Ming-Sheng Ying

List of Publications by Year
in descending order

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190	4,165	94433	155660
papers	citations	37 h-index	55 g-index

202	202	202	1385
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A proof system for disjoint parallel quantum programs. Theoretical Computer Science, 2022, 897, 164-184.	0.9	9
2	Verification of Distributed Quantum Programs. ACM Transactions on Computational Logic, 2022, 23, 1-40.	0.9	4
3	Algebraic reasoning of Quantum programs via non-idempotent Kleene algebra. , 2022, , .		3
4	Equivalence checking of quantum finite-state machines. Journal of Computer and System Sciences, 2021, 116, 1-21.	1.2	2
5	Robustness Verification of Quantum Classifiers. Lecture Notes in Computer Science, 2021, , 151-174.	1.3	6
6	Optimal Policies for Quantum Markov Decision Processes. International Journal of Automation and Computing, 2021, 18, 410-421.	4.5	6
7	An HHL-based algorithm for computing hitting probabilities of quantum walks. Quantum Information and Computation, 2021, 21, 395-404.	0.3	2
8	A Quantum Interpretation of Bunched Logic & Quantum Separation Logic. , 2021, , .		9
9	Quantum Hoare Logic with Classical Variables. ACM Transactions on Quantum Computing, 2021, 2, 1-43.	4.3	11
10	Strassen's theorem for quantum couplings. Theoretical Computer Science, 2020, 802, 67-76.	0.9	6
11	Quantum Supremacy Circuit Simulation on Sunway TaihuLight. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 805-816.	5.6	27
12	Relational proofs for quantum programs. , 2020, 4, 1-29.		11
13	Projection-based runtime assertions for testing and debugging Quantum programs. , 2020, 4, 1-29.		45
14	An applied quantum Hoare logic. , 2019, , .		26
15	Quantitative robustness analysis of quantum programs. , 2019, 3, 1-29.		17
16	Model-checking quantum systems. National Science Review, 2019, 6, 28-31.	9.5	3
17	Preface to special topic on quantum computing. National Science Review, 2019, 6, 20-20.	9.5	1
18	Toward automatic verification of quantum programs. Formal Aspects of Computing, 2019, 31, 3-25.	1.8	12

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19	Formal Verification of Quantum Algorithms Using Quantum Hoare Logic. Lecture Notes in Computer Science, 2019, , 187-207.	1.3	24
20	Algorithmic analysis of termination problems for quantum programs. , 2018, 2, 1-29.		7
21	Decomposition of quantum Markov chains and its applications. Journal of Computer and System Sciences, 2018, 95, 55-68.	1.2	10
22	Reachability analysis of quantum Markov decision processes. Information and Computation, 2018, 263, 31-51.	0.7	12
23	$$Q\|Slangle $$Q|SlâŸ©Â: A Quantum Programming Environment. Lecture Notes in Computer Science, 2018, , 133-164.	1.3	13
24	Super-activating quantum memory with entanglement. Quantum Information and Computation, 2018, 18, 1115-1124.	0.3	0
25	Invariants of quantum programs: characterisations and generation. , 2017, , .		12
26	Differential Privacy in Quantum Computation. , 2017, , .		13
27	Invariants of quantum programs: characterisations and generation. ACM SIGPLAN Notices, 2017, 52, 818-832.	0.2	7
28	Analysis of quantum programs. , 2016, , 149-207.		14
29	Quantum case statements. , 2016, , 211-271.		0
30	Syntax and semantics of quantum programs. , 2016, , 61-102.		0
31	Logic for quantum programs. , 2016, , 103-148.		22
32	Quantum recursion. , 2016, , 273-324.		0
33	Optimal simulation of Deutsch gates and the Fredkin gate. Physical Review A, 2015, 91, .	2.5	26
34	Symbolic Bisimulation for Quantum Processes. ACM Transactions on Computational Logic, 2014, 15, 1-32.	0.9	19
35	Model-Checking Linear-Time Properties of Quantum Systems. ACM Transactions on Computational Logic, 2014, 15, 1-31.	0.9	17
36	Debugging quantum processes using monitoring measurements. Physical Review A, 2014, 89, .	2.5	8

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37	Distinguishability of Quantum States by Positive Operator-Valued Measures With Positive Partial Transpose. IEEE Transactions on Information Theory, 2014, 60, 2069-2079.	2.4	43
38	Termination of nondeterministic quantum programs. Acta Informatica, 2014, 51, 1-24.	0.5	12
39	(Un)decidable Problems about Reachability of Quantum Systems. Lecture Notes in Computer Science, 2014, , 482-496.	1.3	3
40	Removing measurements from quantum walks. Physical Review A, 2013, 87, .	2.5	2
41	Verification of quantum programs. Science of Computer Programming, 2013, 78, 1679-1700.	1.9	37
42	Five two-qubit gates are necessary for implementing the Toffoli gate. Physical Review A, 2013, 88, .	2.5	43
43	Model checking quantum Markov chains. Journal of Computer and System Sciences, 2013, 79, 1181-1198.	1.2	49
44	Probabilistic automata for computing with words. Journal of Computer and System Sciences, 2013, 79, 152-172.	1.2	6
45	Quantum Information-Flow Security: Noninterference and Access Control. , 2013, , .		3
46	Reachability Probabilities of Quantum Markov Chains. Lecture Notes in Computer Science, 2013, , 334-348.	1.3	13
47	Reachability Analysis of Recursive Quantum Markov Chains. Lecture Notes in Computer Science, 2013, , 385-396.	1.3	3
48	Bisimulation for Quantum Processes. ACM Transactions on Programming Languages and Systems, 2012, 34, 1-43.	2.1	16
49	Approximating Markov processes through filtration. Theoretical Computer Science, 2012, 446, 75-97.	0.9	6
50	Four Locally Indistinguishable Ququad-Ququad Orthogonal Maximally Entangled States. Physical Review Letters, 2012, 109, 020506.	7.8	115
51	Semantic Analysis of Component-aspect Dynamism for Connector-based Architecture Styles. , 2012, , .		0
52	Quantum programming: From theories to implementations. Science Bulletin, 2012, 57, 1903-1909.	1.7	8
53	Reachability and Termination Analysis of Concurrent Quantum Programs. Lecture Notes in Computer Science, 2012, , 69-83.	1.3	10
54	A Flowchart Language for Quantum Programming. IEEE Transactions on Software Engineering, 2011, 37, 466-485.	5.6	20

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55	Bisimulation for quantum processes. , 2011, , .		22
56	Any<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>2</mml:mn><mml:mo>âŠ—</mml:mo><mml:mi>n</mml:mi></mml:mrow></mml:math>subsp is locally distinguishable. Physical Review A, 2011, 84, .	2.8	48
57	Floyd--hoare logic for quantum programs. ACM Transactions on Programming Languages and Systems, 2011, 33, 1-49.	2.1	82
58	Bisimulation for quantum processes. ACM SIGPLAN Notices, 2011, 46, 523-534.	0.2	6
59	Quantum loop programs. Acta Informatica, 2010, 47, 221-250.	0.5	31
60	Quantum computation, quantum theory and AI. Artificial Intelligence, 2010, 174, 162-176.	5.8	75
61	Reasoning about cardinal directions between extended objects. Artificial Intelligence, 2010, 174, 951-983.	5.8	61
62	Local unambiguous discrimination with remaining entanglement. Physical Review A, 2010, 82, .	2.5	3
63	Optimal simulation of a perfect entangler. Physical Review A, 2010, 81, .	2.5	5
64	Locally indistinguishable subspaces spanned by three-qubit unextendible product bases. Physical Review A, 2010, 81, .	2.5	59
65	Foundations of Quantum Programming (Extended Abstract). Lecture Notes in Computer Science, 2010, , 16-20.	1.3	3
66	The LU-LC conjecture is false. Quantum Information and Computation, 2010, 10, 97-108.	0.3	18
67	An algebra of quantum processes. ACM Transactions on Computational Logic, 2009, 10, 1-36.	0.9	44
68	Distinguishability of Quantum States by Separable Operations. IEEE Transactions on Information Theory, 2009, 55, 1320-1330.	2.4	78
69	Dealing with uncertainty and fuzziness in intelligent systems. International Journal of Intelligent Systems, 2009, 24, 223-225.	5.7	4
70	Perfect Distinguishability of Quantum Operations. Physical Review Letters, 2009, 103, 210501.	7.8	87
71	An Algebraic Language for Distributed Quantum Computing. IEEE Transactions on Computers, 2009, 58, 728-743.	3.4	33
72	Soft constraint abstraction based on semiring homomorphism. Theoretical Computer Science, 2008, 403, 192-201.	0.9	7

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73	Parameter Estimation of Quantum Channels. IEEE Transactions on Information Theory, 2008, 54, 5172-5185.	2.4	94
74	Deterministic distributed dense coding with stabilizer states. Physical Review A, 2008, 77, .	2.5	6
75	Perfect many-to-one teleportation with stabilizer states. Physical Review A, 2008, 77, .	2.5	13
76	Existence of universal entangler. Journal of Mathematical Physics, 2008, 49, .	1.1	13
77	Local Distinguishability of Multipartite Unitary Operations. Physical Review Letters, 2008, 100, 020503.	7.8	46
78	Sequential voting rules and multiple elections paradoxes. , 2007, , .		11
79	Multipartite unlockable bound entanglement in the stabilizer formalism. Physical Review A, 2007, 75, .	2.5	15
80	Publisherâ€™s Note: Entanglement is Not Necessary for Perfect Discrimination between Unitary Operations [Phys. Rev. Lett.PRLTAO0031-900798, 100503 (2007)]. Physical Review Letters, 2007, 98, .	7.8	4
81	Discrimination between pure states and mixed states. Physical Review A, 2007, 75, .	2.5	11
82	Quantum adiabatic computation and adiabatic conditions. Physical Review A, 2007, 76, .	2.5	21
83	Publisherâ€™s Note: Distinguishing Arbitrary Multipartite Basis Unambiguously Using Local Operations and Classical Communication [Phys. Rev. Lett.98, 230502 (2007)]. Physical Review Letters, 2007, 99, .	7.8	0
84	State-Based Control of Fuzzy Discrete-Event Systems. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 410-424.	5.0	46
85	Entanglement is Not Necessary for Perfect Discrimination between Unitary Operations. Physical Review Letters, 2007, 98, 100503.	7.8	95
86	Distinguishing Arbitrary Multipartite Basis Unambiguously Using Local Operations and Classical Communication. Physical Review Letters, 2007, 98, 230502.	7.8	77
87	Probabilistic bisimulations for quantum processes. Information and Computation, 2007, , .	0.7	2
88	Quantum logic and automata theory. , 2007, , 619-754.		8
89	On fundamentals of fuzzy logic and soft computing and some applications. Fuzzy Sets and Systems, 2007, 158, 927-928.	2.7	1
90	Probabilistic bisimulations for quantum processes. Information and Computation, 2007, 205, 1608-1639.	0.7	31

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91	Topology, randomness and noise in process calculus. Frontiers of Electrical and Electronic Engineering in China: Selected Publications From Chinese Universities, 2007, 2, 127-131.	0.6	0
92	Commutativity of quantum weakest preconditions. Information Processing Letters, 2007, 104, 152-158.	0.6	11
93	Proof rules for the correctness of quantum programs. Theoretical Computer Science, 2007, 386, 151-166.	0.9	40
94	Observability and decentralized control of fuzzy discrete-event systems. IEEE Transactions on Fuzzy Systems, 2006, 14, 202-216.	9.8	81
95	Linguistic quantifiers modeled by Sugeno integrals. Artificial Intelligence, 2006, 170, 581-606.	5.8	42
96	Unambiguous discrimination of mixed quantum states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 353, 300-306.	2.1	13
97	A modified quantum adiabatic evolution for the Deutschâ€“Jozsa problem. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 354, 271-273.	2.1	31
98	A relation between fidelity and quantum adiabatic evolution. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 356, 312-315.	2.1	4
99	Some Issues in Quantum Information Theory. Journal of Computer Science and Technology, 2006, 21, 776-789.	1.5	6
100	Partial recovery of quantum entanglement. IEEE Transactions on Information Theory, 2006, 52, 3080-3104.	2.4	5
101	Identification and Distance Measures of Measurement Apparatus. Physical Review Letters, 2006, 96, 200401.	7.8	39
102	Similarity-Based Supervisory Control of Discrete-Event Systems. IEEE Transactions on Automatic Control, 2006, 51, 325-330.	5.7	2
103	Boundary effect of deterministic dense coding. Physical Review A, 2006, 73, .	2.5	17
104	Unambiguous discrimination among quantum operations. Physical Review A, 2006, 73, .	2.5	92
105	Majorization in quantum adiabatic algorithms. Physical Review A, 2006, 74, .	2.5	1
106	Relation between catalyst-assisted transformation and multiple-copy transformation for bipartite pure states. Physical Review A, 2006, 74, .	2.5	6
107	Universal programmable devices for unambiguous discrimination. Physical Review A, 2006, 74, .	2.5	18
108	A theory of computation based on quantum logic (I). Theoretical Computer Science, 2005, 344, 134-207.	0.9	50

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109	Knowledge transformation and fusion in diagnostic systems. Artificial Intelligence, 2005, 163, 1-45.	5.8	2
110	The existence of quantum entanglement catalysts. IEEE Transactions on Information Theory, 2005, 51, 75-80.	2.4	17
111	Catalyst-Assisted Probabilistic Entanglement Transformation. IEEE Transactions on Information Theory, 2005, 51, 1090-1101.	2.4	16
112	Ï€-calculus with noisy channels. Acta Informatica, 2005, 41, 525-593.	0.5	11
113	A theory of computation based on quantum logic (I). , 2005, , .		4
114	Entanglement-assisted transformation is asymptotically equivalent to multiple-copy transformation. Physical Review A, 2005, 72, .	2.5	9
115	Local cloning of two product states. Physical Review A, 2005, 72, .	2.5	2
116	Efficiency of deterministic entanglement transformation. Physical Review A, 2005, 71, .	2.5	5
117	Trade-off between multiple-copy transformation and entanglement catalysis. Physical Review A, 2005, 71, .	2.5	10
118	Multiple-copy entanglement transformation and entanglement catalysis. Physical Review A, 2005, 71, .	2.5	25
119	Optimal conclusive discrimination of two states can be achieved locally. Physical Review A, 2005, 71, .	2.5	40
120	Supervisory Control of Fuzzy Discrete Event Systems. IEEE Transactions on Systems, Man, and Cybernetics, 2005, 35, 366-371.	5.0	78
121	Unambiguous discrimination between mixed quantum states. Physical Review A, 2004, 70, .	2.5	72
122	When catalysis is useful for probabilistic entanglement transformation. Physical Review A, 2004, 69, .	2.5	10
123	Process algebra approach to reasoning about concurrent actions. Journal of Computer Science and Technology, 2004, 19, 364-373.	1.5	0
124	Characterizations of quantum automata. Theoretical Computer Science, 2004, 312, 479-489.	0.9	15
125	Quantum operation, quantum Fourier transform and semi-definite programming. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 323, 48-56.	2.1	7
126	Comparability of multipartite entanglement. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 330, 418-423.	2.1	5

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127	Local discrimination of maximally entangled states in canonical form. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 333, 232-234.	2.1	2
128	Generalized Region Connection Calculus. Artificial Intelligence, 2004, 160, 1-34.	5.8	44
129	Reasoning about probabilistic sequential programs in a probabilistic logic. Acta Informatica, 2003, 39, 315-389.	0.5	37
130	Region Connection Calculus: Its models and composition table. Artificial Intelligence, 2003, 145, 121-146.	5.8	75
131	Probabilistic cloning and deleting of quantum states. Physical Review A, 2002, 65, .	2.5	12
132	Mathematical nature of and a family of lower bounds for the success probability of unambiguous discrimination. Physical Review A, 2002, 65, .	2.5	24
133	Set discrimination of quantum states. Physical Review A, 2002, 65, .	2.5	32
134	A formal model of computing with words. IEEE Transactions on Fuzzy Systems, 2002, 10, 640-652.	9.8	101
135	Lower bound on inconclusive probability of unambiguous discrimination. Physical Review A, 2002, 66, .	2.5	12
136	Implication operators in fuzzy logic. IEEE Transactions on Fuzzy Systems, 2002, 10, 88-91.	9.8	30
137	Universal and original-preserving quantum copying is impossible. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 297, 1-3.	2.1	1
138	Woottersâ€“Zurek quantum-copying machine: the higher-dimensional case. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 299, 107-115.	2.1	2
139	Universal quantum-copying machines: a sufficient and necessary condition. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 302, 1-7.	2.1	1
140	Bisimulation indexes and their applications. Theoretical Computer Science, 2002, 275, 1-68.	0.9	43
141	Additive models of probabilistic processes. Theoretical Computer Science, 2002, 275, 481-519.	0.9	15
142	Lattice-theoretic models of conjectures, hypotheses and consequences. Artificial Intelligence, 2002, 139, 253-267.	5.8	14
143	Fuzzy Topology Based on Residuated Lattice-Valued Logic. Acta Mathematica Sinica, English Series, 2001, 17, 89-102.	0.6	14
144	Recursive equations in higher-order process calculi. Theoretical Computer Science, 2001, 266, 839-852.	0.9	2

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145	Upper bound for the success probability of unambiguous discrimination among quantum states. Physical Review A, 2001, 64, .	2.5	40
146	Topology in Process Calculus. , 2001, , .		12
147	Process Calculus. , 2001, , 11-36.		4
148	Bisimulation Indexes Induced by Metrics on Actions. , 2001, , 139-206.		0
149	Limit Behavior of Agents. , 2001, , 95-111.		0
150	Approximate Reasoning Based on Similarity. Mathematical Logic Quarterly, 2000, 46, 77-86.	0.2	14
151	Weak confluence and ï„-inertness. Theoretical Computer Science, 2000, 238, 465-475.	0.9	9
152	Automata Theory Based on Quantum Logic. (I). International Journal of Theoretical Physics, 2000, 39, 985-995.	1.2	34
153	Automata Theory Based on Quantum Logic II. International Journal of Theoretical Physics, 2000, 39, 2545-2557.	1.2	51
154	Approximate Bisimilarity. Lecture Notes in Computer Science, 2000, , 309-322.	1.3	27
155	A shorter proof to uniqueness of solutions of equations. Theoretical Computer Science, 1999, 216, 395-397.	0.9	4
156	Phase semantics for a pure noncommutative linear propositional logic. Journal of Computer Science and Technology, 1999, 14, 135-139.	1.5	0
157	Topology in process calculus (I): Limit behaviour of agents. Journal of Computer Science and Technology, 1999, 14, 328-336.	1.5	4
158	Perturbation of fuzzy reasoning. IEEE Transactions on Fuzzy Systems, 1999, 7, 625-629.	9.8	37
159	Limits of Agents in Process Calculus. , 1999, , 221-240.		1
160	Approximate reasoning with linguistic modifiers. International Journal of Intelligent Systems, 1998, 13, 403-418.	5.7	7
161	Compactness in fuzzy logic. Science Bulletin, 1998, 43, 1166-1171.	1.7	0
162	A model of reasoning about knowledge. Science in China Series D: Earth Sciences, 1998, 41, 527-534.	0.9	4

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163	Quantifiers, modifiers and qualifiers in fuzzy logic. Journal of Applied Non-Classical Logics, 1997, 7, 335-342.	0.5	15
164	When is the ideal completion of abstract basis algebraic. Theoretical Computer Science, 1996, 159, 355-356.	0.9	4
165	Putting consistent theories together in institutions. Journal of Computer Science and Technology, 1995, 10, 260-266.	1.5	0
166	Institutions of variable truth values: An approach in the ordered style. Journal of Computer Science and Technology, 1995, 10, 267-273.	1.5	0
167	A logic for approximate reasoning. Journal of Symbolic Logic, 1994, 59, 830-837.	0.5	85
168	On the method of neighborhood systems in fuzzy topology. Fuzzy Sets and Systems, 1994, 68, 227-238.	2.7	14
169	A new approach for fuzzy topology (III). Fuzzy Sets and Systems, 1993, 55, 193-207.	2.7	56
170	Fuzzifying topology based on complete residuated lattice-valued logic (I). Fuzzy Sets and Systems, 1993, 56, 337-373.	2.7	38
171	Fuzzifying uniform spaces. Fuzzy Sets and Systems, 1993, 53, 93-104.	2.7	20
172	Compactness in fuzzifying topology. Fuzzy Sets and Systems, 1993, 55, 79-92.	2.7	15
173	A new approach for fuzzy topology (II). Fuzzy Sets and Systems, 1992, 47, 221-232.	2.7	66
174	THE FUNDAMENTAL THEOREM OF ULTRAPRODUCT IN PAVELKA'S LOGIC. Zeitschrift FÃ¼r Mathematische Logik Und Grundlagen Der Mathematik, 1992, 38, 197-201.	0.2	20
175	COMPACTNESS, THE LÃ–WENHEIM-SKOLEM PROPERTY AND THE DIRECT PRODUCT OF LATTICES OF TRUTH VALUES. Zeitschrift FÃ¼r Mathematische Logik Und Grundlagen Der Mathematik, 1992, 38, 521-524.	0.2	12
176	A new approach for fuzzy topology (I). Fuzzy Sets and Systems, 1991, 39, 303-321.	2.7	238
177	Deduction Theorem for Many-Valued Inference. Zeitschrift FÃ¼r Mathematische Logik Und Grundlagen Der Mathematik, 1991, 37, 533-537.	0.2	11
178	The alternativity measures of fuzzy sets. Fuzzy Sets and Systems, 1990, 37, 105-110.	2.7	3
179	Reasonableness of the compositional rule of fuzzy inference. Fuzzy Sets and Systems, 1990, 36, 305-310.	2.7	9
180	On probalistic normed spaces underÏ„,T,L. International Journal of Mathematics and Mathematical Sciences, 1990, 13, 731-736.	0.7	0

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181	On Ïμ-fuzzy sets. Fuzzy Sets and Systems, 1989, 31, 123-129.	2.7	0
182	On a class of non-causal triangle functions. Mathematical Proceedings of the Cambridge Philosophical Society, 1989, 106, 467-469.	0.4	1
183	Report from Jiangxi Province, People's Republic of China. Fuzzy Sets and Systems, 1988, 25, 382.	2.7	0
184	On standard models of fuzzy modal logics. Fuzzy Sets and Systems, 1988, 26, 357-363.	2.7	36
185	SOME NOTES ON MULTIDIMENSIONAL FUZZY REASONING. Cybernetics and Systems, 1988, 19, 281-293.	2.5	8
186	Fuzzy semilattices. Information Sciences, 1987, 43, 155-159.	6.9	2
187	A counter-example of Gottwald's theorem. Fuzzy Sets and Systems, 1987, 23, 399-400.	2.7	1
188	Predicate Transformer Semantics of Quantum Programs. , 0, , 311-360.		8
189	On Zadeh's method for interpreting linguistically quantified proposition. , 0, , .		0
190	Quantifiers, modifiers and qualifiers in fuzzy logic. , 0, , .		0