation in NS2 Simulator. Procedia Computer Science, 2013, 19, 478-485.	2.0	7
51	Per-hop Data Encryption Protocol for Transmitting Data Securely Over Public Networks. Procedia Computer Science, 2014, 32, 965-972.	2.0	7
52	ECORS: Energy consumption-oriented route selection for wireless sensor network. , 2016, , .		7
53	Thermal Energy Storage Performance of Tetrabutylammonium Acrylate Hydrate as Phase Change Materials. Applied Sciences (Switzerland), 2021, 11, 4848.	2.5	7
54	Modeling of Router-based Request Redirection for Content Distribution Network. International Journal of Computer Applications, 2013, 76, 37-46.	0.2	7

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55	Martini: A Network Interface Controller Chip for High Performance Computing with Distributed PCs. IEEE Transactions on Parallel and Distributed Systems, 2007, 18, 1282-1295.	5.6	6
56	An approach to acceleration estimation using FPGA. , 2008, , .		6
57	Gravity Compensation for Improvement of Operationarity in Bilateral Teleoperation. IEEJ Transactions on Industry Applications, 2008, 128, 767-774.	0.2	6
58	Service-oriented communication platform for scalable smart community applications. , 2012, , .		6
59	Service-Oriented Router-Based CDN System: An SoR-Based CDN Infrastructure Implementation on a Real Network Environment. , 2013, , .		6
60	Construction of HEMS in Japanese cold district for reduction of carbon dioxide emissions. , 2014, , .		6
61	Privacy-preserving data collection for demand response using self-organizing map. , 2015, , .		6
62	Line Replacement Algorithm for L1-scale Packet Processing Cache. , 2016, , .		6
63	Slightly-slacked dropout for improving neural network learning on FPGA. ICT Express, 2018, 4, 75-80.	4.8	6
64	Cache-Based Network Processor Architecture: Evaluation with Real Network Traffic. IEICE Transactions on Electronics, 2006, E89-C, 1620-1628.	0.6	6
65	Smart Community Edge: Stream Processing Edge Computing Node for Smart Community Services. IEEJ Transactions on Electronics, Information and Systems, 2020, 140, 1030-1039.	0.2	6
66	Discussion of Aspects in Energy Management with Demand Response System KNIVES. , 2006, , .		5
67	An Approach to Velocity Estimation Using FPGA. , 2007, , .		5
68	A simulation study of electric power leveling using V2G infrastructure. , 2011, , .		5
69	A router-based management system for prediction of network congestion. , 2014, , .		5
70	Enhanced building thermal model by using CO2 based occupancy data. , 2015, , .		5
71	Prototype implementation of fast and secure traceability service over public networks. IEEJ Transactions on Electrical and Electronic Engineering, 2016, 11, S122.	1.4	5
72	Implementation and evaluation of an FPGA-based network data anonymizer. IEEJ Transactions on Electrical and Electronic Engineering, 2017, 12, S134.	1.4	5

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73	A privacy-preserving sharing method of electricity usage using self-organizing map. ICT Express, 2018, 4, 24-29.	4.8	5
74	Time slotted channel hopping scheduling based on the energy consumption of wireless sensor networks. , 2018, , .		5
75	Software-accelerated Service-oriented Router for Edge and Fog Service Enhancement Using Advanced Stream Content Analysis. IEJ Transactions on Electronics, Information and Systems, 2019, 139, 891-899.	0.2	5
76	FPGA Context-based Live Migration Maintaining Network Consistency. , 2020, , .		5
77	RHiNET-2/SW: a high-throughput, compact network-switch using 8.8-gbit/s optical interconnection. New Generation Computing, 2000, 18, 187-197.	3.3	4
78	64-Gb/s highly reliable network switch (RHiNET-2/SW) using parallel optical interconnection. Journal of Lightwave Technology, 2000, 18, 1620-1627.	4.6	4
79	Bilateral Control in Multi DOF Haptic Surgical Robotic System Utilizing FPGA. , 2007, , .		4
80	Position Control Using an FPGA based on Multirate Acceleration Control. , 2007, , .		4
81	Evaluation of power consumption and comfort using inverter control of air-conditioning. , 2011, , .		4
82	Router-based request redirection management for a next-generation content distribution network. , 2013, , .		4
83	Cost-effective air conditioning control considering comfort level and user location. , 2014, , .		4
84	RAM-based hardware accelerator for network data anonymization. , 2014, , .		4
85	SLRouting. , 2015, , .		4
86	Active controlled shutter for effective cooling of servers in data center. , 2015, , .		4
87	Air conditioning control using self-powered sensor considering comfort level and occupant location. , 2015, , .		4
88	Effectiveness of a Service-oriented Router in Future Content Delivery Networks. , 2015, , .		4
89	Hardware accelerator for data anonymization using dynamic partial reconfiguration. , 2016, , .		4
90	Feature extraction and classification using power demand information. , 2016, , .		4

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91	Sparse-coding-based household clustering for demand response services. , 2016, , .		4
92	An Information Platform for Smart Communities Realizing Data Usage Authentication and Secure Data Sharing. , 2017, , .		4
93	An Overview of Technologies for Lower Energy Consumption in Smart Buildings. , 2018, , .		4
94	Hardware for Accelerating Anonymization Transparent to Network. , 2018, , .		4
95	How Can a Service-oriented Router Merge with a CDN?. IEJ Transactions on Electronics, Information and Systems, 2016, 136, 1172-1179.	0.2	4
96	Novel Method to Watermark Anonymized Data for Data Publishing. IEICE Transactions on Information and Systems, 2017, E100.D, 1671-1679.	0.7	4
97	Introducing a Distance Vector Routing Protocol for ns-3 Simulator. , 2015, , .		4
98	Dataflow Management Platform for Smart Communities using an Edge Computing Environment. , 2021, , .		4
99	Hierarchical Multiobjective Distributed Deep Learning for Residential Short-Term Electric Load Forecasting. IEEE Access, 2022, 10, 69950-69962.	4.2	4
100	Bilateral Teleoperation Based on Modal System Design. , 2005, , .		3
101	Structural Health Monitoring system considering fault-tolerance. , 2008, , .		3
102	Evaluation of cooperative demand control system on micro grid. , 2009, , .		3
103	Distributed Algorithm for Router-Based Management of Replica Server in Next-CDN Infrastructure. , 2013, , .		3
104	GPU-based Multi-stream Analyzer on Application Layer for Service-Oriented Router. , 2013, , .		3
105	Real-time METs estimation for effective indoor amenity control in HEMS. , 2013, , .		3
106	Accurate indoor condition control based on PMV prediction in BEMS environments. , 2013, , .		3
107	Analysis and implementation of WSN with Route Selection considering Energy Consumption. , 2016, , .		3
108	Automated generation method of recommendation for effective energy utilization as a HEMS service. , 2016, , .		3

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109	Time-series decomposition of power demand data to extract uncertain features. , 2017, , .		3
110	FROG: A Packet Hop Count based DDoS Countermeasure in NDN. , 2018, , .		3
111	On the Effectiveness of IP-Routable Entire-Packet Encryption Service Over Public Networks (November) Tj ETQq1 1 0.784314.3rgBT /Ov4.2	4.2	3
112	Improving Energy Efficiency in Data Centers by Controlling Task Distribution and Cooling. , 2018, , .		3
113	Data prediction for response flows in packet processing cache. , 2018, , .		3
114	Network Transparent Fog-based IoT Platform for Industrial IoT. , 2019, , .		3
115	Implementation of Content-Based Anonymization Edge Router on NetFPGA. , 2019, , .		3
116	Face-Image Anonymization as an Application of Multidimensional Data k-anonymizer. International Journal of Networking and Computing, 2021, 11, 102-119.	0.4	3
117	Sustainable Energy Consumption. Energies, 2021, 14, 6665.	3.1	3
118	Router-based Content-aware Data Redirection for Future CDN Systems. International Journal of Computer Network and Information Security, 2014, 6, 1-10.	1.9	3
119	<title>High-throughput network switch for the RHiNET-2 optically interconnected parallel computing system</title>. , 2000, , .		2
120	Energy Assessment of Cogeneration and Air Conditioning System on Keio University Shonan Fujisawa Campus. , 2006, , .		2
121	Quality of connectivity guarantee of ZigBee based wireless mobile sensor network. , 2009, , .		2
122	Lightweight Data Duplication for Fault Tolerant Structural Health onitoring System. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 255-258.	0.4	2
123	A Regular Expression Processor Embedded in Service-Friendly Router for Future Internet. , 2010, , .		2
124	Implementation of lossy haptic data compression using integer DCT to FPGA. , 2010, , .		2
125	OPTIMIZED CONTROL OF HOME ELECTRIC APPLIANCES CONSIDERING ENVIRONMENTAL AMENITY AND ELECTRIC POWER CONSUMPTION. Journal of Environmental Engineering (Japan), 2012, 77, 1011-1019.	0.4	2
126	Per hop data encryption protocol for transmission of motion control data over public networks. , 2014, , .		2



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127	Hyperthermic effects of hand bathing: benefits of incorporating finger flexion-extension exercise. Journal of Physical Therapy Science, 2015, 27, 3779-3782.	0.6	2
128	Time Synchronization Technique Using EPON for Next-Generation Power Grids. IEICE Transactions on Communications, 2016, E99.B, 859-866.	0.7	2
129	Effective communicating optimization for V2G with electric bus. , 2016, , .		2
130	Feature extraction and background information detection method using power demand. , 2017, , .		2
131	Self-Organizing Map Using Classification Method for Services in Multilayer Computing Environments. , 2018, , .		2
132	TmK-Anonymity: Perturbation-Based Data Anonymization Method for Improving Effectiveness of Secondary Use. , 2018, , .		2
133	Data Prediction for Response Flows in Packet Processing Cache. , 2018, , .		2
134	Estimation of Building Thermal Performance Using Simple Sensors and Air Conditioners. Energies, 2019, 12, 2950.	3.1	2
135	Digital Watermarking for Anonymized Data With Low Information Loss. IEEE Access, 2021, 9, 130570-130585.	4.2	2
136	Development of Multi Degrees-of-Freedom Bilateral Forceps Robot System Using FPGA. IEEJ Transactions on Industry Applications, 2007, 127, 508-517.	0.2	2
137	Energy Optimization Technologies in Smart Homes. , 2020, , .		2
138	A local area system network RHINET-1: a network for high performance parallel computing. , 0, , .		1
139	Development of multi-degree-of-freedom bilateral forceps robot system using FPGA. Electronics and Communications in Japan, 2008, 91, 23-33.	0.5	1
140	Perfect Classified Channel retaining DC balance for high-throughput communication. , 2008, , .		1
141	Haptic communication system using FPGA and real-time network framework. , 2009, , .		1
142	ESTIMATION METHOD OF THE NUMBER OF PEOPLE IN A ROOM BY USING ENVIRONMENTAL SENSORS. Journal of Environmental Engineering (Japan), 2010, 75, 355-362.	0.4	1
143	An expression of system connection considering transmission delay. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 2010, 170, 45-54.	0.4	1
144	Effective data sharing system for fault tolerant Structural Health Monitoring system. , 2010, , .		1

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145	Numerical Simulations of Rockfall Protection Retaining Wall Joined to Steel-Pile Foundation. Applied Mechanics and Materials, 0, 82, 716-721.	0.2	1
146	Development of Steam Generator Model Using RELAP5 to Simulate Two-Phase Natural Circulation for Pressurized Water Reactor. , 2014, , .		1
147	High-Throughput and Low-Cost Hardware Accelerator for Privacy Preserving Publishing. , 2014, , .		1
148	Coordination middleware for secure wireless sensor networks. , 2016, , .		1
149	Shutter control for cooling air flow management in data center servers. , 2016, , .		1
150	High-speed decompression architecture of compressed HTTP streams for the internet routers. , 2016, , .		1
151	Influence of noise-based perturbation on recommendation application. , 2016, , .		1
152	Temperature-Based Request Distribution for Effective CRAC and Equipment Life-Cycle Extension. , 2017, , .		1
153	Estimation of Required EVs Battery Capacity for Leveling Demand Energy Considering Parking Durations. International Journal of Intelligent Transportation Systems Research, 2017, 15, 155-165.	1.1	1
154	Efficient energy utilization based on task distribution and cooling airflow management in a data center. , 2017, , .		1
155	Blind Watermarking Method for Anonymized Data. , 2017, , .		1
156	Feature expression of frequency transform regarding daily power demand information. , 2017, , .		1
157	Proposal of Feature Value Selection Method for Time-Critical Learning. , 2018, , .		1
158	Request Distribution for Heterogeneous Database Server Clusters with Processing Time Estimation. , 2018, , .		1
159	Building Thermal Performance Assessments Using Simple Sensors for the Green New Deal in Japan. , 2018, , .		1
160	Exploring Variability in IoT Data for Human Activity Recognition. , 2019, , .		1
161	Adaptive Control Method of HVAC for Uniformizing Comfort at Japanese Residential Living Rooms Using Deep Reinforcement Learning. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 373-382.	0.2	1
162	Network Transparent Decrypting of Cryptographic Stream Considering Service Provision at the Edge. , 2021, , .		1

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163	Low-Power Network-Packet-Processing Architecture Using Process-Learning Cache for High-End Backbone Router. IEICE Transactions on Electronics, 2005, E88-C, 536-543.	0.6	1
164	An Expression of System Connection Considering Transmission Delay. IEEJ Transactions on Industry Applications, 2007, 127, 635-642.	0.2	1
165	Dynamic Load Balancing Using Actual Workload Traces Based on Central Processing Unit Temperatures. Journal of Electronic Packaging, Transactions of the ASME, 2019, 141, .	1.8	1
166	A network switch for supporting high-performance parallel processing by computers distributed in local areas. Systems and Computers in Japan, 2001, 32, 24-33.	0.2	0
167	RHiNET-2/SW: High-speed network switch implemented with parallel optical interconnection for parallel computing system. Electronics and Communications in Japan, 2002, 85, 1-10.	0.2	0
168	Synthesis for SoC architecture using VCores. , 0, , .		0
169	Realization of acceleration control using multirate sampling method. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 2008, 162, 72-81.	0.4	0
170	Design of acceleration control system considering current dynamics. , 2009, , .		0
171	Self-Organized Link State Aware Routing for Multiple Mobile Agents in Wireless Network. IEICE Transactions on Communications, 2010, E93-B, 2012-2021.	0.7	0
172	Estimation of Degrading Process of Tunnel Concrete. Procedia Engineering, 2011, 14, 3136-3141.	1.2	0
173	DATA BACKUP MECHANISM FOR STRUCTURAL HEALTH MONITORING SYSTEM. Journal of Environmental Engineering (Japan), 2011, 76, 439-447.	0.4	0
174	Numerical Simulations on Impact Resistant Behavior of Rahmen-Slab Type RC Structures. Applied Mechanics and Materials, 2011, 82, 583-588.	0.2	0
175	A case for routing cache on HPC switches. IEICE Communications Express, 2012, 1, 49-53.	0.4	0
176	DC-balanced perfect classified channel for hiding framing signals. IEEJ Transactions on Electrical and Electronic Engineering, 2013, 8, 610-615.	1.4	0
177	Demand control of a pool by means of residual chlorine sensor. , 2013, , .		0
178	Previous hop data retransmission service for SoR-based public networks. , 2014, , .		0
179	Experimental Study on Model Development for Liquid Accumulation in Steam Generator U-Tube (First) Tj ETQq1 1 0.784314 ggBT /Overl		0
180	Implementation and evaluation of HEMS management middleware using XML. , 2015, , .		0

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181	Implementation of Household's Amenity Maintaining System Based on Behavior Estimation. Procedia Environmental Sciences, 2016, 34, 582-593.	1.4	0
182	Influence of Reinforcing Bar Type On Flexural Behavior of R-UHPFRC. Procedia Engineering, 2017, 171, 977-984.	1.2	0
183	Architecture and Data Management for Smart Community Information Platform. , 2018, , 1-10.		0
184	On the effectiveness of using network device state information for network path selection. Procedia Computer Science, 2018, 130, 134-141.	2.0	0
185	Purchasing Behavior Prediction Model for Real Stores Considering Product Cluster and Time-series Patterns. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 471-482.	0.2	0
186	A Study for Protecting Cold Boot Attacks. IEEJ Transactions on Electronics, Information and Systems, 2010, 130, 1350-1356.	0.2	0
187	Effective Control System of Electric Home Appliances Considering Variability of Amenity Index Tendency. Transactions of the Society of Instrument and Control Engineers, 2014, 50, 471-477.	0.2	0
188	A Proposal of Campus Energy Management System Considering Learning Efficiency. Transactions of the Society of Instrument and Control Engineers, 2015, 51, 344-351.	0.2	0
189	Feature Extraction and Resident Number Prediction Method using Power Consumption Data. IEEJ Transactions on Electronics, Information and Systems, 2019, 139, 227-236.	0.2	0
190	RPC: An Approach for Reducing Compulsory Misses in Packet Processing Cache. IEICE Transactions on Information and Systems, 2020, E103.D, 2590-2599.	0.7	0
191	Architecture and Data Management for Smart Community Information Platform. , 2020, , 37-46.		0
192	Recommendation System for Energy Consumption Behavior Change on Residents's™ Response and Stress. , 2021, , .		0
193	Consistency Guaranteed Multi Container Migration for Smart Community Network Services. IEEJ Transactions on Electronics, Information and Systems, 2021, 141, 1453-1461.	0.2	0