# Kenichi Morita

List of Publications by Year
in descending order



| 106 | 1,385 | 331259 | 377514 |
|---|---|---|---|
| papers | citations | 21 h-index | 34 g-index |

| 118 | 118 | 118 | 455 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Reversible computing and cellular automataâ€"A survey. Theoretical Computer Science, 2008, 395, 101-131. | 0.5 | 132 |
| 2 | Drift-compensated data acquisition performed at room temperature with frequency modulation atomic force microscopy. Applied Physics Letters, 2007, 90, 203103. | 1.5 | 94 |
| 3 | Reversible simulation of one-dimensional irreversible cellular automata. Theoretical Computer Science, 1995, 148, 157-163. | 0.5 | 66 |
| 4 | Asynchronous game of life. Physica D: Nonlinear Phenomena, 2004, 194, 369-384. | 1.3 | 59 |
| 5 | A Simple Universal Logic Element and Cellular Automata for Reversible Computing. Lecture Notes in Computer Science, 2001, , 102-113. | 1.0 | 59 |
| 6 | A computation-universal two-dimensional 8-state triangular reversible cellular automaton. Theoretical Computer Science, 2000, 231, 181-191. | 0.5 | 53 |
| 7 | Universality of a reversible two-counter machine. Theoretical Computer Science, 1996, 168, 303-320. | 0.5 | 51 |
| 8 | 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 |
| 9 | Computation-universality of one-dimensional one-way reversible cellular automata. Information Processing Letters, 1992, 42, 325-329. | 0.4 | 46 |
| 10 | Self-reproduction in a reversible cellular space. Theoretical Computer Science, 1996, 168, 337-366. | 0.5 | 45 |
| 11 | Self-Reproduction in Three-Dimensional Reversible Cellular Space. Artificial Life, 2002, 8, 155-174. | 1.0 | 44 |
| 12 | Theory of Reversible Computing. Monographs in Theoretical Computer Science, 2017, , . | 0.6 | 39 |
| 13 | Firing squad synchronization problem in reversible cellular automata. Theoretical Computer Science, 1996, 165, 475-482. | 0.5 | 36 |
| 14 | NP problems are tractable in the space of cellular automata in the hyperbolic plane. Theoretical Computer Science, 2001, 259, 99-128. | 0.5 | 34 |
| 15 | Brownian Circuits. ACM Journal on Emerging Technologies in Computing Systems, 2013, 9, 1-24. | 1.8 | 32 |
| 16 | Two-Way Reversible Multi-Head Finite Automata. Fundamenta Informaticae, 2011, 110, 241-254. | 0.3 | 30 |
| 17 | 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 |
| 18 | Constructible functions in cellular automata and their applications to hierarchy results. Theoretical Computer Science, 2002, 270, 797-809. | 0.5 | 24 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | A Universal Reversible Turing Machine. Lecture Notes in Computer Science, 2007, , 90-98. | 1.0 | 24 |
| 20 | Universal delay-insensitive circuits with bidirectional and buffering lines. IEEE Transactions on Computers, 2004, 53, 1034-1046. | 2.4 | 22 |
| 21 | Universal Computing in Reversible and Number-Conserving Two-Dimensional Cellular Spaces. , 2002, , 161-199. | | 21 |
| 22 | Universality of Reversible Hexagonal Cellular Automata. RAIRO - Theoretical Informatics and Applications, 1999, 33, 535-550. | 0.5 | 20 |
| 23 | CONTEXT-SENSITIVITY OF TWO-DIMENSIONAL REGULAR ARRAY GRAMMARS. International Journal of Pattern Recognition and Artificial Intelligence, 1989, 03, 295-319. | 0.7 | 17 |
| 24 | 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 |
| 25 | East-West paths to unconventional computing. Progress in Biophysics and Molecular Biology, 2017, 131, 469-493. | 1.4 | 14 |
| 26 | 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 |
| 27 | Simulating reversible Turing machines and cyclic tag systems by one-dimensional reversible cellular automata. Theoretical Computer Science, 2011, 412, 3856-3865. | 0.5 | 12 |
| 28 | Cellular Automata and Artificial Life. Nonlinear Phenomena and Complex Systems, 2001, , 151-200. | 0.0 | 11 |
| 29 | A New Universal Logic Element for Reversible Computing. Topics in Computer Mathematics, 2003, , 285-294. | 0.0 | 11 |
| 30 | A hierarchy of uniquely parsable grammar classes and deterministic acceptors. Acta Informatica, 1997, 34, 389-410. | 0.5 | 10 |
| 31 | Sequential and maximally parallel multiset rewriting: reversibility and determinism. Natural Computing, 2012, 11, 95-106. | 1.8 | 10 |
| 32 | Computation with Competing Patterns inÂLife-Like Automaton. , 2010, , 547-572. | | 9 |
| 33 | Reversible Cellular Automata. , 2012, , 231-257. | | 8 |
| 34 | Design of 1-tape 2-symbol reversible Turing machines based on reversible logic elements. Theoretical Computer Science, 2012, 460, 78-88. | 0.5 | 8 |
| 35 | A universal non-conservative reversible elementary triangular partitioned cellular automaton that shows complex behavior. Natural Computing, 2019, 18, 413-428. | 1.8 | 8 |
| 36 | The complexity of some decision problems about two-dimensional array grammars. Information Sciences, 1983, 30, 241-262. | 4.0 | 7 |

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|---|---|---|---|
| 37 | Number-Conserving Reversible Cellular Automata and Their Computation-Universality. RAIRO - Theoretical Informatics and Applications, 2001, 35, 239-258. | 0.5 | 7 |
| 38 | CONTEXT-SENSITIVITY OF TWO-DIMENSIONAL REGULAR ARRAY GRAMMARS. , 1989, , 17-41. | | 7 |
| 39 | Lower Bound of Face Guards of Polyhedral Terrains. Journal of Information Processing, 2012, 20, 435-437. | 0.3 | 6 |
| 40 | General design of reversible sequential machines based on reversible logic elements. Theoretical Computer Science, 2015, 568, 19-27. | 0.5 | 6 |
| 41 | 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 |
| 42 | Logical universality and self-reproduction in reversible cellular automata. Lecture Notes in Computer Science, 1997, , 152-166. | 1.0 | 6 |
| 43 | Computing by Swarm Networks. Lecture Notes in Computer Science, 2008, , 50-59. | 1.0 | 6 |
| 44 | On Reversibility and Determinism in P Systems. Lecture Notes in Computer Science, 2010, , 158-168. | 1.0 | 6 |
| 45 | On time-constructible functions in one-dimensional cellular automata. Lecture Notes in Computer Science, 1999, , 316-326. | 1.0 | 6 |
| 46 | An 8-State Simple Reversible Triangular Cellular Automaton that Exhibits Complex Behavior. Lecture Notes in Computer Science, 2016, , 170-184. | 1.0 | 6 |
| 47 | Reversible Computing Systems, Logic Circuits, and Cellular Automata. , 2012, , . | | 5 |
| 48 | Universal Reversible Turing Machines with a Small Number of Tape Symbols. Fundamenta Informaticae, 2015, 138, 17-29. | 0.3 | 5 |
| 49 | Two Small Universal Reversible Turing Machines. Emergence, Complexity and Computation, 2017, , 221-237. | 0.2 | 5 |
| 50 | 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 |
| 51 | On the Non-existance 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 |
| 52 | Computation in reversible cellular automata. International Journal of General Systems, 2012, 41, 569-581. | 1.2 | 4 |
| 53 | Finding the Minimum Number of Face Guards is NP-Hard. IEICE Transactions on Information and Systems, 2012, E95.D, 2716-2719. | 0.4 | 4 |
| 54 | Reversible Computing. , 2012, , 2685-2701. | | 4 |

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| 55 | Constructing Reversible Turing Machines by Reversible Logic Element with Memory. Emergence, Complexity and Computation, 2015, , 127-138. | 0.2 | 4 |
| 56 | Parallel generation and parsing of array languages using reversible cellular automata. Lecture Notes in Computer Science, 1992, , 213-230. | 1.0 | 4 |
| 57 | An efficient reasoning method for syllogism and its application to knowledge processing. Systems and Computers in Japan, 1988, 19, 20-31. | 0.2 | 3 |
| 58 | TWO-DIMENSIONAL UNIQUELY PARSABLE ISOMETRIC ARRAY GRAMMARS. International Journal of Pattern Recognition and Artificial Intelligence, 1992, 06, 301-313. | 0.7 | 3 |
| 59 | Uniquely parsable array grammars for generating and parsing connected patterns. Pattern Recognition, 1999, 32, 269-276. | 5.1 | 3 |
| 60 | Complexity of evolution languages of the elementary cellular automaton of rule 146. Applied Mathematics, 2006, 21, 418-428. | 0.6 | 3 |
| 61 | A Polynomial-Time Reduction from the 3SAT Problem to the Generalized String Puzzle Problem. Algorithms, 2012, 5, 261-272. | 1.2 | 3 |
| 62 | Reversibility in space-bounded computation. International Journal of General Systems, 2014, 43, 697-712. | 1.2 | 3 |
| 63 | Majority Adder Implementation by Competing Patterns in Life-Like Rule B2/S2345. Lecture Notes in Computer Science, 2010, , 93-104. | 1.0 | 3 |
| 64 | Hierarchies of DLOGTIME-Uniform Circuits. Lecture Notes in Computer Science, 2005, , 211-222. | 1.0 | 3 |
| 65 | TWO-DIMENSIONAL THREE-WAY ARRAY GRAMMARS AND THEIR ACCEPTORS. International Journal of Pattern Recognition and Artificial Intelligence, 1989, 03, 353-376. | 0.7 | 2 |
| 66 | Universality of One-Dimensional Reversible and Number-Conserving Cellular Automata. Electronic Proceedings in Theoretical Computer Science, EPTCS, 2012, 90, 142-150. | 0.8 | 2 |
| 67 | Generalized Chat Noir is PSPACE-Complete. IEICE Transactions on Information and Systems, 2013, E96.D, 502-505. | 0.4 | 2 |
| 68 | Reversible Cellular Automata. , 2009, , 7679-7695. | | 2 |
| 69 | Universality of 2-State 3-Symbol Reversible Logic Elements â€" A Direct Simulation Method of a Rotary Element. Proceedings in Information and Communications Technology, 2010, , 252-259. | 0.2 | 2 |
| 70 | Translational Lemmas for Alternating TMs and PRAMs. Lecture Notes in Computer Science, 2005, , 137-148. | 1.0 | 2 |
| 71 | A Time Hierarchy Theorem for Nondeterministic Cellular Automata. , 2007, , 511-520. | | 2 |
| 72 | On two-dimensional pattern-matching languages and their decision problems. Information Sciences, 1986, 40, 53-66. | 4.0 | 1 |

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| 73 | A quadratic speedup theorem for iterative arrays. Acta Informatica, 2002, 38, 847-858. | 0.5 | 1 |
| 74 | Simulation of one-dimensional cellular automata by uniquely parallel parsable grammars. Theoretical Computer Science, 2003, 304, 185-200. | 0.5 | 1 |
| 75 | 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 ETQq1 1 0.784314 rgBT /Ove | 0.7 | 1 |
| 76 | Translational lemmas for DLOGTIME-uniform circuits, alternating TMs, and PRAMs. Acta Informatica, 2007, 44, 345-359. | 0.5 | 1 |
| 77 | NP-Hard and k-EXPSPACE-Hard Cast Puzzles. IEICE Transactions on Information and Systems, 2010, E93-D, 2995-3004. | 0.4 | 1 |
| 78 | Universality Issues in Reversible Computing Systems and Cellular Automata (Extended Abstract). Electronic Notes in Theoretical Computer Science, 2010, 253, 23-31. | 0.9 | 1 |
| 79 | Generalized Shisen-Sho is NP-Complete. IEICE Transactions on Information and Systems, 2012, E95.D, 2712-2715. | 0.4 | 1 |
| 80 | Logical Gates via Gliders Collisions. Emergence, Complexity and Computation, 2018, , 199-220. | 0.2 | 1 |
| 81 | GENERATION AND PARSING OF MORPHISM LANGUAGES BY UNIQUELY PARALLEL PARSABLE GRAMMARS. , 2001, , 303-314. | | 1 |
| 82 | Reversible Cellular Automata. , 2012, , 2668-2684. | | 1 |
| 83 | TWO-DIMENSIONAL UNIQUELY PARSABLE ISOMETRIC ARRAY GRAMMARS. Series in Machine Perception and Artificial Intelligence, 1992, , 91-103. | 0.1 | 1 |
| 84 | Fredkin gates in simple reversible cellular automata. International Journal of Parallel, Emergent and Distributed Systems, 2022, 37, 249-272. | 0.7 | 1 |
| 85 | 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 |
| 86 | Uniquely Parsable Unification Grammars and Their Parser Implemented in Prolog. Grammars, 2000, 3, 63-81. | 0.4 | 0 |
| 87 | 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 |
| 88 | Editorial for special issue on unconventional computation. Natural Computing, 2012, 11, 65-66. | 1.8 | 0 |
| 89 | An instruction set for reversible Turing machines. Acta Informatica, 2021, 58, 377-396. | 0.5 | 0 |
| 90 | Reversible Logic Element with Memory as an Alternative Logical Device. , 2021, , 31-57. | | 0 |

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|---|---|---|---|
| 91 | Speeding-Up Cellular Automata by Alternations. Lecture Notes in Computer Science, 2001, , 240-251. | 1.0 | 0 |
| 92 | PATTERN GENERATION AND PARSING BY ARRAY GRAMMARS. Series in Machine Perception and Artificial Intelligence, 2006, , 260-273. | 0.1 | 0 |
| 93 | 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 |
| 94 | Computational Complexity of Cast Puzzles. Lecture Notes in Computer Science, 2009, , 122-131. | 1.0 | 0 |
| 95 | Reversible Logic Elements with Memory and Their Universality. Electronic Proceedings in Theoretical Computer Science, EPTCS, 0, 128, 3-14. | 0.8 | 0 |
| 96 | How Can We Construct Reversible Machines Out of Reversible Logic Element with Memory?. Lecture Notes in Computer Science, 2014, , 352-366. | 1.0 | 0 |
| 97 | On the Two-Dimensional Model of Biological System. Japanese Journal of Applied Physics, 1985, 24, 99. | 0.8 | 0 |
| 98 | Reversible Cellular Automata. , 2015, , 1-23. | | 0 |
| 99 | Reversible Computing. , 2015, , 1-24. | | 0 |
| 100 | Reversible Cellular Automata. , 2017, , 1-25. | | 0 |
| 101 | Reversible Computing. , 2017, , 1-26. | | 0 |
| 102 | Reversible Computing. , 2018, , 463-488. | | 0 |
| 103 | Reversible Cellular Automata. , 2018, , 1-25. | | 0 |
| 104 | Reversible Cellular Automata. , 2018, , 105-128. | | 0 |
| 105 | A Snapshot of My Life. Emergence, Complexity and Computation, 2018, , 1-3. | 0.2 | 0 |
| 106 | TWO-DIMENSIONAL THREE-WAY ARRAY GRAMMARS AND THEIR ACCEPTORS. , 1989, , 75-98. | | 0 |