Universality and complexity in cellular automata

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#	Paper	IF	Citations
1145	.		
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1142	Ou en est la Turbulence Developpè?. **1985**, T9, 137-146		23
1141	Twenty Problems in the Theory of Cellular Automata. **1985**, T9, 170-183		92
1140	A multi-processor cellular automaton chip.		2
1139	Phase transitions in two-dimensional stochastic cellular automata. **1986**, 19, L69-L75		17
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1136	Long-range effects in an elementary cellular automaton. **1986**, 45, 27-39		52
1135	Annealed and quenched inhomogeneous cellular automata (INCA). **1986**, 45, 875-883		26
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1133	Pixelated structures as a compositional medium. **1986**, 2, 243-254		2
1132	Periodic orbits for additive cellular automata. **1986**, 1, 277-288		5
1131	Pattern formation in reversible cellular automata. **1986**, 19, L933-L939		5
1130	Distribution and Entropy of Clusters in Growth Models. **1986**, 2, 823-828		7
1129	Invariants in automata networks. **1986**, 19, L961-L965		4

1128 Linearization and Synthesis of Cellular Automata: The Additive Case. **1986**, 34, 444-448 6

1127 Model for the formation of nonequilibrium clusters. **1986**, 33, 3618-3621 4

1126 Periods and clusters in Ising cellular automata. **1987**, 20, 4939-4948 27

1125 Some more exact enumeration results for 1D cellular automata. **1987**, 20, 4039-4046 12

1124 Exact solution for a model on directed lattices. **1987**, 20, L521-L527 1

1123 On the approach of the stationary state in Kauffman's random Boolean network. **1987**, 48, 185-191 46

1122 Multiplicities and instabilities in chemically reacting systems a review. **1987**, 42, 1005-1047 155

1121 Microeconomic foundations of cyclical irregularities or haos**1987**, 13, 185-214 9

1120 A mathematical classification of the one-dimensional deterministic cellular automata. **1987**, 112, 627-631 3

1119 Biogenesis and the growth of DNA-like polymer chains: A computer simulation. **1988**, 153, 202-216 4

1118 Dynamics of selected reactions catalyzed by platinum supported on zeolites and Al2O3. **1988**, 3, 475-483 6

1117 Intriguing properties of global structure in some classes of finite cellular automata. *Physica D: Nonlinear Phenomena*, **1988**, 31, 318-338 3.3 6

1116 Onset of turbulent pattern in a coupled map lattice. Case for soliton-like behavior. **1988**, 128, 349-354 5

1115 Symplectic cellular automata. **1988**, 129, 9-16 25

1114 Applications of cellular automata: attractors and fractals in analytical chemistry?. **1988**, 7, 240-244 2

1113 The power of totalistic cellular automata and totalistic systolic networks. **1988**, 11, 367-369

1112 . **1988**, 37, 138-145 38

1111 Cellular Robotic Systems: Self-organizing Robots And Kinetic Pattern Generation. 5

1110	Microscopic and macroscopic entropy. **1988**, 38, 4794-4798	20
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1108	Inhomogeneous mean-field approximation for phase transitions in probabilistic cellular automata: an example. **1988**, 21, 1283-1292	1
1107	A connection between the percolation transition and the onset of chaos in the Kauffman model. **1988**, 21, 2481-2486	13
1106	5. Computability Considerations: Looking at the Numbers. **1988**, T20, 50-56	
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1100	A geometrical interpretation of the chaotic state of inhomogeneous deterministic cellular automata. **1989**, 160, 275-297	4
1099	A numerical study of one-dimensional cellular automata. *Physica D: Nonlinear Phenomena*, **1989**, 39, 352-364	2
1098	Nonstationary dissipative structures and diffusion-induced chaos in nonlinear media. **1989**, 176, 189-370	40
1097	. **1989**, 38, 148-149	3
1096	. **1989**, 8, 842-859	212
1095	. **1989**, 38, 769-774	10
1094	. **1989**, 38, 1466-1473	136
1093	On the Limit Sets of Cellular Automata. **1989**, 18, 831-842	77

1092	.		13
1091	.		4
1090	Kinetic Phase Transition in a One Component Irreversible Reaction Model. **1990**, T33, 65-70		1
1089	. **1990**, 38, 2099-2107		22
1088	The algebraic properties of finite cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 41, 282-294	3.3	2
1087	Transition phenomena in cellular automata rule space. *Physica D: Nonlinear Phenomena*, **1990**, 45, 77-94	3.3	91
1086	Is there a sharp phase transition for deterministic cellular automata?. *Physica D: Nonlinear Phenomena*, **1990**, 45, 95-104	3.3	25
1085	Wolfram's class IV automata and a good life. *Physica D: Nonlinear Phenomena*, **1990**, 45, 105-121	3.3	41
1084	A hierarchical classification of cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 45, 136-156	3.3	47
1083	Invertible cellular automata: A review. *Physica D: Nonlinear Phenomena*, **1990**, 45, 229-253	3.3	226
1082	Computation theoretic aspects of cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 45, 357-378	3.3	74
1081	Attractor dominance patterns in sparsely connected boolean nets. *Physica D: Nonlinear Phenomena*, **1990**, 45, 441-451	3.3	12
1080	A distributed dynamic load balancer and its implementation on multi-transputer systems for molecular dynamics simulation. **1990**, 60, 39-45		17
1079	Emergent computation: Self-organizing, collective, and cooperative phenomena in natural and artificial computing networks. *Physica D: Nonlinear Phenomena*, **1990**, 42, 1-11	3.3	74
1078	Computation at the edge of chaos: Phase transitions and emergent computation. *Physica D: Nonlinear Phenomena*, **1990**, 42, 12-37	3.3	937
1077	Nearest neighbor cellular automata over Z2 with periodic boundary conditions. *Physica D: Nonlinear Phenomena*, **1990**, 45, 26-35	3.3	7
1076	Boolean derivatives on cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 45, 63-74	3.3	51
1075	Criticality in cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 45, 122-135	3.3	21

1074	An informational process based on reversible universal cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 45, 254-270	3.3	100
1073	Classifying circular cellular automata. *Physica D: Nonlinear Phenomena*, **1990**, 45, 386-395	3.3	36
1072	Maps of recent cellular automata and lattice gas automata literature. *Physica D: Nonlinear Phenomena*, **1990**, 45, 477-479	3.3	5
1071	The quantum coin toss-testing microphysical undecidability. **1990**, 143, 433-437		29
1070	Bibliography. **1990**, 553-621		
1069	Energy and attractors in parallel Potts dynamics. **1990**, 23, 1329-1332		1
1068	Scaling of overhangs in (1+1)-dimensional directed processes in a gradient. **1990**, 23, L145-L151		10
1067	Annihilation of Defects during the Evolution of Some One-Dimensional Class-3 Deterministic Cellular Automata. **1990**, 13, 489-494		5
1066	Kinetic Ising cellular automata models in one dimension. **1990**, 23, 2147-2156		5
1065	Critical behavior of an autocatalytic reaction model. **1990**, 41, 5294-5301		73
1064	.		3
1063	. **1990**, 39, 1273-1283		21
1062	. **1990**, 9, 767-778		122
1061	Biological aspects of theoretical shell morphology. **1990**, 23, 195-212		55
1060	. **1990**, 12, 74-78		4
1059	Seismic fluids and percolation theory. **1991**, 96, 8417		6
1058	.		277
1057	Analytic determination of stationary patterns of cellular automata. **1991**, 159, 379-383		

1056	Long-range correlations in chaotic cellular automata. *Physica D: Nonlinear Phenomena*, **1991**, 48, 295-310	3.3	5
1055	The structure of reversible one-dimensional cellular automata. *Physica D: Nonlinear Phenomena*, **1991**, 52, 277-292	3.3	7
1054	Dynamics of a large system of coupled nonlinear oscillators. *Physica D: Nonlinear Phenomena*, **1991**, 52, 293-331	3.3	188
1053	Block transformations of one-dimensional deterministic cellular automaton rules. **1991**, 24, 1849-1865		7
1052	Particlelike structures and their interactions in spatiotemporal patterns generated by one-dimensional deterministic cellular-automaton rules. **1991**, 44, 866-875		68
1051	Transients, cycles, and complexity in cellular automata. **1991**, 44, R7881-R7884		9
1050	Effect Of Noise On Long Term Memory In Cellular Automata With Asynchronous Delays Between The Processors.		
1049	.		2
1048	Two Pattern Learning Algorithms Using Dynamical Systems.		
1047	Spontaneous evolution of spatiotemporal patterns in materials. **1992**, 55, 723-795		57
1046	.		0
1045	.		0
1044	.		18
1043	Phenomenology of nonlocal cellular automata. **1992**, 68, 829-882		32
1042	The kink of cellular automaton rule 18 performs a random walk. **1992**, 69, 1131-1136		29
1041	Measure theoretic approach to the classification of cellular automata. **1992**, 39, 125-136		3
1040	Calculating growth rates and moments for additive cellular automata. **1992**, 35, 47-65		12
1039	Noisy collective behaviour in deterministic cellular automata. **1992**, 180, 19-41		58

1038	Towards the classification of all Boolean cellular automata. **1992**, 182, 320-324		2
1037	Self-organization toward criticality in the Game of Life. *BioSystems*, **1992**, 26, 135-8	1.9	12
1036	Damage spreading and Lyapunov exponents in cellular automata. **1992**, 172, 34-38		61
1035	Transient behavior of cellular automaton rule 110. **1992**, 166, 335-339		9
1034	Collective behaviors in a family of high-dimensional cellular automata. **1992**, 163, 279-285		11
1033	Noise, chaos, and (μ)-entropy per unit time. **1993**, 235, 291-343		167
1032	Measuring complexity using information fluctuation. **1993**, 172, 416-425		60
1031	Collective behaviour of a probabilistic cellular automaton with two absorbing phases. **1993**, 181, 33-38		6
1030	Turbulent pattern bases for cellular automata. *Physica D: Nonlinear Phenomena*, **1993**, 69, 279-301	3.3	65
1029	Transformations of one-dimensional cellular automaton rules by translation-invariant local surjective mappings. *Physica D: Nonlinear Phenomena*, **1993**, 68, 416-426	3.3	7
1028	Cellular automata approach to site percolation on Z2. A numerical study. **1993**, 73, 399-408		1
1027	.		
1026	.		
1025	Cellular Automata Synthesis Based On Precomputed Test Vectors For Built-in Self-test.		5
1024	.		
1023	.		
1022	Cellular Automata and Fractal Urban Form: A Cellular Modelling Approach to the Evolution of Urban Land-Use Patterns. **1993**, 25, 1175-1199		727
1021	Optically driven quantum networks: Applications in molecular electronics. **1993**, 48, 2335-2346		46

1020	Nonlinear dynamics of the cellular-automaton "game of Life". **1993**, 48, 3345-3351		17
1019	Bibliography. **1993**, 393-448		
1018	Chapter 8 Mathematical Models of Different Types of Oscillations in Heterogeneous Catalytic Systems. **1994**, 269-378		2
1017	A Novel Quantum Cellular Automata Logic with Loop Structures. **1994**, 33, L1502-L1505		12
1016	.		2
1015	Parametric ordering of complex systems. **1994**, 49, 2023-2025		12
1014	Evolution and extinction of families in cellular automata. **1994**, 49, 5900-5902		4
1013	Fractal evolution of normalized feedback systems on a lattice. **1994**, 186, 145-151		
1012	Predecessors of cellular automata states III. Garden of Eden classification of cellular automata. *Physica D: Nonlinear Phenomena*, **1994**, 73, 152-167	3.3	5
1011	Multilevel evolution: replicators and the evolution of diversity. *Physica D: Nonlinear Phenomena*, **1994**, 75, 275-291	3.3	25
1010	Computer simulations of self-organized wind ripple patterns. *Physica D: Nonlinear Phenomena*, **1994** , 77, 238-260	3.3	48
1009	(Anti-) stable points and the dynamics of extended systems. **1994**, 187, 167-170		
1008	A universal cellular automaton in quasi-linear time and its S□n□ form. **1994**, 123, 199-237		31
1007	Stabilization of cellular automata governed by non-symmetric deterministic and homogeneous dynamics on square lattice. **1994**, 95, 519-530		2
1006	.		
1005	Field Theory for a Model of Self-Organized Criticality. **1994**, 27, 97-102		93
1004	Sequential predation: a multi-model study. **1995**, 174, 149-167		13
1003	Global analysis of self-similarity features of cellular automata: selected examples. *Physica D: Nonlinear Phenomena*, **1995**, 86, 64-80	3.3	16

1002	Forecasting the spatial dynamics of gypsy moth outbreaks using cellular transition models. **1995**, 10, 177-189	27
1001	Characteristic representation of elementary cellular automata. **1995**, 198, 23-33	2
1000	Pattern growth in elementary cellular automata. **1995**, 145, 1-26	35
999	Divisibility and cellular automata. **1995**, 6, 105-112	2
998	Relaxation and limit cycles in a global version of the quenched Kauffman model. **1995**, 216, 120-127	1
997	Block-analyzing method in cellular automata. **1995**, 52, 3566-3569	1
996	Role of initial conditions in the classification of the rule space of cellular automata dynamics. **1995**, 51, 3032-3037	9
995	The operation of the social system in a model based on cellular automata. **1995**, 34, 413-441	3
994	. **1995**, 44, 805-816	30
993	Mixed deterministic and pseudorandom test vector generator based on cellular automata structures.	
992	Pattern recognition using Boltzmann machine.	0
991	Analysis of one-dimensional linear hybrid cellular automata over GF(q). **1996**, 45, 782-792	17
990	A cellular-automaton model for cooperative effects in matter-radiation interaction: the semiconductor laser. **1996**, 111, 863-877	1
989	SUZANA: a 3D CAD tool for anisotropically etched silicon microstructures.	7
988	Self-organization between local and non-local interaction in 2-D cellular automata.	1
987	The FAST architecture: a neural network with flexible adaptable-size topology.	7
986	Dynamical systems as models for physical processes. **1996**, 1, 23-33	9
985	Computer simulations of the temperature dependence of the uniaxial magnetic anisotropy induced in amorphous FeBSi thin films during rf sputtering. **1996**, 160, 341-342	6

984	Co-evolving non-uniform cellular automata to perform computations. *Physica D: Nonlinear Phenomena*, **1996**, 92, 193-208	3.3	59
983	Toward a viable, self-reproducing universal computer. *Physica D: Nonlinear Phenomena*, **1996**, 97, 335-352	3.3	69
982	SIMULATING THE SPATIO-TEMPORAL DYNAMICS OF THE PINE CATERPILLAR (DENDROLIMUS PUNCTATUS WALKER) DAMAGE USING THE GENERALIZED CA MODEL. **1996**, 3, 263-270		
981	When Two and Two Make Four: A Structured Population Without Chaos. **1996**, 178, 89-97		20
980	Multiplication-free evaluation of polynomials via a Stochastic Bernstein Representation. **1996**, 79, 1-25		
979	Damage spreading in non-frustrated phase of a triangular antiferromagnet. **1996**, 232, 162-170		2
978	Visualising global behaviour of 1D cellular automata image sequences in 2D maps. **1996**, 233, 785-800		12
977	Consensus formation and the cellular automata. **1996**, 19, 15-22		5
976	Computational complexity of symbolic dynamics at the onset of chaos. **1996**, 53, 4477-4485		8
975	The evolutionary organization as a complex adaptive system.		2
974	The firefly machine: online evolware.		13
973	Phase transitions in random networks: Simple analytic determination of critical points. **1997**, 55, 257-260		70
972	The use of constrained cellular automata for high-resolution modelling of urban land-use dynamics. **1997**, 24, 323-343		392
971	A self-modifying cellular automaton model of historical urbanization in the San Francisco Bay area. **1997**, 24, 247-261		942
970	Some properties of maximum length cellular automaton sequences.		
969	A cellular automaton for the simulation of competitive location. **1997**, 24, 205-218		23
968	Dynamics, Complexity and Computation. **1997**, 69-103		1
967	Self-organizing cities. **1997**, 29, 353-380		34

966	Sensitive dependence on initial conditions for cellular automata. *Chaos*, **1997**, 7, 688-693	3.3	16
965	One-dimensional cellular automata characterization by the roughness exponent. **1997**, 245, 461-471		17
964	Phase transition in an elementary probabilistic cellular automaton. **1997**, 235, 473-485		4
963	A dynamic phase diagram of the planar Ising antiferromagnet. **1997**, 242, 219-229		1
962	Co-evolving architectures for cellular machines. *Physica D: Nonlinear Phenomena*, **1997**, 99, 428-441	3.3	32
961	Self-organized criticality resulting from minimization of perpetual disequilibration. *Physica D: Nonlinear Phenomena*, **1997**, 102, 275-284	3.3	2
960	The topological skeleton of cellular automaton dynamics. *Physica D: Nonlinear Phenomena*, **1997**, 103, 155-168	3.3	10
959	Computational mechanics of cellular automata: An example. *Physica D: Nonlinear Phenomena*, **1997**, 103, 169-189	3.3	94
958	Designing cellular automata using a parallel evolutionary algorithm. **1997**, 389, 278-283		3
957	The evolution of parallel cellular machines: toward evolware. *BioSystems*, **1997**, 42, 29-43	1.9	20
956	Additive one-dimensional cellular automata are chaotic according to Devaney's definition of chaos. **1997**, 174, 157-170		24
955	The magic rule spaces of neural-like elementary cellular automata. **1997**, 178, 77-102		4
954	How the neighborhood coherence principle (NCP) can give rise to tissue homeostasis: a cellular automaton approach. **1997**, 185, 475-87		6
953	On the Emergence of Large-scale Complex Behavior in the Dynamics of a Society of Living Individuals: the Stochastic Game of Life. **1997**, 187, 183-194		8
952	Nonlinear science The impact of biology. **1997**, 334, 971-1014		6
951	Adaptive evolution of holon networks by an autonomous decentralized method. **1998**, 91, 43-61		14
950	Diffusion on complex cellular automata patterns. **1998**, 260, 338-348		4
949	Built-in self-test generator design using nonuniform cellular automata model. **1998**, 145, 155		4

948 Studying artificial life with a molecular automaton. **1998**, 193, 257-85 15

947 Pattern formation in a patch occupancy metapopulation model: a cellular automata approach. **1998**, 194, 79-90 23

946 Complex Chaotic Systems and Emergent Phenomena. **1998**, 8, 235-259 13

945 Phenomenology of excitation in 2-D cellular automata and swarm systems. **1998**, 9, 1233-1265 21

944 Generalized sub-shifts in elementary cellular automata: the Strange case of chaotic rule 180. **1998**, 201, 171-187 7

943 Measures of statistical complexity: Why?. **1998**, 238, 244-252 258

942 Non-trivial collective behavior in three-dimensional totalistic illegal cellular automata with high connectivity. **1998**, 240, 151-159 4

941 Scheduling tasks of a parallel program in two-processor systems with use of cellular automata. **1998**, 14, 351-364 7

940 1 Fluctuation in the Game of Life *Physica D: Nonlinear Phenomena*, **1998**, 118, 49-52 3.3 28

939 Introduction To Artificial Life. **1998**, 2, 168-170 8

938 Tight Bounds on Periodic Cell Configurations in Life. **1998**, 7, 221-241 3

937 Application of a renormalization group algorithm to nonequilibrium cellular automata with one absorbing state. **1998**, 57, 6289-6295 2

936 Discovery with genetic algorithm scheduling strategies for cellular automata. **1998**, 643-652 7

935 Inducing an order on cellular automata by a grouping operation. **1998**, 116-127 12

934 Additive cellular automata over Zp and the bottom of (CA,) **1998**, 834-843 1

933 Adaptation in co-evolving non-uniform cellular automata. **1998**, 90-97 0

932 Cities and cellular automata. **1998**, 2, 111-125 25

931 Cellular Arrays. **1999**,

930	Cellular Automata. **1999**,		
929	Distributed Simulation with Cellular Automata: Architecture and Applications. **1999**, 203-248		4
928	FPGA implementation of four-step genetic search algorithm.		2
927	Semiotics of the artificial: The Self of self-reproducing systems in cellular automata. **1999**, 127,		7
926	PROGRAMMABLE CELLULAR AUTOMATA. **1999**, 09, 255-260		1
925	Synchronization of coupled systems with spatiotemporal chaos. **1999**, 59, R2520-R2522		35
924	Fundamental laws and the completeness of physics 1 This paper was presented under the title Fundamental Laws at the 25th Annual Philosophy of Science Conference held at the Inter University Centre in Dubrovnik, Croatia, 12–17 April 1999. I am grateful to those present for their comments and criticism, especially James Robert Brown, Richard Arthur, David Davies, Andrew Reynolds and Jean-Pierre Marquis. I would also like to acknowledge the benefit of discussions of an earlier version of the paper with Davi. **1999**, 13, 261-274		2
923	Braids of vortex filaments generated by laser on metal surface. **1999**, 259, 479-487		6
922	Riddled basins of coupled elastic arches. **1999**, 260, 453-461		13
921	Characterizing critical rules at the 'edge of chaos'. *BioSystems*, **1999**, 49, 127-42	1.9	10
920	FPGA Implementation of one-dimensional and two-dimensional cellular automata. **1999**, 430, 127-142		0
919	Microscopic chaos from brownian motion?. **1999**, 401, 875-875		43
918	Microscopic chaos from brownian motion?. **1999**, 401, 875-876		22
917	Global fixed point attractors of circular cellular automata and periodic tilings of the plane: Undecidability results. **1999**, 199, 103-122		9
916	Whose Thoughts Are They, Anyway? Dimensionally Exploding Bion's Double-Headed Arrow into Coadapting, Transitional Space. **1999**, 3, 65-92		4
915	Simulation of EEG: dynamic changes in synaptic efficacy, cerebral rhythms, and dissipative and generative activity in cortex. **1999**, 81, 131-47		29
914	Convolution-Generated Motion as a Link between Cellular Automata and Continuum Pattern Dynamics. **1999**, 151, 836-861		21
913	The emergence hypothesis and computational universality at the edge of chaos. **1999**, 82, 1-8		1

912	Synchronization and maximum Lyapunov exponents of cellular automata. **1999**, 59, R1307-R1310		37
911	Making Music with Algorithms: A Case-Study System. **1999**, 23, 19-30		48
910	Hardware implementation of four-step genetic search algorithm. **1999**,		4
909	Synthesis of self-replication cellular automata using genetic algorithms. **2000**,		3
908	Evolutionary financial market models. **2000**, 287, 507-523		14
907	Network evolution and the emergence of structure. **2000**, 51-90		2
906	A GROUP INTERPRETATION OF PARTICLES GENERATED BY ONE-DIMENSIONAL CELLULAR AUTOMATON, WOLFRAM'S RULE 54. **2000**, 11, 101-123		7
905	(Quantum) spacetime as a statistical geometry of lumps in random networks. **2000**, 17, 2029-2057		21
904	A brief history of cellular automata. **2000**, 32, 80-107		168
903	References. **2000**, 275-308		
902	Mutual information in a dilute, asymmetric neural network model. **2001**, 63, 041905		14
901	Computer Aided Systems Theory □EUROCAST 2001. **2001**,		2
900	Nonlinear dynamics of the microwave stimulated emission in dissipative paramagnetic systems.		
899	Graph-Cellular Automata: A Generalised Discrete Urban and Regional Model. **2001**, 28, 687-705		61
898	Highly symmetric cellular automata and their symmetry-breaking patterns. *Physica D: Nonlinear Phenomena*, **2001**, 148, 255-271	3.3	
897	Upper bound on the products of particle interactions in cellular automata. *Physica D: Nonlinear Phenomena*, **2001**, 154, 240-258	3.3	28
896	A cellular neural network modeling the behavior of reconfigurable cellular automata. **2001**, 25, 379-387		5
895	Randomness on full shift spaces?. **2001**, 12, 491-503		4

894	Convolution□hresholding Methods for Interface Motion. **2001**, 169, 678-707		17
893	Brave new modeling: Cellular automata and artificial neural networks for mastering complexity in economics. **2001**, 7, 39-47		4
892	Toward an integrated continuum model of cerebral dynamics: the cerebral rhythms, synchronous oscillation and cortical stability. *BioSystems*, **2001**, 63, 71-88	1.9	87
891	INTERMITTENT COLLECTIVE BEHAVIOR IN CELLULAR AUTOMATA. **2001**, 12, 1229-1239		1
890	Low-Density Series Expansion for the Domany-Kinzel Model. **2001**, 70, 359-366		3
889	Fractal and chaotic behavior of circular cellular automata. **2001**, 64, 036105		1
888	Parallel implementations of cellular automata algorithms on the AGILA high performance computing system.		0
887	ONE-DIMENSIONAL CELLULAR AUTOMATA WITH MEMORY: PATTERNS FROM A SINGLE SITE SEED. **2002**, 12, 205-226		20
886	A quantized chaotic spiking oscillator: analysis and implementation.		
885	Enhanced Environments: Large-Scale, Real-Time Ecosystems. **2002**, 11, 221-246		3
884	Encryption based on reversible cellular automata.		0
883	International communication of technological knowledge: an empirical study of Taiwan's manufacturing firms. **2002**, 1, 82		1
882	Heat conduction and entropy production in a one-dimensional hard-particle gas. **2002**, 89, 180601		139
881	A persistence criterion for metapopulations. **2002**, 61, 115-25		29
880	TWO-DIMENSIONAL CELLULAR AUTOMATA WITH MEMORY: PATTERNS STARTING WITH A SINGLE SITE SEED. **2002**, 13, 49-65		8
879	ANALYSIS OF A QUANTIZED CHAOTIC SYSTEM. **2002**, 12, 1207-1218		15
878	Synthetic Harmonies: An Approach to Musical Semiosis by Means of Cellular Automata. **2002**, 35, 153-159		9
877	Calibration of stochastic cellular automata: the application to rural-urban land conversions. **2002**, 16, 795-818		409

876 Sequential and parallel cellular automata-based scheduling algorithms. **2002**, 13, 1009-1023 31

875 Applying cellular automata in multiprocessor scheduling. 1

874 Dynamic behaviour forecast as a driving force in the coevolution of one-dimensional cellular automata.

873 An interdisciplinary modelling approach to evaluate the effects of land use change. **2002**, 27, 655-662 50

872 From embodied to socially embedded agents Implications for interaction-aware robots. **2002**, 3, 397-428 116

871 Fuzzy automata and life. **2002**, 7, 19-29 34

870 Intermittent collective behavior in totalistic cellular automata with high connectivity. **2002**, 18, 921-929

869 Dualities for a Class of Finite Range Probabilistic Cellular Automata in One Dimension. **2002**, 106, 915-922 6

868 The role of depth and 1/f dynamics in perceiving reversible figures. **2003**, 7, 161-80 23

867 The secret-key block cipher MKC1. **2003**, 86, 68-83

866 . **2003**, 8, 5-25 10

865 A numerical simulation of pool boiling using CAS model. **2003**, 46, 4789-4797 10

864 Reversible cellular automata with memory: two-dimensional patterns from a single site seed. *Physica D: Nonlinear Phenomena*, **2003**, 175, 1-30 3.3 45

863 Enhancing evolvability with mutation buffering mediated through multiple weak interactions. *BioSystems*, **2003**, 69, 127-42 1.9 3

862 Cellular automata and intermediate degrees. **2003**, 296, 365-375 14

861 Modelling dynamic spatial processes: simulation of urban future scenarios through cellular automata. **2003**, 64, 145-160 344

860 How Landscapes Change. **2003**, 5

859 BACK MATTER. **2003**, 233-248

858	Cellular automaton model for the simulation of laser dynamics. **2003**, 67, 066708	23
857	Mixed system and component level T-CAD for micro fabrication.	
856	Artificial Societies: Multiagent Systems and the Micro-Macro Link in Sociological Theory. **2003**, 31, 325-363	97
855	Information content in the Nagel-Schreckenberg cellular automaton traffic model. **2003**, 67, 047103	
854	Understanding Urban Growth: a Conceptual Model. **2003**, 7, 83-101	2
853	COMPLEXITY: METRICS AND MODULES. **2003**, 06, 313-329	2
852	Research of a Cellular Automaton Simulating Logic Gates by Evolutionary Algorithms. **2003**, 414-423	11
851	Simulated electrocortical activity at microscopic, mesoscopic, and global scales. **2003**, 28 Suppl 1, S80-93	34
850	On a pulse-coupled network of spiking neurons having quantized state.	
849	Phase Transitions in Self-Organising Sensor Networks. **2003**, 781-791	9
848	A Mean-Field Theory of Cellular Automata Model for Distributed Packet Networks. **2004**, 773-783	1
847	On reversibility of cellular automata with periodic boundary conditions. **2004**, 37, 5789-5804	19
846	Sierpinski signal generates 1/f alpha spectra. **2004**, 70, 032101	9
845	Computational irreducibility and the predictability of complex physical systems. **2004**, 92, 074105	47
844	Zoning grassland protection area by using remote sensing and cellular automata model with a case study in Xilingol "typical steppe" grassland in northern China.	1
843	GLOBALLY SYNCHRONIZED OSCILLATIONS IN AN ONE-DIMENSIONAL CELLULAR AUTOMATON. **2004**, 15, 409-425	
842	Emergence and Universal Computation. **2004**, 55, 219-238	6
841	Charting epilepsy by searching for intelligence in network space with the help of evolving autonomous agents. **2004**, 98, 507-29	13

840	Digital circuit design using intrinsic evolvable hardware.	19
839	From stochastic partial difference equations to stochastic cellular automata through the ultra-discretization. **2004**, 155, 727-735	2
838	Self-organising behaviour in the presence of negative externalities: A conceptual model of commuter choice. **2004**, 157, 501-513	13
837	Spatial pattern formation in asynchronous cellular automata with mass conservation. **2004**, 343, 185-200	15
836	Assessing cellular automata based models using partial differential equations. **2004**, 40, 977-994	3
835	Spontaneous emergence of complex optimal networks through evolutionary adaptation. **2004**, 28, 1789-1798	38
834	.	1
833	Self-organized pattern formation and noise-induced control based on particle computations. **2005**, 2005, L12001-L12001	6
832	Self-deployment, Self-configuration:Critical Future Paradigms for Wireless Access Networks. **2005**, 58-68	17
831	Evolving the Game of Life. **2005**, 132-146	2
830	Cellular Automata, PDEs, and Pattern Formation. **2005**, 18-273-18-284	1
829	Overgrowth competition, fragmentation and sex-ratio dynamics: a spatially explicit, sub-individual-based model. **2005**, 233, 25-42	22
828	On connectivity of reconfigurable impact networks in ageless aerospace vehicles. **2005**, 53, 36-58	20
827	Spontaneous emergence of spatio-temporal order in class 4 automata. **2005**, 356, 78-82	7
826	Cellular automata models of road traffic. **2005**, 419, 1-64	378
825	Topology regulates pattern formation capacity of binary cellular automata on graphs. **2005**, 354, 641-662	35
824	Algebraic properties of some quadratic dynamical systems. **2005**, 35, 407-432	2
823	Economic demography in fuzzy spatial dilemmas and power laws. **2005**, 44, 109-113	4

822	Control of spatiotemporal chaos: dependence of the minimum pinning distance on the spatial measure entropy. **2005**, 33, 279-283		9
821	Genetically modified crops and agricultural landscapes: spatial patterns of contamination. **2005**, 53, 387-401		41
820	Autonomous indefiniteness versus external indefiniteness: Theory of weak topped ?-structure and its application to elementary local cellular automaton. *Physica D: Nonlinear Phenomena*, **2005**, 202, 71-94	3.3	2
819	Emergent patterning phenomena in 2D cellular automata. *Artificial Life*, **2005**, 11, 339-62	1.4	27
818	HIGHER ORDER CELLULAR AUTOMATA. **2005**, 08, 169-192		12
817	1/f(alpha) spectra in elementary cellular automata and fractal signals. **2005**, 71, 067103		14
816	Phase transitions of extended-range probabilistic cellular automata with two absorbing states. **2005**, 71, 046108		6
815	A hardware-in-the-loop system to evaluate the performance of small-world cellular automata.		
814	TIME EVOLUTION OF CIRCULAR CELLULAR AUTOMATA ON SQUARE LATTICES. **2005**, 16, 745-755		2
813	The Density Classification Problem for Multi-states Cellular Automata. **2005**, 443-452		
812	VLSI characteristic of cellular automata and LFSR.		
811	Cellular automata in generative electronic music and sonic art: a historical and technical review. **2005**, 16, 165-185		22
810	Synthesis of binary cellular automata based on binary neural networks.		2
809	On a hardware architecture for the evolution of cellular automata functionality.		
808	Novel digital spiking neuron and its pulse-coupled network: spike position coding and multiplex communication.		4
807	Complexity, emergence and cellular urban models: lessons learned from applying SLEUTH to two Portuguese metropolitan areas. **2005**, 13, 93-115		74
806	Low-power test pattern generator design for BIST via non-uniform cellular automata.		3
805	Zoning grassland protection area using remote sensing and cellular automata modeling□A case study in Xilingol steppe grassland in northern China. **2005**, 63, 814-826		81

804	Control and Mechanical Characteristics of Hierarchical Modular Structures. **2005**,	2
803	Adaptive Agents and Multi-Agent Systems II. **2005**,	3
802	Unifying Themes in Complex Systems. **2006**,	
801	Collective Beings. **2006**,	3
800	Consciousness, Neurobiology and Quantum Mechanics: The Case for a Connection. **2006**, 193-253	21
799	Engineering Self-Organising Systems. **2006**,	5
798	Hidden potentialities. **2006**, 35, 461-469	1
797	Coarse-graining of cellular automata, emergence, and the predictability of complex systems. **2006**, 73, 026203	45
796	Pattern generation using likelihood inference for cellular automata. **2006**, 15, 1718-27	9
795	The use of Cellular Automata in the learning of emergence. **2006**, 47, 280-297	10
794	Multiprocessor scheduling and rescheduling with use of cellular automata and artificial immune system support. **2006**, 17, 253-262	44
793	Computational modelling and simulation of the immune system. **2006**, 2, 63-88	14
792	Memory in astrocytes: a hypothesis. **2006**, 3, 2	24
791	Coupled simulation of regional land use change and soil carbon sequestration: A case study for the state of Hesse in Germany. **2006**, 21, 1430-1446	24
790	Complex systems: Network thinking. **2006**, 170, 1194-1212	199
789	Dynamics of three-state excitable units on Poisson vs. power-law random networks. **2006**, 367, 595-612	10
788	Cell-centric heuristics for the classification of cellular automata. **2006**, 32, 44-66	2
787	Translation of energy into morphology: Simulation of stromatolite morphospace using a stochastic model. **2006**, 185, 185-203	77

786	Lattice Boltzmann Simulation of Fluid Flow in Synthetic Fractures. **2006**, 65, 363-384		51
785	Fully asynchronous behavior of double-quiescent elementary cellular automata. **2006**, 362, 1-16		59
784	Bibliography. **2006**, 259-282		
783	Power Laws, Scale-Free Networks and Genome Biology. **2006**,		22
782	Cellular Automata-Based Scheduling: A New Approach to Improve Generalization Ability of Evolved Rules. **2006**,		6
781	Genetic Learning of Digital Three-Layer Perceptrons for Implementation of Binary Cellular Automata..		3
780	Various spike-trains from a digital spiking neuron: analysis of inter-spike intervals and their modulation. **2006**,		2
779	Reconfigurable Digital Spiking Neuron and Its Pulse-Coupled Network: Basic Characteristics and Potential Applications. **2006**, 53, 734-738		28
778	EVOLVING INDUCTIVE GENERALIZATION VIA GENETIC SELF-ASSEMBLY. **2006**, 09, 1-29		10
777	NONINVERTIBLE TRANSFORMATIONS AND SPATIOTEMPORAL RANDOMNESS. **2006**, 16, 3369-3381		2
776	SCALING PHENOMENA IN THE SLOPE SYSTEM. **2006**, 14, 295-302		4
775	The Emerging Physics of Consciousness. **2006**,		9
774	EXTENDING CHUA'S GLOBAL EQUIVALENCE THEOREM ON WOLFRAM'S NEW KIND OF SCIENCE. **2007**, 17, 4245-4259		14
773	PARALLELIZING THREE DIMENSIONAL CELLULAR AUTOMATA WITH OpenMP. **2007**, 17, 349-361		
772	EFFECT OF MEMORY ON BOOLEAN NETWORKS WITH DISORDERED DYNAMICS: THE K = 4 CASE. **2007**, 18, 1313-1327		11
771	A Hybrid Optimization Method Based on Cellular Automata and its Application in Soft-Sensing Modeling. **2007**,		
770	The self-construction and -repair of a foraging organism by explicitly specified development from a single cell. *Artificial Life*, **2007**, 13, 347-68	1.4	6
769	Linearizable cellular automata. **2007**, 40, 7159-7174		1

768	Network analysis of the state space of discrete dynamical systems. **2007**, 98, 198701	19
767	Fracture Toughness Calculation by Movable Cellular Automata Method. **2007**, 353-358, 774-779	1
766	Damage spreading and -sensitivity on cellular automata. **2007**, 27, 545	3
765	Biodiversity conservation, traditional agriculture and ecotourism: Land cover/land use change projections for a natural protected area in the northeastern Yucatan Peninsula, Mexico. **2007**, 83, 137-153	70
764	A novel cellular automata based approach to storm sewer design. **2007**, 39, 345-364	42
763	A Genetic approach to search for glider guns in cellular automata. **2007**,	1
762	Evolving Biological Behavior in Gene-Based Cellular Simulations. **2007**,	
761	Generative Network Automata: A Generalized Framework for Modeling Complex Dynamical Systems with Autonomously Varying Topologies. **2007**,	13
760	Using Chemical Cellular Automata in Simulation of Chemical Materials. **2007**,	2
759	On the dynamics of cellular automata induced from a prefix code. **2007**, 38, 27-53	8
758	Evolutionary Markovian strategies in spatial games. **2007**, 375, 323-335	7
757	Long-range memory elementary 1D cellular automata: Dynamics and nonextensivity. **2007**, 379, 465-470	7
756	Synchronization and predictability under rule 52, a cellular automaton reputedly of class 4. **2007**, 366, 25-29	5
755	Set theoretical and algebraic model for redundancies in the genetic code. **2007**, 1,	
754	An automata networks based preprocessing technique for artificial neural network modelling of primary production levels in reservoirs. **2007**, 201, 359-368	4
753	Visual transformation for interactive spatiotemporal data mining. **2007**, 13, 119-142	12
752	Evolutionary games on graphs. **2007**, 446, 97-216	1964
751	Artificial Intelligence techniques: An introduction to their use for modelling environmental systems. **2008**, 78, 379-400	167

750	Lattice-driven cellular automata implementing local semantics. *Physica D: Nonlinear Phenomena*, **2008**, 237, 187-197	3.3	3
749	Emergence and Adaptation. **2008**, 18, 493-520		10
748	Reverse engineering of spatial patterns in cellular automata. **2008**, 13, 172-175		5
747	Robustness in regulatory networks: a multi-disciplinary approach. **2008**, 56, 27-49		42
746	Analog computation through high-dimensional physical chaotic neuro-dynamics. *Physica D: Nonlinear Phenomena*, **2008**, 237, 1215-1225	3.3	30
745	Boolean delay equations: A simple way of looking at complex systems. *Physica D: Nonlinear Phenomena*, **2008**, 237, 2967-2986	3.3	50
744	Directional dynamics for cellular automata: A sensitivity to initial condition approach. **2008**, 400, 1-18		37
743	Digital spiking neuron and its learning for approximation of various spike-trains. **2008**, 21, 140-9		31
742	. **2008**, 2, 198-208		3
741	Computational complexity of dynamical systems: The case of cellular automata. **2008**, 206, 1104-1116		19
740	A cellular automata model for population expansion of Spartina alterniflora at Jiuduansha Shoals, Shanghai, China. **2008**, 77, 47-55		40
739	Artificial Evolution. **2008**,		
738	Strategies and Tactics in Supply Chain Event Management. **2008**,		2
737	An analysis of emerging behaviors in large-scale queueing-based service systems using agent-based simulation. **2008**,		4
736	Integral Foam Molding of Light Metals. **2008**,		
735	An approach to prediction of spatio-temporal patterns based on binary neural networks and cellular automata. **2008**,		1
734	ON MEMORY AND STRUCTURAL DYNAMISM IN EXCITABLE CELLULAR AUTOMATA WITH DEFENSIVE INHIBITION. **2008**, 18, 527-539		5
733	THE EFFECT OF MEMORY IN CELLULAR AUTOMATA ON SCALE-FREE NETWORKS: THE $overline{K}=4$ CASE. **2008**, 18, 2477-2486		5

732	Cellar Automaton Model for Railway Transportation Safety System. **2008**,	1
731	When are cellular automata random?. **2008**, 84, 50005	
730	Study on the unified framework of traffic modelling and simulation based on the multi-dimensional spatio-temporal model. **2008**,	
729	Artificial ant colony foraging simulation and emergent property analysis. **2008**,	1
728	Performance Analysis of the CPLD/FPGA Implementation of Cellular Automata. **2008**,	3
727	Topological Entropy and Complexity of One Class of Cellular Automata Rules. **2008**,	0
726	Emergence Made Ontological? Computational versus Combinatorial Approaches. **2008**, 75, 595-607	14
725	Modeling and Processing Using Reversible Conservative Noisy Elementary Cellular Automata Circuits and their M-Ary Quantum Computing. **2008**, 14, 177-206	
724	A very effective density classifier two-dimensional cellular automaton with memory. **2009**, 42, 485101	5
723	A GA-based flexible learning algorithm with error tolerance for digital binary neural networks. **2009** ,	4
722	State-dependent computation using coupled recurrent networks. **2009**, 21, 478-509	63
721	On the robustness of NK-Kauffman networks against changes in their connections and Boolean functions. **2009**, 50, 043513	5
720	The discrete dynamics of developmental systems. **2009**,	4
719	Intelligent agents behavior in the queueing Process: Integrating cellular automata & Genetic Algorithms. **2009**,	0
718	A SPECTRAL METHOD FOR AGGREGATING VARIABLES IN LINEAR DYNAMICAL SYSTEMS WITH APPLICATION TO CELLULAR AUTOMATA RENORMALIZATION. **2009**, 12, 131-155	13
717	DIFFERENCE EQUATIONS FOR CELLULAR AUTOMATA. **2009**, 19, 805-830	6
716	ON THE DYNAMICAL BEHAVIOR OF CELLULAR AUTOMATA. **2009**, 19, 1147-1156	5
715	A topological classification of D-dimensional cellular automata. **2009**, 24, 45-61	1

714	Exact quantification of the complexity of spacewise pattern growth in cellular automata. **2009**, 42, 395003		2
713	Ramifying feedback networks, cross-scale interactions, and emergent quasi individuals in Conway's game of Life. *Artificial Life*, **2009**, 15, 351-75	1.4	6
712	Stem cell decision making and critical-like exploratory networks. **2009**, 2, 165-77		16
711	Genetic approaches to search for computing patterns in cellular automata. **2009**, 4, 20-28		11
710	Ecological risk assessment of genetically modified crops based on cellular automata modeling. **2009**, 27, 1132-1136		7
709	An information-theoretic primer on complexity, self-organization, and emergence. **2009**, 15, 11-28		174
708	Are complex systems hard to evolve?. **2009**, 14, 15-20		7
707	Reverse engineering of spatiotemporal patterns in the spatial prisoner dilemma. **2009**, 14, 498-501		1
706	Outer-totalistic cellular automata on graphs. **2009**, 373, 546-549		25
705	Modeling crowd evacuation of a building based on seven methodological approaches. **2009**, 44, 437-445		391
704	Morphogenesis by coupled regulatory networks: reliable control of positional information and proportion regulation. **2009**, 261, 176-93		7
703	Symbolics dynamics of elementary cellular automata rule 88. *Nonlinear Dynamics*, **2009**, 58, 431-442	5	3
702	Complex systems: An introduction. **2009**, 14, 761-781		2
701	A dynamical study of a cellular automata model of the spread of HIV in a lymph node. **2009**, 71, 25-74		21
700	On the dynamics and recursive properties of multidimensional symbolic systems. **2009**, 176, 131-167		62
699	Complex dynamics of cellular automata rule 119. **2009**, 388, 984-990		5
698	Modeling urban growth using a variable grid cellular automaton. **2009**, 33, 35-43		112
697	The self-affine property of . **2009**, 157, 3728-3742		

696	Characterization of Single Cycle CA and its Application in Pattern Classification. **2009**, 252, 181-203		19
695	Information processing mechanisms in microtubules at physiological temperature: Model predictions for experimental tests. *BioSystems*, **2009**, 97, 28-34	1.9	24
694	An algorithm for testing permutativeness of cellular automata. **2009**, 43, 323-330		
693	On the Asymptotic Behavior of Fuzzy Cellular Automata. **2009**, 252, 23-40		8
692	Integrating GIS with Cellular Automaton Model for Railway Transportation Safety System. **2009**,		2
691	Space□time Patterns of Urban Sprawl, a 1D Cellular Automata and Microeconomic Approach. **2009**, 36, 968-988		11
690	Research for Spatio-Temporal Modeling Approach of Railway Safety System Based on Hybrid Cellular Automata. **2009**,		
689	Learning of Digital Spiking Neuron and its Application Potentials. *Understanding Complex Systems*, **2009**, 273-285	0.4	1
688	Adaptive Networks. *Understanding Complex Systems*, **2009**,	0.4	130
687	Multifractal properties of elementary cellular automata in a discrete wavelet approach of MF-DFA. **2009**, 87, 28003		22
686	Gliders, Collisions and Chaos of Cellular Automata Rule 62. **2009**,		
685	. **2009**,		
684	A Network Emergent Computing Model Based on Cellular Automaton. **2009**,		
683	Encyclopedia of Complexity and Systems Science. **2009**, 5466-5482		1
682	Surface Instabilities of Ferrofluids. **2009**, 1-91		13
681	MEMRISTOR CELLULAR AUTOMATA AND MEMRISTOR DISCRETE-TIME CELLULAR NEURAL NETWORKS. **2009**, 19, 3605-3656		253
680	Complete sets of initial vectors for pattern growth with elementary cellular automata. **2010**, 181, 750-755		3
679	Eliminating the mystery from the concept of emergence. **2010**, 25, 843-849		9

678	Stochastic automated search methods in cellular automata: the discovery of tens of thousands of glider guns. **2010**, 9, 513-543		3
677	Ecological hierarchies and self-organisation Pattern analysis, modelling and process integration across scales. **2010**, 11, 572-581		15
676	How to make dull cellular automata complex by adding memory: Rule 126 case study. **2010**, 15, NA-NA		1
675	A novel cellular automata based technique for visual multimedia content encryption. **2010**, 283, 4250-4260		29
674	Fuel management optimization based on power profile by Cellular Automata. **2010**, 37, 1712-1722		1
673	Evaluation of dynamic behavior forecasting parameters in the process of transition rule induction of unidimensional cellular automata. *BioSystems*, **2010**, 99, 6-16	1.9	2
672	Origins of learned reciprocity in solitary ciliates searching grouped 'courting' assurances at quantum efficiencies. *BioSystems*, **2010**, 99, 27-41	1.9	17
671	Sociospatial Residential Dynamics: Stability and Instability within a Self-Organizing City. **2010**, 26, 321-340		68
670	Exploring Spatial Process Dynamics Using Irregular Cellular Automaton Models. **2010**, 33, 1-18		47
669	. **2010**,		12
668	Origins of life: computing and simulation approaches. 66-82		
667	Network Dynamics as an Interface between Modeling and Experiment in Systems Biology. **2010**, 243-276		2
666	Exploring Ancient Architectural Designs with Cellular Automata. **2010**,		4
665	Hayek, Keynes, and Modern Macroeconomics. **2010**,		1
664	Electroactive Polymer Gel Robots. **2010**,		10
663	Characterization of CA Rules for SACA Targeting Detection of Faulty Nodes in WSN. **2010**, 300-311		7
662	Global Attractors and Chaos of Complex Bernoulli-shift Rules. **2010**,		0
661	Evolutionary heuristics for automatic discoveries of cellular automata simulating AND gates. **2010**,		

660 . **2010**,

659 Exploratory analysis of spatiotemporal patterns of cellular automata by clustering compressibility. **2010**, 81, 026103 8

658 SYNCHRONIZATION OF ONE-DIMENSIONAL STOCHASTICALLY COUPLED CELLULAR AUTOMATA. **2010**, 21, 513-522 1

657 A METHOD FOR FINDING AGGREGATED REPRESENTATIONS OF LINEAR DYNAMICAL SYSTEMS. **2010**, 13, 199-215 13

656 THE HPP RULE WITH MEMORY AND THE DENSITY CLASSIFICATION TASK. **2010**, 21, 1115-1128 2

655 The salt marsh vegetation dynamics analysis with GeoCA-wetland-landscape. **2010**,

654 Trajectories and attractors as specification for the evolution of behaviour in cellular automata. **2010**, 5

653 Digital spike maps and learning of spike signals. **2010**, 3

652 CA-based generator of S-boxes for cryptography use. **2010**, 2

651 Permutation complexity of spatiotemporal dynamics. **2010**, 90, 10007 12

650 Complex interaction. **2010**, 17, 1-32 22

649 Complex urban system simulations based on generalized information entropy principle. **2010**,

648 Connectivity, dynamics, and memory in reservoir computing with binary and analog neurons. **2010**, 22, 1272-311 103

647 A Novel Hybrid Spiking Neuron: Bifurcations, Responses, and On-Chip Learning. **2010**, 57, 2168-2181 48

646 Past, Present, and Future: Microbial Mats as Models for Astrobiological Research. **2010**, 563-582 5

645 Cooperativity at different space and time scales in multiscale protein dynamics. **2010**, 82, 016213 1

644 Is a transdisciplinary perspective on economic complexity possible?. **2010**, 75, 3-11 24

643 Dynamic binary neural networks and evolutionary learning. **2010**, 2

642	Game of Life Cellular Automata. **2010**,		44
641	Computer and Computing Technologies in Agriculture III. **2010**,		13
640	Microbial Mats. **2010**,		29
639	Phenomenological study of irregular cellular automata based on Lyapunov exponents and Jacobians. *Chaos*, **2010**, 20, 033112	3.3	27
638	A cellular automata model for population dynamics simulation of two plant species with different life strategies. **2010**,		
637	Subsystems and Glider Dynamics of Hyper Bernoulli CA Rule 26. **2010**,		
636	. **2010**,		43
635	Topological Conjugacy Classification of Two-Dimensional Cellular Automata. **2011**,		
634	. **2011**,		
633	Partial information decomposition as a spatiotemporal filter. *Chaos*, **2011**, 21, 037104	3.3	16
632	On the topological sensitivity of cellular automata. *Chaos*, **2011**, 21, 023108	3.3	8
631	Wildland fire spread modelling using cellular automata: evolution in large-scale spatially heterogeneous environments under fire suppression tactics. **2011**, 20, 633		27
630	Ecological benefits assessment and spatial modeling of urban ecosystem for controlling urban sprawl in Eastern Beijing, China. **2011**, 8, 153-160		16
629	Computational Molecular Engineering for Nanodevices and Nanosystems. **2011**, 347-383		
628	Foundations of Simulation Modeling. **2011**,		0
627	. **2011**,		9
626	References. **2011**, 233-246		
625	Towards the Full Lyapunov Spectrum of Elementary Cellular Automata. **2011**,		1

624	Non-Brownian Phase Space Dynamics of Molecules, the Nature of their Vibrational States, and Non-RRKM Kinetics. **2011**, 83-122		5
623	Information Processing by Local and Global Nonlinear Dynamics. **2011**, 4, 198-214		
622	Self-Organizing Digital Spike Maps for Learning of Spike-Trains. **2011**, E94-A, 2845-2852		3
621	Topological chaos of universal elementary cellular automata rule. *Nonlinear Dynamics*, **2011**, 63, 217-2225		6
620	Using cellular automata for porous media simulation. **2011**, 57, 121-131		14
619	GPGPU computation and visualization of three-dimensional cellular automata. **2011**, 27, 67-81		8
618	An adaptive and robust biological network based on the vacant-particle transportation model. **2011** , 272, 187-200		43
617	Stochastic cellular automata model and Monte Carlo simulations of CD4+ T cell dynamics with a proposed alternative leukapheresis treatment for HIV/AIDS. **2011**, 41, 546-58		11
616	Evaluating the effect of using different sets of enrichment for FAs on fuel management optimization using CA. **2011**, 38, 835-845		1
615	Modeling hysteretic nonlinear behavior of bridge aerodynamics via cellular automata nested neural network. **2011**, 99, 378-388		81
614	Discrete dynamics of cellular machines. **2011**,		
613	On the correlations between developmental diversity and genomic composition. **2011**,		2
612	Identifying patterns from one-rule-firing cellular automata. *Artificial Life*, **2011**, 17, 21-32	1.4	1
611	BACK MATTER. **2011**, 343-465		
610	Emerging properties of financial time series in the "Game of Life". **2011**, 84, 066104		
609	Dual-phase evolution in complex adaptive systems. **2011**, 8, 609-29		34
608	Diagnosing mitral valve prolapse by improving the predictive power of classifiers. **2011**, 39, 1075-83		
607	Complex Evolutionary Dynamics in Urban-Regional and Ecologic-Economic Systems. **2011**,		26

606	ARTIFICIAL MICRO-WORLDS PART III: A TAXONOMY OF SELF-REPRODUCING 2D CA SPECIES. **2011**, 21, 1233-1263	7
605	ON THE STRUCTURE OF REAL-VALUED ONE-DIMENSIONAL CELLULAR AUTOMATA. **2011**, 21, 1265-1279	5
604	Advances in Artificial Life. Darwin Meets von Neumann. **2011**,	
603	Complex Dynamic Behaviors in Cellular Automata Rule 14. **2012**, 2012, 1-12	2
602	Disentangling Complexity from Randomness and Chaos. **2012**, 14, 177-212	11
601	Softening the Complexity of Entropic Motion on Curved Statistical Manifolds. **2012**, 19, 1250001	10
600	Z2-algebras in the Boolean function irreducible decomposition. **2012**, 53, 023516	1
599	COMPLEX DYNAMICS OF ELEMENTARY CELLULAR AUTOMATA EMERGING FROM CHAOTIC RULES. **2012**, 22, 1250023	25
598	DIRECT COUNTING ANALYSIS ON NETWORK GENERATED BY DISCRETE DYNAMICS. **2012**, 26, 1250023	1
597	Unconventional Computation and Natural Computation. **2012**,	4
596	Counting Cycles in Reversible Cellular Automata. **2012**, 11-19	
595	Social biases determine spatiotemporal sparseness of ciliate mating heuristics. **2012**, 5, 3-11	7
594	Chaos emerged on the Edge of chaos**2012**, 89, 1584-1595	2
593	Cellular Resource-Driven Automata. **2012**, 120, 243-257	3
592	Control of cellular automata. **2012**, 86, 066201	13
591	Astrobiological complexity with probabilistic cellular automata. **2012**, 42, 347-71	17
590	Fuzzy cognitive maps and cellular automata: An evolutionary approach for social systems modelling. **2012**, 12, 3771-3784	38
589	Accelerating agent-based computation of complex urban systems. **2012**, 26, 1917-1937	18

588	Cauchy-Euler model, cellular automata simulation of the rate of recovery of the infected airway from COPD. **2012**,		1
587	Cellular automata model based on machine learning methods for simulating land use change. **2012**,		
586	Single parent generalization of cellular automata rules. **2012**,		0
585	Universalities in Cellular Automata*. **2012**, 189-229		4
584	Universal map for cellular automata. **2012**, 376, 2645-2657		17
583	Emergence and complexity in Austrian economics. **2012**, 81, 122-128		24
582	Rationality, Stability, and Endogenous Price Formation in Spatially Interdependent Markets. **2012**, 44, 538-559		6
581	Complexity and information: Measuring emergence, self-organization, and homeostasis at multiple scales. **2012**, 18, 29-44		99
580	Neuronal avalanches and coherence potentials. **2012**, 205, 259-301		51
579	Universal construction mechanism for networks from one-dimensional symbol sequences. **2012**, 219, 1020-1030		2
578	Parallel dynamical systems over directed dependency graphs. **2012**, 219, 1114-1119		26
577	Universality, Turing Incompleteness and Observers. **2012**, 435-449		
576	ACCESS TO INFORMATION IN WORD OF MOUTH MARKETING WITHIN A CELLULAR AUTOMATA MODEL. **2012**, 15, 1250080		3
575	A full computation-relevant topological dynamics classification of elementary cellular automata. *Chaos*, **2012**, 22, 043143	3.3	18
574	Nonclassical Computation – A Dynamical Systems Perspective. **2012**, 1979-2025		10
573	Cellular Automata on Graphs: Topological Properties of ER Graphs Evolved towards Low-Entropy Dynamics. **2012**, 14, 993-1010		8
572	Building blocks of self-sustained activity in a simple deterministic model of excitable neural networks. *Frontiers in Computational Neuroscience*, **2012**, 6, 50	3.5	29
571	Spatial dynamics of benthic competition on coral reefs. **2012**, 168, 1079-90		68

570	Detecting grain boundaries in deformed rocks using a cellular automata approach. **2012**, 42, 136-142		30
569	Self-organizing circuitry and emergent computation in mouse embryonic stem cells. **2012**, 8, 324-33		16
568	Physical approach to complex systems. **2012**, 515, 115-226		285
567	Synchronous cellular automata-based scheduler initialized by heuristic and modeled by a pseudo-linear neighborhood. **2013**, 12, 339-351		4
566	Interference of Human Impacts in Urban Growth Modelling with Transition Rules of Cellular Automata, GIS and Multi-Temporal Satellite Imagery: A Case Study of Maraghe, Iran. **2013**, 41, 993-1008		4
565	Irreducibility and Computational Equivalence. *Emergence, Complexity and Computation*, **2013**,	0.1	1
564	Agent-based modeling and simulation of emergent behavior in air transportation. **2013**, 1,		29
563	A cloud computing based framework for general 2D and 3D cellular automata simulation. **2013**, 65, 78-89		5
562	BACK MATTER. **2013**, 409-443		
561	Simulating Urban Growth in Nakuru (Kenya) Using Java-Based Modelling Platform XULU. **2013**,		2
560	Evolutionary cellular automata bonsai. **2013**,		0
559	Parallel dynamical systems over special digraph classes. **2013**, 90, 2039-2048		10
558	Parallel additive implementation for modified FIRS. **2013**,		0
557	Origin of complexity and conditional predictability in cellular automata. **2013**, 88, 042814		13
556	New mathematics for old physics: The case of lattice fluids. **2013**, 44, 231-241		6
555	A spatially explicit agent-based simulation platform for investigating effects of shared pollination service on ecological communities. **2013**, 37, 107-124		11
554	Impartial games emulating one-dimensional cellular automata and undecidability. **2013**, 120, 1116-1130		4
553	Cellular Automata: Models of the Physical World. *Emergence, Complexity and Computation*, **2013**, 3-10	0.1	

552	EXPRESSIVENESS OF ELEMENTARY CELLULAR AUTOMATA. **2013**, 24, 1350010		7
551	Design Versus Self-Organization. **2013**, 3-21		1
550	Pervasiveness of Universalities of Cellular Automata: Fascinating Life-Like Behaviours. *Emergence, Complexity and Computation*, **2013**, 199-210	0.1	
549	Quantum Cellular Automaton for Simulating Static Magnetic Fields. **2013**, 49, 1617-1620		4
548	Topology-induced phase transitions in totalistic cellular automata. *Physica D: Nonlinear Phenomena*, **2013**, 249, 16-24	3.3	4
547	Cellular Automata Model for Elastic Solid Material. **2013**, 59, 59-67		6
546	Complexities of Natural Selection Dynamics. **2013**, 429-442		
545	A Lyapunov View on the Stability of Two-State Cellular Automata. *Emergence, Complexity and Computation*, **2013**, 25-33	0.1	1
544	Wolfram's Classification and Computation in Cellular Automata Classes III and IV. *Emergence, Complexity and Computation*, **2013**, 237-259	0.1	3
543	Influence of the topology of a cellular automaton on its dynamical properties. **2013**, 18, 651-668		8
542	Symmetry analysis of cellular automata. **2013**, 377, 276-285		16
541	Corrupt organizations: modeling educators' misconduct with cellular automata. **2013**, 19, 1-24		7
540	Dynamic Behaviour of Chaotic Cellular Automata - A Comparative Entropy Analysis of Regular Lattices and Small-World Structures. **2013**,		1
539	Phase transitions enable computational universality in neuristor-based cellular automata. **2013**, 24, 384002		37
538	Towards Managing Nonlinear Regional Development Trajectories. **2013**, 31, 556-570		15
537	Crossing pedestrian traffic flows, the diagonal stripe pattern, and the chevron effect. **2013**, 46, 345002		18
536	The conduciveness of CA-rule graphs. *Artificial Life*, **2013**, 19, 255-66	1.4	
535	The functional benefits of criticality in the cortex. **2013**, 19, 88-100		274

534	DESIGNING COMPLEX DYNAMICS IN CELLULAR AUTOMATA WITH MEMORY. **2013**, 23, 1330035		15
533	EPSA11 Perspectives and Foundational Problems in Philosophy of Science. **2013**,		
532	Integrating remote sensing, GIS and dynamic models: Cellular automata approach for the simulation of urban growth for the city of Montreal. **2013**,		1
531	2D ELEMENTARY CELLULAR AUTOMATA WITH FOUR NEIGHBORS. **2013**, 23, 1350060		1
530	References. **2013**, 271-298		
529	Traffic Accident Propagation Properties and Control Measures for Urban Links Based on Cellular Automata. **2013**, 5, 905640		2
528	Agent-Based Modeling and Simulation of Emergent Behavior in Air Transportation. **2013**,		
527	. **2013**,		74
526	Chaotic Behaviors of Symbolic Dynamics about Rule 58 in Cellular Automata. **2014**, 2014, 1-9		1
525	Innovations in Bio-inspired Computing and Applications. *Advances in Intelligent Systems and Computing*, **2014**,	0.4	1
524	Classifying elementary cellular automata using compressibility, diversity and sensitivity measures. **2014**, 25, 1350098		9
523	Simulations of living cell origins using a cellular automata model. **2014**, 44, 125-41		2
522	3D printing and simulation of naturally randomized cellular automata. **2014**, 19, 311-316		
521	Regulatory logic and pattern formation in the early sea urchin embryo. **2014**, 363, 80-92		2
520	A Multitarget Land Use Change Simulation Model Based on Cellular Automata and Its Application. **2014**, 2014, 1-11		8
519	Computational Experiments in Materials Science. **2014**, 301-370		
518	Chaotic Behavior of One-Dimensional Cellular Automata Rule 24. **2014**, 2014, 1-8		1
517	Dynamic behaviour of network cellular automata with non-chaotic standard rules. **2014**,		0

516	Conway's Game of Life is a near-critical metastable state in the multiverse of cellular automata. **2014**, 89, 052123		9
515	Role of long cycles in excitable dynamics on graphs. **2014**, 90, 052805		13
514	The micro-dynamics of queuing: understanding the formation of queues. **2014**, 8, 304-313		12
513	A Framework for the Local Information Dynamics of Distributed Computation in Complex Systems. *Emergence, Complexity and Computation*, **2014**, 115-158	0.1	23
512	Cellular-Automaton-Based Node Scheduling Control for Wireless Sensor Networks. **2014**, 63, 3892-3899		16
511	A massively parallel cellular automaton for the simulation of recrystallization. **2014**, 22, 075016		14
510	Mapping an expanding territory: computer simulations in evolutionary biology. **2014**, 36, 60-89		8
509	Criticality in Cortex: Neuronal Avalanches and Coherence Potentials. **2014**, 5-42		4
508	Logic operations in memory using a memristive Akers array. **2014**, 45, 1429-1437		53
507	Effect of self-interaction on the phase diagram of a Gibbs-like measure derived by a reversible Probabilistic Cellular Automata. **2014**, 64, 36-47		6
506	Phase transition in NK-Kauffman networks and its correction for Boolean irreducibility. *Physica D: Nonlinear Phenomena*, **2014**, 275, 35-42	3.3	1
505	Achieving Residential Connectivity and Density Goals with Computer-Generated Plans in a Greenfield Area. **2014**, 41, 430-449		2
504	Research on structure emergence based on cellular automata. **2014**, 6, 126		3
503	On the decomposition of stochastic cellular automata. **2015**, 11, 245-257		4
502	An evolutionary approach to the identification of Cellular Automata based on partial observations. **2015**,		3
501	Lempel-Ziv complexity analysis of one dimensional cellular automata. *Chaos*, **2015**, 25, 123106	3.3	9
500	Modeling Wireless Sensor Network Based on Non-Volatile Cellular Automata. **2015**, E98.B, 1294-1301		1
499	Memristor cellular automata through belief propagation inspired algorithm. **2015**,		3

498	Statistical Mechanics of Surjective Cellular Automata. **2015**, 160, 1198-1243		13
497	Failure Propagation in Load-Sharing Complex Systems. **2015**, 79-106		
496	The Intrinsic Cause-Effect Power of Discrete Dynamical Systems From Elementary Cellular Automata to Adapting Animats. **2015**, 17, 5472-5502		28
495	Stabilization Methods for a Multiagent System with Complex Behaviours. **2015**, 2015, 236285		3
494	Self-Organizing Construction Method of Offshore Structures by Cellular Automata Model. **2015**, 2015, 1-7		
493	Parallel Dynamical Systems over Graphs and Related Topics: A Survey. **2015**, 2015, 1-14		20
492	Effects of Initial Symmetry on the Global Symmetry of One-Dimensional Legal Cellular Automata. **2015**, 7, 1768-1779		3
491	Quantum state transfer through noisy quantum cellular automata. **2015**, 48, 195304		3
490	Evolvable fashion-based cellular automata for generating cavern systems. **2015**,		5
489	References. **2015**, 353-370		
488	Birkhoff's aesthetics, Arnheim's entropy. Some remarks on complexity and fuzzy entropy in arts. **2015**, 8, 1103		3
487	Cell-Division Behavior in a Heterogeneous Swarm Environment. *Artificial Life*, **2015**, 21, 481-500	1.4	4
486	Evolution of 2D apoptotic cellular automata. **2015**,		0
485	Reversibility of general 1D linear cellular automata over the binary field Z2 under null boundary conditions. *Information Sciences*, **2015**, 324, 23-31	7.7	10
484	Failure risk propagation and protection schemes in coupled systems. **2015**, 80, 62-75		5
483	On the Dynamics of Cellular Automata with Memory. **2015**, 138, 1-16		2
482	Cluster models for random particle aggregates Morphological statistics and collision distance. **2015**, 12, 65-80		4
481	Graphical limit sets for general cellular automata. **2015**, 580, 14-27		1

480 Limit sets of stable cellular automata. **2015**, 35, 673-690 2

479 Ecological Continuum from the Changjiang (Yangtze River) Watersheds to the East China Sea Continental Margin. **2015**, 3

478 Spatial Complexity Measure for Characterising Cellular Automata Generated 2D Patterns. **2015**, 201-212 7

477 A dynamical systems approach to the discrimination of the modes of operation of cryptographic systems. **2015**, 29, 102-115 2

476 An investigation of the efficient implementation of cellular automata on multi-core CPU and GPU hardware. **2015**, 77, 11-25 19

475 Three-state von Neumann cellular automata and pattern generation. **2015**, 39, 2003-2024 12

474 A classification of one-dimensional cellular automata using infinite computations. **2015**, 255, 15-24 29

473 A meshfree interface-finite element method for modelling isothermal solutal melting and solidification in binary systems. **2015**, 95, 20-41 3

472 An agent-based simulator driven by variants of Self-Organizing Maps. **2015**, 147, 207-224 8

471 Design and implementation of a genetic algorithm IP core on an FPGA for path planning of mobile robots. **2016**, 24, 5055-5067 4

470 A Local Land Use Competition Cellular Automata Model and Its Application. **2016**, 5, 106 30

469 A Comparative Study between the Dynamic Behaviours of Standard Cellular Automata and Network Cellular Automata Applied to Cryptography. **2016**, 31, 189-207 1

468 Multiscale modeling of brain dynamics: from single neurons and networks to mathematical tools. **2016**, 8, 438-58 16

467 References. 362-369

466 A Morphogenetic Design Strategy Using a Composite CA Model. **2016**,

465 Validation and predictions of coupled finite element and cellular automata model: Influence of the degree of deformation on static recrystallization kinetics case study. **2016**, 179, 282-294 18

464 A Symbolic Dynamics Perspective of Conway□ Game of Life. **2016**, 26, 1650035

463 A cellular automata based highly accurate memory test hardware realizing March C□**2016**, 52, 91-103 4

462	The Density Classification Problem in the Context of Continuous Cellular Automata. **2016**, 79-87		4
461	Busy beaver machines and the observant otter heuristic (or how to tame dreadful dragons). **2016**, 646, 61-85		1
460	Cyber security of smart grids modeled through epidemic models in cellular automata. **2016**,		3
459	Spectral representations and global maps of cellular automata dynamics. **2016**, 91, 503-510		2
458	Land use scenarios and projections simulation using an integrated GIS cellular automata algorithms. **2016**, 2, 1		25
457	Impact of future urban growth on regional climate changes in the Seoul Metropolitan Area, Korea. **2016**, 571, 355-63		18
456	Memristor cellular automata for image pattern recognition and clinical applications. **2016**,		3
455	Classification of cellular automata through texture analysis. *Information Sciences*, **2016**, 370-371, 33-49	7.7	6
454	Extension of cellular automata via the introduction of an algorithm for the recursive estimation of neighbors. **2016**, 21, 338-344		2
453	Simulation of Rock Mass Horizontal Displacements with Usage of Cellular Automata Theory.. **2016**, 61, 749-763		7
452	Scenario Generation with Cellular Automaton for Game-Based Crisis Simulation System. **2016**,		0
451	Asynchronous cellular automata and pattern classification. **2016**, 21, 370-386		14
450	Stability of Cellular Automata Trajectories Revisited: Branching Walks and Lyapunov Profiles. **2016**, 26, 1329-1367		3
449	Urban growth models: progress and perspective. **2016**, 61, 1637-1650		72
448	The inactive□ctive phase transition in the noisy additive (exclusive-or) probabilistic cellular automaton. **2016**, 27, 1650016		6
447	Unraveling simplicity in elementary cellular automata. **2016**, 641, 2-10		2
446	Characterization of random fluctuation-based computation in cellular automata. *Information Sciences*, **2016**, 352-353, 150-166	7.7	6
445	Analysis of information gain and Kolmogorov complexity for structural evaluation of cellular automata configurations. **2016**, 28, 155-170		3

444	Evolutionary potential games on lattices. **2016**, 624, 1-60		53
443	Selforganization in Complex Systems: The Past, Present, and Future of Synergetics. *Understanding Complex Systems*, **2016**,	0.4	6
442	Stochastic modeling for dynamics of HIV-1 infection using cellular automata: A review. **2016**, 14, 1630001		6
441	Modelling and simulation of complex cellular models using Cell-DEVS. **2016**, 92, 101-115		2
440	Thinking platforms for smarter urban water systems: fusing technical and socio-economic models and tools. **2017**, 408, 201-219		10
439	Load Balancing at the Edge of Chaos: How Self-Organized Criticality Can Lead to Energy-Efficient Computing. **2017**, 28, 517-529		13
438	A cellular automaton model for ship traffic flow in waterways. **2017**, 471, 705-717		24
437	Generation and Exploration of Architectural Form Using a Composite Cellular Automata. **2017**, 99-110		0
436	Memristor-Based Platforms: A Comparison Between Continous-Time and Discrete-Time Cellular Neural Networks. **2017**, 65-79		
435	A common developmental program can produce diverse leaf shapes. **2017**, 216, 401-418		64
434	Cryptographic Nature. 157-173		2
433	Automata and Animats: From Dynamics to Cause Effect Structures. 334-365		1
432	On periods and equilibria of computational sequential systems. *Information Sciences*, **2017**, 409-410, 27-34	7.7	22
431	Self-organisation in Cellular Automata with Coalescent Particles: Qualitative and Quantitative Approaches. **2017**, 167, 1180-1220		2
430	Complex Structures and Behavior from Elementary Adaptive Network Automata. **2017**, 105-126		1
429	Impact of time delay on the dynamics of SEIR epidemic model using cellular automata. **2017**, 471, 114-125		34
428	Cellular Automata and Grossone Computations. **2017**, 316-337		
427	Discovery of Regular Domains in Large DNA Data Sets. **2017**,		1

426	A DETERMINISTIC APPROACH TO THE SYNCHRONIZATION OF NONLINEAR CELLULAR AUTOMATA. **2017**, 20, 1750006		
425	Density-conserving affine continuous cellular automata solving the relaxed density classification problem. **2017**, 50, 345103		4
424	MULTIFRACTAL APPROACH TO THE ANALYSIS OF CRIME DYNAMICS: RESULTS FOR BURGLARY IN SAN FRANCISCO. **2017**, 25, 1750043		3
423	Glider Collisions in Hybrid Cellular Automaton with Memory Rule (43,74). **2017**, 27, 1750082		1
422	On the complexity and the information content of cosmic structures. **2017**, 465, 4942-4955		5
421	Utilization of cellular automata for analysis of the efficiency of urban freight transport measures based on loading/unloading bays example. **2017**, 25, 1021-1035		10
420	A multi-label cellular automata model for land change simulation. **2017**, 21, 1298-1320		11
419	Parameter Search for a Small Swarm of AUVs Using Particle Swarm Optimisation. **2017**, 384-396		0
418	A Novel Osmosis-Inspired Algorithm for Multiobjective Optimization. **2017**, 80-88		1
417	Meta-Parametric Design. **2017**, 52, 73-95		33
416	A cellular automaton for the signed particle formulation of quantum mechanics. **2017**, 468, 638-647		0
415	Computational Matter: Evolving Computational Functions in Nanoscale Materials. *Emergence, Complexity and Computation*, **2017**, 397-428	0.1	9
414	Conventional and Unconventional Approaches to Swarm Logic. *Emergence, Complexity and Computation*, **2017**, 711-734	0.1	2
413	Topological Conjugacy Classification of Elementary Cellular Automata with Majority Memory. **2017**, 27, 1750217		1
412	Number-conserving cellular automata with a von Neumann neighborhood of range one. **2017**, 50, 435101		7
411	Analyzing Information Distribution in Complex Systems. **2017**, 19, 636		5
410	Graph Cellular Automata with Relation-Based Neighbourhoods of Cells for Complex Systems Modelling: A Case of Traffic Simulation. **2017**, 9, 322		19
409	An Urban Cellular Automata Model for Simulating Dynamic States on a Local Scale. **2017**, 19, 12		3

408	Emergence of Distinct Spatial Patterns in Cellular Automata with Inertia: A Phase Transition-Like Behavior. **2017**, 19, 102		5
407	An Open Data Platform for Traffic Parameters Measurement via Multirotor Unmanned Aerial Vehicles Video. **2017**, 2017, 1-12		9
406	Remote Sensing, Gis and Cellular Automata for Urban Growth Simulation. **2017**, 10, 38		2
405	An Array Database Approach for Earth Observation Data Management and Processing. **2017**, 6, 220		7
404	Logical Gates via Gliders Collisions. *Emergence, Complexity and Computation*, **2018**, 199-220	0.1	1
403	Complexity as a contrast between dynamics and phenomenology. **2018**, 63, 86-99		4
402	Information geometric methods for complexity. *Chaos*, **2018**, 28, 032101	3.3	29
401	Dynamical Criticality: Overview and Open Questions. **2018**, 31, 647-663		36
400	A Study of Chaos in Cellular Automata. **2018**, 28, 1830008		4
399	A model for analyzing phenomena in multicellular organisms with multivariable polynomials: Polynomial life. **2018**, 11, 1850007		
398	Sensitivity of Probable Maximum Flood in a Changing Environment. **2018**, 54, 3913-3936		17
397	Strategy and Performance of Knowledge Flow. **2018**,		
396	Shift-equivalence of k-ary, one-dimensional cellular automata rules. **2018**, 63, 280-291		2
395	Modelling coastal land use change by incorporating spatial autocorrelation into cellular automata models. **2018**, 33, 470-488		30
394	Analysis of the environmental impacts of unloading bays based on cellular automata simulation. **2018**, 61, 104-117		45
393	How synapses can enhance sensibility of a neural network. **2018**, 492, 1045-1052		
392	Towards measuring the semantic capacity of a physical medium demonstrated with elementary cellular automata. *BioSystems*, **2018**, 164, 177-185	1.9	3
391	Improvement of False Report Detection Performance Based on Invalid Data Detection Using Neural Network in WSNF. **2018**, 10, 21-34		

390	Interleaved Cellular Automata, Evolved Artwork and Packing Problems. **2018**,		1
389	Small-Angle Scattering Analysis of Fractals Generated by Additive Cellular Automata. **2018**,		
388	Small-Angle Scattering from Mass and Surface Fractals. **2018**,		3
387	Distributed Control of a Manufacturing System with One-Dimensional Cellular Automata. **2018**, 2018, 1-15		1
386	Modelling urban sprawl using fuzzy cellular automata model for the city of Jaipur. **2018**, 10, 285		2
385	Mathematical Modelling in Plant Biology. **2018**,		4
384	Modeling Plant Development with L-Systems. **2018**, 139-169		5
383	An evolutionary analysis of Artificial Life publications. **2018**,		
382	A Universal Platform that Emulates any Cellular Automaton. **2018**,		
381	Regional Control of Probabilistic Cellular Automata. **2018**, 243-254		4
380	Aggregate Effects of Advertising Decisions: A Complex Systems Look at Search Engine Advertising Via an Experimental Study. **2018**,		
379	An Information-Theoretic Approach to Self-Organisation: Emergence of Complex Interdependencies in Coupled Dynamical Systems. **2018**, 20,		16
378	Possibility of Controlling Self-Organized Patterns with Totalistic Cellular Automata Consisting of Both Rules like Game of Life and Rules Producing Turing Patterns. **2018**, 9,		2
377	Complex interactions in one-dimensional cellular automata and linguistic constructions. **2018**, 12, 691-721		3
376	Epistemic Communities in Urban Self-organization: A Systematic Review and Assessment. **2018**, 33, 310-328		12
375	Complex spatiotemporal behavior and coherent excitations in critically-coupled chains of neural circuits. *Chaos*, **2018**, 28, 093102	3.3	2
374	Personality, Team Goals, Motivation, and Tacit Knowledge Sharing Performance Within a University Research Team. **2018**, 71-81		1
373	Modeling the impact of immigration and climatic conditions on the epidemic spreading based on cellular automata approach. **2018**, 46, 36-44		4

372	Structural Properties of Additive Nano/Microcellular Automata. **2018**, 530, 1800004		3
371	Efficiency Evaluation of Knowledge Flow in University-Industry Collaborative Innovation in China. **2018**, 29-48		0
370	Exploring Representation in Evolutionary Level Design. **2018**, 2, 1-155		0
369	Kauffman Cellular Automata on Quasicrystal Topology. **2018**, 48, 531-538		1
368	Anticorrelations between Active Brain Regions: An Agent-Based Model Simulation Study. **2018**, 2018, 6815040		1
367	Big Five Personality Traits and Knowledge Flow in University-Industry Collaborative Innovation. **2018**, 49-69		
366	The Open Computing Abstraction Layer for Parallel Complex Systems Modeling on Many-Core Systems. **2018**, 121, 53-70		13
365	Reservoir Computing with Computational Matter. **2018**, 269-293		7
364	Aggregate effects of advertising decisions. **2018**, 28, 1079-1102		7
363	Evolutionary Game Model of Knowledge Transfer in University-Industry Collaborative Innovation. **2018**, 95-108		
362	Colored Petri Net Model of Knowledge Flow Based on Knowledge Life Cycle. **2018**, 83-94		2
361	Computational Matter. **2018**,		8
360	Prebiotic Geochemical Automata at the Intersection of Radiolytic Chemistry, Physical Complexity, and Systems Biology. **2018**, 2018, 1-21		3
359	Authorship attribution based on Life-Like Network Automata. **2018**, 13, e0193703		8
358	Introduction. *Emergence, Complexity and Computation*, **2019**, 1-26	0.1	
357	Conventional and Unconventional Automata on Swarm Behaviours. *Emergence, Complexity and Computation*, **2019**, 127-163	0.1	
356	Unconventional Computers Designed on Swarm Behaviours. *Emergence, Complexity and Computation*, **2019**, 73-126	0.1	
355	Behaviourism in Studying Swarms: Logical Models of Sensing and Motoring. *Emergence, Complexity and Computation*, **2019**,	0.1	2

354	Solving reverse emergence with quantum PSO application to image processing. **2019**, 23, 6921-6935		13
353	Predecessors and Garden-of-Eden configurations in parallel dynamical systems on maxterm and minterm Boolean functions. **2019**, 348, 26-33		8
352	Guided Evolutionary Search for Boolean Networks in the Density Classification Problem. *Advances in Intelligent Systems and Computing*, **2019**, 69-77	0.4	
351	Shift-symmetric configurations in two-dimensional cellular automata: Irreversibility, insolvability, and enumeration. *Chaos*, **2019**, 29, 063120	3.3	
350	Urban sprawl scenario simulations based on cellular automata and ordered weighted averaging ecological constraints. **2019**, 107, 105572		23
349	Dynamical attraction in parallel network models. **2019**, 361, 874-888		2
348	Co-Designing the Computational Model and the Computing Substrate. **2019**, 5-14		2
347	Voxel-based support structures for additive manufacture of topologically optimal geometries. **2019**, 105, 1-26		16
346	Density decay and growth of correlations in the Game of Life. **2019**, 2019, 013212		
345	Optimal and suboptimal regional control of probabilistic cellular automata. **2019**, 18, 845-853		
344	Convolutional Neural Networks for Cellular Automata Classification. **2019**,		0
343	Real Linear Automata with a Continuum of Periodic Solutions for Every Period. **2019**, 29, 1930016		
342	Integrating Cellular Automata with Unsupervised Deep-Learning Algorithms: A Case Study of Urban-Sprawl Simulation in the Jingjintang Urban Agglomeration, China. **2019**, 11, 2464		3
341	Cellular Automata Modeling of Stem-Cell-Driven Development of Tissue in the Nervous System. **2019**, 79, 497-517		10
340	Plant behaviour in response to the environment: information processing in the solid state. **2019**, 374, 20180370		10
339	Evolutionary aspects of reservoir computing. **2019**, 374, 20180377		17
338	A Study of Chaos in Non-uniform Cellular Automata. **2019**, 76, 116-131		2
337	Autonomous Population Regulation Using a Multi-Agent System in a Prey–Predator Model That Integrates Cellular Automata and the African Buffalo Optimization Metaheuristic. **2019**, 12, 59		

336	Policy Modeling and Applications: State-of-the-Art and Perspectives. **2019**, 2019, 1-11	4
335	Agent-based modelling and economic complexity: a diversified perspective. **2019**, 26, 170-188	7
334	Robustness of Elementary Cellular Automata to Asynchronous Transitions and Communications. **2019**,	1
333	. **2019**,	1
332	Search optimization, funnel topography, and dynamical criticality on the string landscape. **2019**, 2019, 014-014	7
331	Hidden complexity in Life-like rules. **2019**, 100, 052133	
330	Automatic Generation of Diverse Cavern Maps with Morphing Cellular Automata. **2019**,	0
329	A Comprehensive Study on Pedestrians Evacuation. **2019**, 7, 38	2
328	Self-referential basis of undecidable dynamics: From the Liar paradox and the halting problem to the edge of chaos. **2019**, 31, 134-156	5
327	Modelling and knowledge transfer in complexity science. **2019**, 77, 120-129	3
326	Systems Thinking for Systems Making: Joining Systems of Thought and Action. **2019**, 32, 63-91	5
325	Identification of Cellular Automata Based on Incomplete Observations With Bounded Time Gaps. **2020**, 50, 971-984	2
324	A class of discrete dynamical systems with properties of both cellular automata and L-systems. **2020**, 19, 609-641	1
323	A graph theory approach for regional controllability of Boolean cellular automata. **2020**, 35, 499-513	2
322	State-of-the-Art Pedestrian and Evacuation Dynamics. **2020**, 21, 1849-1866	23
321	An improved artificial neural network based on human-behaviour particle swarm optimization and cellular automata. **2020**, 140, 112862	12
320	Vegetation dynamics under water-level fluctuations: Implications for wetland restoration. **2020**, 581, 124418	19
319	Elementary cellular automata and self-referential paradoxes. **2020**, 30, 745-763	0

318	A Dynamic Urban Lake Area Evolution Model Based on Multilevel Grid, Cellular Automata, and Multiagent System. **2020**, 2020, 1-19		1
317	Breaking of the Trade-Off Principle between Computational Universality and Efficiency by Asynchronous Updating. **2020**, 22,		2
316	Necrotic Control of the Aesthetics of Evolved Art. **2020**,		0
315	Cellular Automata and Discrete Complex Systems. **2020**,		0
314	The combination of artificial intelligence and systems biology for intelligent vaccine design. **2020**, 15, 1267-1281		11
313	Four-Types of IIT-Induced Group Integrity of. **2020**, 22,		3
312	Subverting Process-Based Controls: Oscillation in Automotive Recalls and a Simulation on Opportunism within a Network. **2020**,		1
311	Modeling and analyzing malware diffusion in wireless sensor networks based on cellular automaton. **2020**, 16, 155014772097294		5
310	Brain-Inspired Self-Organization with Cellular Neuromorphic Computing for Multimodal Unsupervised Learning. **2020**, 9, 1605		5
309	Maladaptive social norms, cultural progress, and the free-energy principle. **2020**, 43, e100		1
308	"Social physiology" for psychiatric semiology: How TTOM can initiate an interactive turn for computational psychiatry?. **2020**, 43, e102		2
307	Enculturation without TTOM and Bayesianism without FEP: Another Bayesian theory of culture is needed. **2020**, 43, e103		1
306	Emergence of Turing Patterns in a Simple Cellular Automata-Like Model via Exchange of Integer Values between Adjacent Cells. **2020**, 2020, 1-12		2
305	Emergence versus neoclassical reductions in economics. **2020**, 27, 240-262		3
304	IECA: an efficient IoT friendly image encryption technique using programmable cellular automata. **2020**, 11, 5083-5102		21
303	Criticality in Pareto Optimal Grammars?. **2020**, 22,		2
302	Games of life. *American Journal of Physics*, **2020**, 88, 371-378	0.7	1
301	Reachability problem in non-uniform cellular automata. *Information Sciences*, **2021**, 543, 72-84	7.7	2

300	Urban Human Dynamics. **2021**, 41-57		
299	Reversibility of non-saturated linear cellular automata on finite triangular grids. *Chaos*, **2021**, 31, 013136	3.3	
298	The Complexity and Information Content of Simulated Universes. *Emergence, Complexity and Computation*, **2021**, 29-56	0.1	
297	Observations on Computability, Uncertainty, and Technology. **2021**, 349-365		
296	A cellular automaton-based model of ship traffic flow in busy waterways. **2021**, 74, 605-618		2
295	Cellular Automata Modeling for Urban and Regional Planning. **2021**, 865-883		5
294	Deep Reservoir Computing. **2021**, 77-95		1
293	The Santa Fe Institute and Econophysics: A Possible Genealogy?. 1		2
292	Nonlinear Endogenous Business Cycles: Zambelli-Goodwin Excursions in Cellular Automata Worlds. **2021**, 311-327		
291	High-Level Synthesis of Cellular Automata Belousov Zhabotinsky Reaction in FPGA. **2021**, 341-349		0
290	Entropy-Based Classification of Elementary Cellular Automata under Asynchronous Updating: An Experimental Study. **2021**, 23,		4
289	Probabilistic Cellular Automata for Granular Media in Video Games. **2021**, 10, 111-120		1
288	Criticality, Connectivity, and Neural Disorder: A Multifaceted Approach to Neural Computation. *Frontiers in Computational Neuroscience*, **2021**, 15, 611183	3.5	3
287	Motion-Compensated Frame Interpolation Using Cellular Automata-Based Motion Vector Smoothing. **2021**, 2021, 1-16		
286	The emergence of a fractal structure of formal logic via the spatiotemporal reflexive self-identification. *BioSystems*, **2021**, 202, 104342	1.9	1
285	Computational Models and Simulations of Cancer Metastasis. **2021**, 28, 4837		6
284	Construction of phase diagram for elementary cellular automata by behavior of s-step transition function. **2021**, 103, 042128		0
283	On the complexity of asynchronous freezing cellular automata. **2021**, 281, 104764		

282	Physical layer encryption scheme based on cellular automata and DNA encoding by hyper-chaos in a CO-OFDM system. **2021**, 29, 18976-18987		7
281	(Imperfect) strategies to generate primitive polynomials over GF(2). **2021**, 872, 79-96		1
280	Communication complexity meets cellular automata: Necessary conditions for intrinsic universality. **2021**, 20, 307-320		
279	Spatio-temporal evolution and future scenario prediction of karst rocky desertification based on CA–Markov model. **2021**, 14, 1		0
278	Dynamic stability analysis of frame anchor-supported slope. **2021**, 14, 1		
277	Classification of Discrete Dynamical Systems Based on Transients. *Artificial Life*, **2021**, 1-26	1.4	
276	Regulation of Vegetation and Evapotranspiration by Water Level Fluctuation in Shallow Lakes. **2021**, 13, 2651		0
275	Lerch distribution based on maximum nonsymmetric entropy principle: Application to Conway's game of life cellular automaton. **2021**, 151, 111272		4
274	Evolutionary Tabu Inverted Ant Cellular Automata with Elitist Inertia for swarm robotics as surrogate method in surveillance task using e-Puck architecture. **2021**, 144, 103840		0
273	A genetic timing scheduling model for urban traffic signal control. *Information Sciences*, **2021**, 576, 475-483	7.7	1
272	About the robustness of 1d cellular automata revising their temporal entropy. *Physica D: Nonlinear Phenomena*, **2021**, 425, 132953	3.3	2
271	Study on strategies for alighting and boarding in subway stations. **2021**, 583, 126302		1
270	Lévy Walk in Swarm Models Based on Bayesian and Inverse Bayesian Inference. **2021**, 19, 247-260		4
269	Cellular Automata and Agent Base Models for Urban Studies: From Pixels to Cells to Hexa-dpi's. 323-334		8
268	Calibrating and Validating Cellular Automata Models of Urbanization. 335-345		13
267	The Role of Computation in Complex Regulatory Networks. **2006**, 206-225		9
266	Fully Asynchronous Behavior of Double-Quiescent Elementary Cellular Automata. **2005**, 316-327		7
265	Spatiotemporal Data Mining with Cellular Automata. **2006**, 1001-1004		1

264	Cell Dormancy in Cellular Automata. **2006**, 367-374	4
263	On the Complexity of Limit Sets of Cellular Automata Associated with Probability Measures. **2006**, 190-201	4
262	1/f Noise in Elementary Cellular Automaton Rule 110. **2006**, 207-216	5
261	Generalized Automata Networks. **2006**, 14-28	4
260	Directed Percolation Phenomena in Asynchronous Elementary Cellular Automata. **2006**, 667-675	6
259	Problem Solving and Complex Systems. **2006**, 53-85	1
258	Observations on Complex Multi-state CAs. **2001**, 226-235	3
257	Damage Spreading and Sensitivity on Cellular Automata. **2000**, 226-241	1
256	Non-homogeneous Classifier Systems in a Macro-evolution Process. **2000**, 161-174	4
255	Artificial Life Applications of a Class of P Systems: Abstract Rewriting Systems on Multisets. **2001**, 299-346	33
254	The computational complexity of cellular automata. **1989**, 451-459	1
253	Quasi-Uniform Computation-Universal cellular automata. **1995**, 544-554	10
252	Designing evolware by cellular programming. **1997**, 79-95	7
251	Online autonomous evolware. **1997**, 96-106	13
250	Scheduling tasks of a parallel program in two-processor systems with use of cellular automata. **1998**, 261-269	1
249	Encyclopedia of Complexity and Systems Science. **2009**, 3233-3242	2
248	Encyclopedia of Complexity and Systems Science. **2009**, 755-768	6
247	Encyclopedia of Complexity and Systems Science. **2009**, 768-778	9

246	Encyclopedia of Complexity and Systems Science. **2009**, 8815-8850	2
245	Encyclopedia of Complexity and Systems Science. **2009**, 823-848	12
244	Agent-Based Modeling and Artificial Life. **2020**, 725-745	1
243	Computing with Solitons: A Review and Prospectus. **2002**, 277-297	12
242	Implementation of Logical Functions in the Game of Life. **2002**, 491-512	14
241	Computing Inside the Billiard Ball Model. **2002**, 135-160	4
240	Scale-Sensitive Ecological Properties: Historical Context, Current Meaning. **1997**, 3-31	27
239	Cellular Automata Models of Cardiac Conduction. **1991**, 437-476	10
238	Computational Complexity. **2012**, 1821-1836	2
237	The Emergence of Organizational Structures. **1995**, 209-231	2
236	Simulation as a Tool to Model Stochastic Processes in Complex Systems. **1999**, 45-69	4
235	Structurally Dynamic Cellular Automata. **2009**, 29-71	1
234	Cellular Automata with Memory. **2009**, 153-183	6
233	Control of Cellular Automata. **2018**, 445-458	2
232	Cellular Automata Music: From Sound Synthesis to Musical Forms. **2007**, 170-193	11
231	Design vs. Self-organization. **2008**, 3-17	15
230	Growth and Decay in Life-Like Cellular Automata. **2010**, 71-97	14
229	Gliders and Glider Guns Discovery in Cellular Automata. **2010**, 135-165	3

228	Explanatory Models Versus Predictive Models: Reduced Complexity Modeling in Geomorphology. **2013**, 115-128		7
227	Memristor Cellular Automata and Memristor Discrete-Time Cellular Neural Networks. **2014**, 649-713		5
226	Lyapunov Exponents of One-Dimensional, Binary Stochastic Cellular Automata. **2014**, 96-104		1
225	Towards a Comprehensive Understanding of Multi-state Cellular Automata. **2014**, 16-24		2
224	Coastal Wetlands in the Changjiang Estuary. **2015**, 137-159		2
223	Computing with Classical Soliton Collisions. *Emergence, Complexity and Computation*, **2017**, 261-295	0.1	2
222	Memristor Cellular Automata and Memristor Discrete-Time Cellular Neural Networks. **2019**, 1289-1361		5
221	Cellular Automaton and Tacit Knowledge Sharing. **2018**, 109-120		1
220	On Measuring Cognition and Cognitive Augmentation. **2018**, 494-507		2
219	On the Influence of Localisation and Communication Error on the Behaviour of a Swarm of Autonomous Underwater Vehicles. *Advances in Intelligent Systems and Computing*, **2019**, 68-79	0.4	2
218	Research of Complex Forms in Cellular Automata by Evolutionary Algorithms. **2004**, 357-367		6
217	Intrinsic Evolvable Hardware in Digital Filter Design. **2004**, 389-398		8
216	A New Universal Cellular Automaton Discovered by Evolutionary Algorithms. **2004**, 175-187		8
215	Evaluating Team Performance at the Edge of Chaos. **2004**, 89-101		13
214	Local Information in One-Dimensional Cellular Automata. **2004**, 121-130		12
213	SAT-Based Analysis of Cellular Automata. **2004**, 745-754		1
212	Exploring Rhythmic Automata. **2005**, 551-556		4
211	Evolution and Hypercomputing in Global Distributed Evolvable Virtual Machines Environment. **2006**, 176-191		4

210	Prediction Horizons in Agent Models. **2008**, 88-102		4
209	Understanding a Non-trivial Cellular Automaton by Finding Its Simplest Underlying Communication Protocol. **2008**, 592-604		6
208	Generative Network Automata: A Generalized Framework for Modeling Adaptive Network Dynamics Using Graph Rewritings. *Understanding Complex Systems*, **2009**, 311-332	0.4	13
207	Introduction to Modeling of Complex Systems Using Cellular Automata. *Understanding Complex Systems*, **2010**, 1-16	0.4	7
206	Cellular Automata Composition Techniques for Spatial Dynamics Simulation. *Understanding Complex Systems*, **2010**, 81-115	0.4	11
205	Research on Vegetation Dynamic Change Simulation Based on Spatial Data Mining of ANN-CA Model Using Time Series of Remote Sensing Images. **2010**, 551-557		2
204	Characterization of Texture in Images by Using a Cellular Automata Approach. **2010**, 522-533		4
203	Application of Cellular Automata in Symmetric Key Cryptography. **2010**, 154-163		1
202	Cryptography with Constant Input Locality. **2014**, 147-185		1
201	Dynamic Cellular Automata-Based S-Boxes. **2012**, 184-191		5
200	Encyclopedia of Complexity and Systems Science. **2018**, 1-14		3
199	Genome Parameters as Information to Forecast Emergent Developmental Behaviors. **2012**, 186-197		5
198	Computation in Complex Systems. **2013**, 13-52		2
197	A Coevolutionary Approach to Cellular Automata-Based Task Scheduling. **2012**, 111-120		5
196	A New Kind of Philosophy: Manifesto for a Digital Ontology. *Emergence, Complexity and Computation*, **2013**, 325-339	0.1	3
195	Exploring Nature's Roulette Wheel: Chaos in Biological Systems. **1991**, 173-185		1
194	Social Dilemmas in Lineland and Flatland. **1996**, 337-361		15
193	Self-organizing Friendship Networks. **1996**, 385-418		4

192	Social Science Simulation Origins, Prospects, Purposes. **1997**, 41-54		31
191	Investigating Universal Computability of Conventional Cellular Automata Problems on an Organic Molecular Matrix. **2010**, 1-12		2
190	Cellular Automata in Urban Spatial Modelling. **2012**, 69-84		13
189	Computer Science Meets Evolutionary Biology: Pure Possible Processes and the Issue of Gradualism. **2012**, 137-162		2
188	Cellular Automata in the Social Sciences. **1996**, 209-233		18
187	TOWARDS A GRAMMAR OF INORGANIC STRUCTURE. **1986**, 803-824		1
186	Digital life, a theory of minds, and mapping human and machine cultural universals. **2020**, 43, e98		1
185	Mesoeconomic Structure, Innovation and Complexity: The Concept of Mesoeconomic Plexus. **2008**, 52-86		1
184	Chimera states in coupled map lattices: Spatiotemporally intermittent behavior and an equivalent cellular automaton. *Chaos*, **2020**, 30, 113102	3.3	1
183	Artificial life in an exciton-polariton lattice. **2020**, 22, 103062		4
182	Entropies of automorphisms of a topological Markov shift. **1987**, 99, 589-589		29
181	Spell-Out and the Minimalist Program. **2011**,		6
180	Limit theorems for the nonattractive Domany-Kinzel model. **2002**, 30,		3
179	Dynamics of Complex Systems Built as Coupled Physical, Communication and Decision Layers. **2016**, 11, e0145135		10
178	Study of spatially extended dynamical systems using probabilistic cellular automata. **1999**, 169, 481		14
177	A CELLULAR AUTOMATA MODEL FOR MONITORING AND SIMULATING URBAN LAND USE/COVER CHANGES TOWARD SUSTAINABILITY. **2018**, 26, 1-7		7
176	Stochastic Optimization Algorithms. **2007**, 28-44		3
175	Configuration Analysis of a Lizard Skin-like Pattern Formed by DNA Self-Assembly. **2021**, 6, 27038-27044		0

174	The Harvard-MIT complexity approach to development and Austrian economics: Similarities and policy implications. 1	0
173	Computational Power of Asynchronously Tuned Automata Enhancing the Unfolded Edge of Chaos. **2021**, 23,	1
172	A critical analysis of radiation-matter interaction. **2000**, 23, 1-59	
171	References. **2001**, 475-495	
170	References. **2001**, 527-546	
169	Observation of on-off intermittency in cellular automata. **2001**, 55-62	
168	Cellular Automata Approach to Scheduling Problem in Case of Modifications of a Program Graph. **2001**, 155-166	
167	A Complexity-Theoretic Approach to the Design of Good Measures of Cryptographic Strength. **2001**, 233-241	
166	On Multiprocessor Scheduling with Cellular Automata. **2002**, 371-380	
165	Finding Gliders in Cellular Automata. **2002**, 381-410	1
164	The Games of Life. **2002**, 5-32	
163	Immune-Like System Approach to Cellular Automata-Based Scheduling. **2002**, 626-633	1
162	Patch Dynamics, Habitat Degradation, and Space in Metapopulations. **2003**, 239-254	
161	A Spiking Oscillator with Quantized State and Its Pulse Coding Characteristics. **2004**, 1123-1128	
160	Pulse Codings of a Spiking Neuron Having Quantized State. **2004**, 1002-1009	
159	Complexity of Linear Cellular Automata over Zm. **2005**, 1209-1213	
158	Dynamik (und Management) von und Reaktion auf Ad-hoc-Krisen. **2005**, 115-140	
157	A Self-organising, Self-adaptable Cellular System. **2005**, 128-137	2

156	A Systemic Framework for Open Software Agents. **2006**, 222-232	
155	Self-adaptation and Dynamic Environment Experiments with Evolvable Virtual Machines. **2006**, 46-60	6
154	Synthesis of Desired Binary Cellular Automata Through the Genetic Algorithm. **2006**, 738-745	1
153	[illegible] **2006**, 18, 123-131	2
152	Gliders and Riders: A Particle Swarm Selects for Coherent Space-Time Structures in Evolving Cellular Automata. **2006**, 131-154	
151	Artificially in Social Sciences. **2007**, 1-15	
150	Applications of Emergent Phenomena. **2008**, 133-157	
149	Interactive Spatiotemporal Reasoning. **2009**, 303-319	
148	Evolving Cellular Automata. **2009**, 543-554	
147	Classification of Cellular Automata. **2009**, 185-200	1
146	The Origin of Evolution in Physical Systems. **2009**, 550-559	
145	Asymptotic Cellular Complexity. **2009**, 195-206	
144	Emergent Phenomena in Cellular Automata. **2009**, 309-321	
143	Towards Generalized Measures Grasping CA Dynamics. **2010**, 177-187	
142	Game of Life Music. **2010**, 489-501	1
141	LIFE with Short-Term Memory. **2010**, 275-290	1
140	The Extended Glider-Eater Machine in the Spiral Rule. **2010**, 175-186	1
139	Emergent Complexity in Conway Game of Life. **2010**, 389-436	

138	Macroscopic Spatial Complexity of the Game of Life Cellular Automaton: A Simple Data Analysis. **2010**, 437-450	
137	Estimation of Air Temperature Changes due to Future Urban Growth in the Seoul Metropolitan Area. **2010**, 19, 237-245	2
136	Prediction of Future Climate Change Using an Urban Growth Model in the Seoul Metropolitan Area. **2010**, 26, 367-379	2
135	Foundation for Establishing NSE: Complexity Science. **2011**, 79-90	
134	Evolution and Complexity. **2011**, 121-138	
133	A Local Behavior Identification Algorithm for Generative Network Automata Configurations. **2011**, 191-199	
132	An Observation of Cryptographic Properties of 256 One-Dimensional Cellular Automata Rules. **2011**, 409-420	0
131	Identifying Generative Mechanisms from Spatiotemporal Patterns in Diffusion Phenomena. **2011**, 338-347	
130	Memory in Astrocytes. **2011**, 22-36	
129	Sub-extraction. **2011**, 83-120	
128	Antecedents and Consequents. **2011**, 188-221	
127	A CLASH Model. **2011**, 263-313	
126	Cyclicity. **2011**, 152-187	
125	Linearization. **2011**, 49-82	
124	The Frustrating Equation. **2011**, 222-262	
123	C-command. **2011**, 121-151	
122	Introduction. **2011**, 1-48	
121	Computational Complexity. **2012**, 3114-3149	

120	Computational Complexity. **2012**, 382-406		0
119	Computational Complexity. **2012**, 325-335		
118	Computational Complexity. **2012**, 312-324		
117	Computational Complexity. **2012**, 1043-1052		
116	Topological Perturbations and Their Effect on the Dynamics of Totalistic Cellular Automata. **2012**, 1-10		
115	Analysis of Climate Variability under Various Scenarios for Future Urban Growth in Seoul Metropolitan Area (SMA), Korea. **2012**, 28, 261-272		3
114	Introduction. **2013**, 1-11		
113	Trace Complexity of Chaotic Reversible Cellular Automata. **2014**, 54-66		1
112	Dynamic mapping of flood boundaries: current possibilities offered by Earth Observation System and Cellular Automata.		
111	Infinite Number of Disjoint Chaotic Subsystems of Cellular Automaton Rule 106. **2014**, 05, 3256-3263		
110	Measuring Phenotypic Structural Complexity of Artificial Cellular Organisms. *Advances in Intelligent Systems and Computing*, **2014**, 23-35	0.4	1
109	Homogeneous Dynamics for Square Boolean Automata with Null Boundary Conditions. **2014**, 30-43		
108	A Pixelated Design Medium. **1986**, 180-202		
107	Systolic architectures, systems and computations. **1988**, 254-270		1
106	Complex Computing with Cellular Automata. **1989**, 57-72		
105	Cellular Automata and Condensed Matter Physics. **1991**, 249-277		
104	Efficient unidimensional universal cellular automaton. **1992**, 374-382		3
103	Self-Similar Fractals can be Generated by Cellular Automata. **1993**, 463-471		2

102	Synergetics, Predictability and Deterministic Chaos. **1993**, 75-141		1
101	Au bord du chaos. **1995**, 239-254		
100	A complexity measure of the Internet. **1997**, 55-57		
99	Quantum Automata in Cytoskeletal Microtubules: A Nanoscale Substrate for Cognition. **1997**, 61-106		
98	Use of fuzzy objects for statistical description of discrete systems with complex behavior. **1997**, 595-597		
97	Where do Industrial Districts Come From? A Cellular Automata Model of Competition, Cooperation and the Dynamics of Industrial Clusters. **1998**, 49-66		
96	Role of Irreducible Processes in Complex Dynamics. **1998**, 26-37		
95	Evolutionary Cellular Automata for Image Compression. **1998**, 117-126		
94	Cellular-Automata Based Node Scheduling Scheme for Wireless Sensor Networks. **2014**, 39B, 708-714		
93	More is Different Sometimes: Ising Models, Emergence, and Undecidability. **2015**, 137-152		1
92	Agent-Based Modeling and Artificial Life. **2015**, 1-25		
91	A Behavioral Analysis of Cellular Automata. **2015**, 123-134		1
90	Broadcasting Automata and Patterns on Z2. *Emergence, Complexity and Computation*, **2015**, 297-340	0.1	1
89	Synergetic Impact of Synergetics - Remembrances of a Chemist. *Understanding Complex Systems*, **2016**, 59-74	0.4	1
88	BLOCK TRANSFORMATION OF HYBRID CELLULAR AUTOMATA. **2016**, 6, 1164-1179		
87	A System on Chip Development of Customizable GA Architecture for Real Parameter Optimization Problem. **2016**, 66-102		0
86	Some Properties on the Capability of Associative Memory for Higher Order Neural Networks. **2016**, 391-419		
85	The Impact of Structure Network Parameters on Consumers Behavior: A Cellular Automata Model. *Advances in Intelligent Systems and Computing*, **2017**, 237-247	0.4	

84	Finite and Infinite Computations and a Classification of Two-Dimensional Cellular Automata Using Infinite Computations. **2017**, 183-195	1
83	Cellular Automata. **2017**, 65-111	
82	Simulation of Road Capacity with Loading/Unloading Bays Based on Cellular Automaton Model. **2017**, 293-306	
81	Generating Efficient Techniques for Information Extraction and Processing Using Cellular Automata. **2017**, 204-228	1
80	Evolution in Nanomaterio: The NASCENCE Project. *Emergence, Complexity and Computation*, **2018**, 87-111	0.1
79	Modeling the spreading of forest fire based on a cellular automata using the markov chain and MOLA with a neighborhood filter. **2017**, 5, 99-122	
78	Recognizing Complex Behavior Emerging from Chaos in Cellular Automata. *Springer Proceedings in Complexity*, **2018**, 82-90	0.3
77	Introduction. **2018**, 1-9	
76	Differential Game Model of Knowledge Flow in University-Industry Collaborative Innovation. **2018**, 133-153	
75	Measuring the Performance of Knowledge Value-Added in University-Industry Collaborative Innovation. **2018**, 11-28	
74	Small-World Network and Knowledge Sharing. **2018**, 121-131	
73	Complexity of Maxmin-(omega) Cellular Automata. *Springer Proceedings in Complexity*, **2018**, 98-107	0.3
72	Conclusion and Further Research. **2018**, 155-157	
71	Edge Detection Property of 2D Cellular Automata. *Advances in Intelligent Systems and Computing*, **2019**, 81-87	0.4
70	Cellular Automata and Shifts of Finite Type. **2019**, 09, 791-798	
69	Hücresel Otomata Tabanlı Kili Sınıflandırma. 43-58	
68	Evolving Diverse Cellular Automata Based Level Maps. *Advances in Intelligent Systems and Computing*, **2020**, 10-23	0.4
67	Automatic Texture Based Classification of the Dynamics of One-Dimensional Binary Cellular Automata. **2019**, 8, 41-61	

66	Reservoir Computing Using Asynchronous Cellular Automata. **2020**, 56, 8-15		
65	Generating Efficient Techniques for Information Extraction and Processing Using Cellular Automata. **2020**, 1356-1376		
64	Reversibility of number-conserving 1D cellular automata: Unlocking insights into the dynamics for larger state sets. *Physica D: Nonlinear Phenomena*, **2021**, 429, 133075	3.3	1
63	Further Exploration of Necrotic Control of Evolved Art. **2020**,		
62	Everywhere Zero Pointwise Lyapunov Exponents for Sensitive Cellular Automata. **2020**, 71-85		
61	Social Organisation of Mobile Sensors for Wildfire Spread Estimation. **2020**, 53, 3596-3601		
60	Viral Diseases Propagation Analysis in Short Time. **2020**, 41-57		0
59	The cellular automata inside optical chimera states. **2021**, 153, 111524		0
58	Some Properties on the Capability of Associative Memory for Higher Order Neural Networks. 57-86		
57	Collisions and their Catenations: Ultimately Periodic Tilings of the Plane. **2008**, 229-240		
56	How to Model Emergence: Non-Traditional Methods. 195-290		
55	Locating Self-Organization at the Edge of Chaos. **2006**, 193-200		
54	FPGA Implementation of Evolvable Characters Recognizer with Self-adaptive Mutation Rates. **2007**, 286-295		2
53	Biological Inspired Global Descriptor for Shape Matching. **2007**, 1281-1290		
52	Design of an Organisational Structure to Govern the Dynamic Behaviour of Aviation-oriented Orders with Multiple Priorities. **2008**, 267-316		
51	Searching for Glider Guns in Cellular Automata: Exploring Evolutionary and Other Techniques. **2007**, 255-265		1
50	Occurrence of Gliders in an Infinite Class of Life-Like Cellular Automata. 32-41		2
49	Can an AI learn political theory?. **2020**, 2,		

48	Biophysical model for high-throughput tumor and epithelial cell co-culture in complex biochemical microenvironments.		0
47	Goals as Emergent Autopoietic Processes. **2021**, 9, 720652		1
46	Progress, gaps and obstacles in the classification of cellular automata. *Physica D: Nonlinear Phenomena*, **2021**, 133074	3.3	4
45	Life Worth Mentioning: Complexity in Life-Like Cellular Automata. *Artificial Life*, **2021**, 27, 105-112	1.4	0
44	Asynchronous communicating cellular automata: Formalization, robustness and equivalence. *Information Sciences*, **2022**, 587, 335-353	7.7	
43	Carle's Game: An Open-Ended Challenge in Exploratory Machine Creativity. **2021**,		
42	About the Reversibility of Elementary Cellular Automata with Rule Number 180. *Lecture Notes in Networks and Systems*, **2022**, 131-140	0.5	
41	Short- and Long-Range Connections Differentially Modulate the Dynamics and State of Small-World Networks.. *Frontiers in Computational Neuroscience*, **2021**, 15, 783474	3.5	1
40	Integrated information as a common signature of dynamical and information-processing complexity.. *Chaos*, **2022**, 32, 013115	3.3	4
39	Exploring complex pattern formation with convolutional neural networks. *American Journal of Physics*, **2022**, 90, 141-151	0.7	
38	Predictability vs. Efficiency of Large-Scale Multi-Agent Systems. *Springer Proceedings in Complexity*, **2022**, 97-115	0.3	
37	Review of atomic layer deposition process, application and modeling tools. *Materials Today: Proceedings*, **2022**,	1.4	2
36	Construction and Configuration Analysis of Zelkova Serrata Lenticel-Like Patterns Generated through DNA Algorithmic Self-Assembly.. *ACS Applied Bio Materials*, **2021**,	4.1	0
35	On Boolean Automata Isolated Cycles and Tangential Double-Cycles Dynamics. *Emergence, Complexity and Computation*, **2022**, 145-178	0.1	
34	On Fungal Automata. *Emergence, Complexity and Computation*, **2022**, 455-483	0.1	1
33	Load Balancing of the Parallel Execution of Two Dimensional Partitioned Cellular Automata. **2022**,		
32	A New Notion of Universality in Respect of Logic Gates Generation Capability of ECAs. *Advances in Intelligent Systems and Computing*, **2022**, 167-190	0.4	
31	Alloy Sounds: Non-Repeating Sound Textures with Probabilistic Cellular Automata. **2021**,		

30	Revisiting the edge of chaos: Again?. *BioSystems*, **2022**, 104693	1.9	0
29	Pattern of Sea-Shells Modelled by One-Dimensional Automata. *Understanding Complex Systems*, **2022**, 163-197	0.4	
28	Monitoring of land use land cover dynamics and prediction of urban growth using Land Change Modeler in Delhi and its environs, India. *Environmental Science and Pollution Research*,	5.1	0
27	Spatiotemporal chaos in two-dimensional dynamic coupled map lattices system based on elementary cellular automata. *Nonlinear Dynamics*,	5	0
26	Machine Learning Techniques in Structural Wind Engineering: A State-of-the-Art Review. *Applied Sciences (Switzerland)*, **2022**, 12, 5232	2.6	0
25	Emergence and Universal Computation. **2022**, 15-30		
24	Verifying Maze-Like Game Levels with Model Checker SPIN. *IEEE Access*, **2022**, 1-1	3.5	
23	Examining the expansion of Spartina alterniflora in coastal wetlands using an MCE-CA-Markov model. *Frontiers in Marine Science*, 9,	4.5	0
22	Selecting continuous life-like cellular automata for halting unpredictability. **2022**,		
21	Synchronisation of ´Elementary Cellular Automata with ´a ´Small Initial Error. Application to ´Rule 18. **2022**, 73-82		
20	High-Speed Privacy Amplification Algorithm Using Cellular Automate in Quantum Key Distribution. **2022**, 11, 2426		1
19	Transverse microstructural evolution and its cellular automata simulation during hot rolling of AZ31 alloy wide-width plate. **2022**, 32, 104097		0
18	Identification of ´Periodic Boundary SACA Rules Exploring NSRT Diagram. **2022**, 29-39		0
17	Therapeutic Neuromodulation toward a Critical State May Serve as a General Treatment Strategy. **2022**, 10, 2317		0
16	On Dynamical Finiteness Properties of Algebraic Group Shifts.		0
15	Modelling brain dynamics by Boolean networks. **2022**, 12,		0
14	Triple-Coupling Cellular Automata and Their Application to Image Encryption. **2022**, 32,		0
13	Memristor Based Integrated System for the Long-Term Analysis of Chronic Wounds: Design and Clinical Trial. **2022**,		0

12	On Deep-Fake Stock Prices and Why Investor Behavior Might Not Matter. **2022**, 15, 475	0
11	Non-uniform number-conserving elementary cellular automata. **2023**,	0
10	Tailoring load balancing of cellular automata parallel execution to the case of a two-dimensional partitioned domain.	0
9	Copyright Page. **2011**, iv-iv	0
8	. **2011**, v-v	0
7	Logical and Philosophical Foundations of Complexity. **2021**, 1-24	0
6	Da emergência da sonoridade às sonoridades emergentes: mediação tecnológica, emergentismo e a criação sonora com suporte computacional. **2017**, 5, 1-25	0
5	An Assessment of Crop-Specific Land Cover Predictions Using High-Order Markov Chains and Deep Neural Networks. **2023**, 1-21	0
4	Fuzzy parallel dynamical systems on Zadeh operators.	0
3	Neural Field Continuum Limits and the Structure–Function Partitioning of Cognitive–Emotional Brain Networks. **2023**, 12, 352	0
2	Lyapunov exponents of multi-state cellular automata. **2023**, 33, 043108	0
1	M-State and N-Color (MN = 11, 21, and 12) Turing Algorithms Demonstrated via DNA Self-Assembly.	0