

Kenichi Morita

List of Publications by Year in descending order

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106
papers

1,385
citations

331259

21
h-index

377514

34
g-index

118
all docs

118
docs citations

118
times ranked

455
citing authors

#	ARTICLE	IF	CITATIONS
1	Fredkin gates in simple reversible cellular automata. International Journal of Parallel, Emergent and Distributed Systems, 2022, 37, 249-272.	0.7	1
2	An instruction set for reversible Turing machines. Acta Informatica, 2021, 58, 377-396.	0.5	0
3	Reversible Logic Element with Memory as an Alternative Logical Device. , 2021, , 31-57.		0
4	A universal non-conservative reversible elementary triangular partitioned cellular automaton that shows complex behavior. Natural Computing, 2019, 18, 413-428.	1.8	8
5	Logical Gates via Gliders Collisions. Emergence, Complexity and Computation, 2018, , 199-220.	0.2	1
6	Reversible Computing. , 2018, , 463-488.		0
7	Reversible Cellular Automata. , 2018, , 1-25.		0
8	Reversible Cellular Automata. , 2018, , 105-128.		0
9	A Snapshot of My Life. Emergence, Complexity and Computation, 2018, , 1-3.	0.2	0
10	East-West paths to unconventional computing. Progress in Biophysics and Molecular Biology, 2017, 131, 469-493.	1.4	14
11	Two Small Universal Reversible Turing Machines. Emergence, Complexity and Computation, 2017, , 221-237.	0.2	5
12	Theory of Reversible Computing. Monographs in Theoretical Computer Science, 2017, , .	0.6	39
13	Reversible Cellular Automata. , 2017, , 1-25.		0
14	Reversible Computing. , 2017, , 1-26.		0
15	An 8-State Simple Reversible Triangular Cellular Automaton that Exhibits Complex Behavior. Lecture Notes in Computer Science, 2016, , 170-184.	1.0	6
16	General design of reversible sequential machines based on reversible logic elements. Theoretical Computer Science, 2015, 568, 19-27.	0.5	6
17	Universal Reversible Turing Machines with a Small Number of Tape Symbols. Fundamenta Informaticae, 2015, 138, 17-29.	0.3	5
18	Constructing Reversible Turing Machines by Reversible Logic Element with Memory. Emergence, Complexity and Computation, 2015, , 127-138.	0.2	4

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19	Reversible Cellular Automata. , 2015, , 1-23.		0
20	Reversible Computing. , 2015, , 1-24.		0
21	Reversibility in space-bounded computation. International Journal of General Systems, 2014, 43, 697-712.	1.2	3
22	How Can We Construct Reversible Machines Out of Reversible Logic Element with Memory?. Lecture Notes in Computer Science, 2014, , 352-366.	1.0	0
23	Brownian Circuits. ACM Journal on Emerging Technologies in Computing Systems, 2013, 9, 1-24.	1.8	32
24	Generalized Chat Noir is PSPACE-Complete. IEICE Transactions on Information and Systems, 2013, E96.D, 502-505.	0.4	2
25	A Deterministic Two-Way Multi-head Finite Automaton Can Be Converted into a Reversible One with the Same Number of Heads. Lecture Notes in Computer Science, 2013, , 29-43.	1.0	13
26	Computation in reversible cellular automata. International Journal of General Systems, 2012, 41, 569-581.	1.2	4
27	Finding the Minimum Number of Face Guards is NP-Hard. IEICE Transactions on Information and Systems, 2012, E95.D, 2716-2719.	0.4	4
28	Generalized Shisen-Sho is NP-Complete. IEICE Transactions on Information and Systems, 2012, E95.D, 2712-2715.	0.4	1
29	Universality of One-Dimensional Reversible and Number-Conserving Cellular Automata. Electronic Proceedings in Theoretical Computer Science, EPTCS, 2012, 90, 142-150.	0.8	2
30	Lower Bound of Face Guards of Polyhedral Terrains. Journal of Information Processing, 2012, 20, 435-437.	0.3	6
31	Reversible Cellular Automata. , 2012, , 231-257.		8
32	Design of 1-tape 2-symbol reversible Turing machines based on reversible logic elements. Theoretical Computer Science, 2012, 460, 78-88.	0.5	8
33	Reversible Computing. , 2012, , 2685-2701.		4
34	Reversible Computing Systems, Logic Circuits, and Cellular Automata. , 2012, , .		5
35	A Polynomial-Time Reduction from the 3SAT Problem to the Generalized String Puzzle Problem. Algorithms, 2012, 5, 261-272.	1.2	3
36	Sequential and maximally parallel multiset rewriting: reversibility and determinism. Natural Computing, 2012, 11, 95-106.	1.8	10

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37	Editorial for special issue on unconventional computation. Natural Computing, 2012, 11, 65-66.	1.8	0
38	Reversible Cellular Automata. , 2012, , 2668-2684.		1
39	Two-Way Reversible Multi-Head Finite Automata. Fundamenta Informaticae, 2011, 110, 241-254.	0.3	30
40	Simulating reversible Turing machines and cyclic tag systems by one-dimensional reversible cellular automata. Theoretical Computer Science, 2011, 412, 3856-3865.	0.5	12
41	NP-Hard and k-EXSPACE-Hard Cast Puzzles. IEICE Transactions on Information and Systems, 2010, E93-D, 2995-3004.	0.4	1
42	Universality Issues in Reversible Computing Systems and Cellular Automata (Extended Abstract). Electronic Notes in Theoretical Computer Science, 2010, 253, 23-31.	0.9	1
43	Computation with Competing Patterns in a Life-Like Automaton. , 2010, , 547-572.		9
44	On Reversibility and Determinism in P Systems. Lecture Notes in Computer Science, 2010, , 158-168.	1.0	6
45	Majority Adder Implementation by Competing Patterns in Life-Like Rule B2/S2345. Lecture Notes in Computer Science, 2010, , 93-104.	1.0	3
46	Universality of 2-State 3-Symbol Reversible Logic Elements – A Direct Simulation Method of a Rotary Element. Proceedings in Information and Communications Technology, 2010, , 252-259.	0.2	2
47	On the Non-existence of Rotation-Symmetric von Neumann Neighbor Number-Conserving Cellular Automata of Which the State Number is Less than Four. IEICE Transactions on Information and Systems, 2009, E92-D, 255-257.	0.4	4
48	Reversible Cellular Automata. , 2009, , 7679-7695.		2
49	Computational Complexity of Cast Puzzles. Lecture Notes in Computer Science, 2009, , 122-131.	1.0	0
50	Reversible computing and cellular automata – A survey. Theoretical Computer Science, 2008, 395, 101-131.	0.5	132
51	Computing by Swarm Networks. Lecture Notes in Computer Science, 2008, , 50-59.	1.0	6
52	An Asynchronous Cellular Automaton Implementing 2-State 2-Input 2-Output Reversed-Twin Reversible Elements. Lecture Notes in Computer Science, 2008, , 67-76.	1.0	27
53	A Recursive Padding Technique on Nondeterministic Cellular Automata. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2008, E91-A, 2335-2340.	0.2	0
54	Drift-compensated data acquisition performed at room temperature with frequency modulation atomic force microscopy. Applied Physics Letters, 2007, 90, 203103.	1.5	94

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55	Translational lemmas for DLOGTIME-uniform circuits, alternating TMs, and PRAMs. Acta Informatica, 2007, 44, 345-359.	0.5	1
56	A Universal Reversible Turing Machine. Lecture Notes in Computer Science, 2007, , 90-98.	1.0	24
57	A Time Hierarchy Theorem for Nondeterministic Cellular Automata. , 2007, , 511-520.		2
58	Complexity of evolution languages of the elementary cellular automaton of rule 146. Applied Mathematics, 2006, 21, 418-428.	0.6	3
59	PATTERN GENERATION AND PARSING BY ARRAY GRAMMARS. Series in Machine Perception and Artificial Intelligence, 2006, , 260-273.	0.1	0
60	Translational Lemmas for Alternating TMs and PRAMs. Lecture Notes in Computer Science, 2005, , 137-148.	1.0	2
61	Hierarchies of DLOGTIME-Uniform Circuits. Lecture Notes in Computer Science, 2005, , 211-222.	1.0	3
62	On simulations of self-reproducing cellular automata with shape-encoding mechanism. Electronics and Communications in Japan, Part III: Fundamental Electronic Science (English Translation of Denshi Tj ETQq0 0 OrgBT /Overlock 10 TF		
63	Asynchronous game of life. Physica D: Nonlinear Phenomena, 2004, 194, 369-384.	1.3	59
64	Universal delay-insensitive circuits with bidirectional and buffering lines. IEEE Transactions on Computers, 2004, 53, 1034-1046.	2.4	22
65	Simulation of one-dimensional cellular automata by uniquely parallel parsable grammars. Theoretical Computer Science, 2003, 304, 185-200.	0.5	1
66	A New Universal Logic Element for Reversible Computing. Topics in Computer Mathematics, 2003, , 285-294.	0.0	11
67	Self-Reproduction in Three-Dimensional Reversible Cellular Space. Artificial Life, 2002, 8, 155-174.	1.0	44
68	A quadratic speedup theorem for iterative arrays. Acta Informatica, 2002, 38, 847-858.	0.5	1
69	Constructible functions in cellular automata and their applications to hierarchy results. Theoretical Computer Science, 2002, 270, 797-809.	0.5	24
70	Embedding a Logically Universal Model and a Self-Reproducing Model into Number-Conserving Cellular Automata. Lecture Notes in Computer Science, 2002, , 164-175.	1.0	6
71	Universal Computing in Reversible and Number-Conserving Two-Dimensional Cellular Spaces. , 2002, , 161-199.		21
72	Cellular Automata and Artificial Life. Nonlinear Phenomena and Complex Systems, 2001, , 151-200.	0.0	11

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73	Number-Conserving Reversible Cellular Automata and Their Computation-Universality. RAIRO - Theoretical Informatics and Applications, 2001, 35, 239-258.	0.5	7
74	NP problems are tractable in the space of cellular automata in the hyperbolic plane. Theoretical Computer Science, 2001, 259, 99-128.	0.5	34
75	A Three-Dimensional Uniquely Parsable Array Grammar that Generates and Parses Cubes. Electronic Notes in Theoretical Computer Science, 2001, 46, 339-354.	0.9	0
76	A Simple Universal Logic Element and Cellular Automata for Reversible Computing. Lecture Notes in Computer Science, 2001, , 102-113.	1.0	59
77	Speeding-Up Cellular Automata by Alternations. Lecture Notes in Computer Science, 2001, , 240-251.	1.0	0
78	GENERATION AND PARSING OF MORPHISM LANGUAGES BY UNIQUELY PARALLEL PARSABLE GRAMMARS. , 2001, , 303-314.		1
79	A computation-universal two-dimensional 8-state triangular reversible cellular automaton. Theoretical Computer Science, 2000, 231, 181-191.	0.5	53
80	Uniquely Parsable Unification Grammars and Their Parser Implemented in Prolog. Grammars, 2000, 3, 63-81.	0.4	0
81	CHARACTERIZING THE ABILITY OF PARALLEL ARRAY GENERATORS ON REVERSIBLE PARTITIONED CELLULAR AUTOMATA. International Journal of Pattern Recognition and Artificial Intelligence, 1999, 13, 523-538.	0.7	4
82	Uniquely parsable array grammars for generating and parsing connected patterns. Pattern Recognition, 1999, 32, 269-276.	5.1	3
83	Universality of Reversible Hexagonal Cellular Automata. RAIRO - Theoretical Informatics and Applications, 1999, 33, 535-550.	0.5	20
84	On time-constructible functions in one-dimensional cellular automata. Lecture Notes in Computer Science, 1999, , 316-326.	1.0	6
85	A hierarchy of uniquely parsable grammar classes and deterministic acceptors. Acta Informatica, 1997, 34, 389-410.	0.5	10
86	Logical universality and self-reproduction in reversible cellular automata. Lecture Notes in Computer Science, 1997, , 152-166.	1.0	6
87	Firing squad synchronization problem in reversible cellular automata. Theoretical Computer Science, 1996, 165, 475-482.	0.5	36
88	Universality of a reversible two-counter machine. Theoretical Computer Science, 1996, 168, 303-320.	0.5	51
89	Self-reproduction in a reversible cellular space. Theoretical Computer Science, 1996, 168, 337-366.	0.5	45
90	Reversible simulation of one-dimensional irreversible cellular automata. Theoretical Computer Science, 1995, 148, 157-163.	0.5	66

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91	PARALLEL GENERATION AND PARSING OF ARRAY LANGUAGES USING REVERSIBLE CELLULAR AUTOMATA. International Journal of Pattern Recognition and Artificial Intelligence, 1994, 08, 543-561.	0.7	14
92	TWO-DIMENSIONAL UNIQUELY PARSABLE ISOMETRIC ARRAY GRAMMARS. International Journal of Pattern Recognition and Artificial Intelligence, 1992, 06, 301-313.	0.7	3
93	Computation-universality of one-dimensional one-way reversible cellular automata. Information Processing Letters, 1992, 42, 325-329.	0.4	46
94	Parallel generation and parsing of array languages using reversible cellular automata. Lecture Notes in Computer Science, 1992, , 213-230.	1.0	4
95	TWO-DIMENSIONAL UNIQUELY PARSABLE ISOMETRIC ARRAY GRAMMARS. Series in Machine Perception and Artificial Intelligence, 1992, , 91-103.	0.1	1
96	TWO-DIMENSIONAL THREE-WAY ARRAY GRAMMARS AND THEIR ACCEPTORS. International Journal of Pattern Recognition and Artificial Intelligence, 1989, 03, 353-376.	0.7	2
97	CONTEXT-SENSITIVITY OF TWO-DIMENSIONAL REGULAR ARRAY GRAMMARS. International Journal of Pattern Recognition and Artificial Intelligence, 1989, 03, 295-319.	0.7	17
98	An extended syllogistic system with conjunctive and complementary terms, and its completeness proof. Systems and Computers in Japan, 1989, 20, 80-95.	0.2	0
99	CONTEXT-SENSITIVITY OF TWO-DIMENSIONAL REGULAR ARRAY GRAMMARS. , 1989, , 17-41.		7
100	TWO-DIMENSIONAL THREE-WAY ARRAY GRAMMARS AND THEIR ACCEPTORS. , 1989, , 75-98.		0
101	An efficient reasoning method for syllogism and its application to knowledge processing. Systems and Computers in Japan, 1988, 19, 20-31.	0.2	3
102	On two-dimensional pattern-matching languages and their decision problems. Information Sciences, 1986, 40, 53-66.	4.0	1
103	On the Two-Dimensional Model of Biological System. Japanese Journal of Applied Physics, 1985, 24, 99.	0.8	0
104	The complexity of some decision problems about two-dimensional array grammars. Information Sciences, 1983, 30, 241-262.	4.0	7
105	Deterministic one-way simulation of two-way real-time cellular automata and its related problems. Information Processing Letters, 1982, 14, 158-161.	0.4	46
106	Reversible Logic Elements with Memory and Their Universality. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 128, 3-14.	0.8	0