# Shigeo Abe

List of Publications by Year
in descending order

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|---|---|---|---|
| 140 papers | 2,864 citations | 304743 22 h-index | 223800 46 g-index |
| 145 all docs | 145 docs citations | 145 times ranked | 1495 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Soft Upper-bound Minimal Complexity LP SVMs. , 2021, , . | | 3 |
| 2 | Minimal Complexity Support Vector Machines for Pattern Classification. Computers, 2020, 9, 88. | 3.3 | 4 |
| 3 | Minimal Complexity Support Vector Machines. Lecture Notes in Computer Science, 2020, , 89-101. | 1.3 | 4 |
| 4 | Analyzing Minimal Complexity Machines. , 2019, , . | | 6 |
| 5 | Are twin hyperplanes necessary?. Pattern Recognition Letters, 2018, 116, 218-224. | 4.2 | 0 |
| 6 | Effect of Equality Constraints to Unconstrained Large Margin Distribution Machines. Lecture Notes in Computer Science, 2018, , 41-53. | 1.3 | 3 |
| 7 | Unconstrained large margin distribution machines. Pattern Recognition Letters, 2017, 98, 96-102. | 4.2 | 20 |
| 8 | Fusing sequential minimal optimization and Newton's method for support vector training. International Journal of Machine Learning and Cybernetics, 2016, 7, 345-364. | 3.6 | 28 |
| 9 | Improving Generalization Abilities of Maximal Average Margin Classifiers. Lecture Notes in Computer Science, 2016, , 29-41. | 1.3 | 3 |
| 10 | Optimizing working sets for training support vector regressors by Newton's method. , 2015, , . | | 3 |
| 11 | Fuzzy support vector machines for multilabel classification. Pattern Recognition, 2015, 48, 2110-2117. | 8.1 | 69 |
| 12 | Comments on: Support vector machines maximizing geometric margins for multi-class classification. Top, 2014, 22, 841-843. | 1.6 | 0 |
| 13 | Incremental Input Variable Selection by Block Addition and Block Deletion. Lecture Notes in Computer Science, 2014, , 547-554. | 1.3 | 1 |
| 14 | Incremental Feature Selection by Block Addition and Block Deletion Using Least Squares SVRs. Lecture Notes in Computer Science, 2014, , 35-46. | 1.3 | 0 |
| 15 | Feature Selection by Iterative Block Addition and Block Deletion. , 2013, , . | | 1 |
| 16 | Training Mahalanobis Kernels by Linear Programming. Lecture Notes in Computer Science, 2012, , 339-346. | 1.3 | 1 |
| 17 | Feature Selection by Block Addition and Block Deletion. Lecture Notes in Computer Science, 2012, , 48-59. | 1.3 | 3 |
| 18 | Mining interlacing manifolds in high dimensional spaces. , 2011, , . | | 0 |

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|---|---------|----|-----------|
| 19 | Multiple Nonlinear Subspace Methods Using Subspace-based Support Vector Machines. , 2011, , . | | 0 |
| 20 | Fast Support Vector Training by Newton's Method. Lecture Notes in Computer Science, 2011, , 143-150. | 1.3 | 1 |
| 21 | Feature selection and fast training of subspace based support vector machines. , 2010, , . | | 6 |
| 22 | Support Vector Machines for Pattern Classification. Advances in Computer Vision and Pattern Recognition, 2010, , . | 1.3 | 263 |
| 23 | Convergence improvement of active set support vector training. , 2010, , . | | 2 |
| 24 | Function Approximation. Advances in Computer Vision and Pattern Recognition, 2010, , 395-442. | 1.3 | 1 |
| 25 | Two-Class Support Vector Machines. Advances in Computer Vision and Pattern Recognition, 2010, , 21-112. | 1.3 | 7 |
| 26 | Multiclass Support Vector Machines. Advances in Computer Vision and Pattern Recognition, 2010, , 113-161. | 1.3 | 12 |
| 27 | Variants of Support Vector Machines. Advances in Computer Vision and Pattern Recognition, 2010, , 163-226. | 1.3 | 5 |
| 28 | Kernel-Based Methods Kernel@Kernel-based method. Advances in Computer Vision and Pattern Recognition, 2010, , 305-329. | 1.3 | 2 |
| 29 | Feature Selection and Extraction. Advances in Computer Vision and Pattern Recognition, 2010, , 331-341. | 1.3 | 40 |
| 30 | A Fast Incremental Kernel Principal Component Analysis for Online Feature Extraction. Lecture Notes in Computer Science, 2010, , 487-497. | 1.3 | 9 |
| 31 | Convergence Improvement of Active Set Training for Support Vector Regressors. Lecture Notes in Computer Science, 2010, , 1-10. | 1.3 | 2 |
| 32 | Feature Extraction Using Support Vector Machines. Lecture Notes in Computer Science, 2010, , 108-115. | 1.3 | 7 |
| 33 | Fast Variable Selection by Block Addition and Block Deletion. Journal of Intelligent Learning Systems and Applications, 2010, 02, 200-211. | 0.5 | 6 |
| 34 | Maximum-Margin Fuzzy Classifiers. Advances in Computer Vision and Pattern Recognition, 2010, , 367-394. | 1.3 | 0 |
| 35 | Maximum-Margin Multilayer Neural Networks. Advances in Computer Vision and Pattern Recognition, 2010, , 353-366. | 1.3 | 0 |
| 36 | Training Methods. Advances in Computer Vision and Pattern Recognition, 2010, , 227-303. | 1.3 | 0 |

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|---|---------|-----|-----------|
| 37 | Evaluation of Feature Selection by Multiclass Kernel Discriminant Analysis. Lecture Notes in Computer Science, 2010, , 13-24. | 1.3 | 0 |
| 38 | Sparse kernel feature analysis using FastMap and its variants. , 2009, , . | | 2 |
| 39 | Subspace based linear programming support vector machines. , 2009, , . | | 2 |
| 40 | Subspace based least squares support vector machines for pattern classification. , 2009, , . | | 3 |
| 41 | Sparse support vector regressors based on forward basis selection. , 2009, , . | | 2 |
| 42 | Decomposition techniques for training linear programming support vector machines. Neurocomputing, 2009, 72, 973-984. | 5.9 | 18 |
| 43 | A new approach to discover interlacing data structures in high-dimensional space. Journal of Intelligent Information Systems, 2009, 33, 3-22. | 3.9 | 2 |
| 44 | Tuning membership functions of kernel fuzzy classifiers by maximizing margins. Memetic Computing, 2009, 1, 221-228. | 4.0 | 7 |
| 45 | Subspace-based support vector machines for pattern classification. Neural Networks, 2009, 22, 558-567. | 5.9 | 11 |
| 46 | Improved Parameter Tuning Algorithms for Fuzzy Classifiers. Lecture Notes in Computer Science, 2009, , 937-944. | 1.3 | 2 |
| 47 | Is Primal Better Than Dual. Lecture Notes in Computer Science, 2009, , 854-863. | 1.3 | 4 |
| 48 | Kernel discriminant analysis based feature selection. Neurocomputing, 2008, 71, 2544-2552. | 5.9 | 13 |
| 49 | Feature selection based on kernel discriminant analysis for multi-class problems. , 2008, , . | | 0 |
| 50 | Sparse support vector machines trained in the reduced empirical feature space. , 2008, , . | | 0 |
| 51 | Sparse Least Squares Support Vector Machines by Forward Selection Based on Linear Discriminant Analysis. Lecture Notes in Computer Science, 2008, , 54-65. | 1.3 | 3 |
| 52 | Batch Support Vector Training Based on Exact Incremental Training. Lecture Notes in Computer Science, 2008, , 295-304. | 1.3 | 5 |
| 53 | An online face recognition system with incremental learning ability. , 2007, , . | | 0 |
| 54 | Boosting Kernel Discriminant Analysis for pattern classification. , 2007, , . | | 0 |

| # | ARTICLE | IF | CITATIONS |
|---|---------|----|-----------|
| 55 | Backward Varibale Selection of Support Vector Regressors by Block Deletion. Neural Networks (IJCNN), International Joint Conference on, 2007, , . | 0.0 | 9 |
| 56 | An Efficient Incremental Kernel Principal Component Analysis for Online Feature Selection. Neural Networks (IJCNN), International Joint Conference on, 2007, , . | 0.0 | 14 |
| 57 | Sparse least squares support vector training in the reduced empirical feature space. Pattern Analysis and Applications, 2007, 10, 203-214. | 4.6 | 38 |
| 58 | Fuzzy Classifiers Based on Kernel Discriminant Analysis. Lecture Notes in Computer Science, 2007, , 180-189. | 1.3 | 3 |
| 59 | Sparse Least Squares Support Vector Regressors Trained in the Reduced Empirical Feature Space. Lecture Notes in Computer Science, 2007, , 527-536. | 1.3 | 10 |
| 60 | A Learning Algorithm of Boosting Kernel Discriminant Analysis for Pattern Recognition. IEICE Transactions on Information and Systems, 2007, E90-D, 1853-1863. | 0.7 | 1 |
| 61 | Incremental training of support vector machines using hyperspheres. Pattern Recognition Letters, 2006, 27, 1495-1507. | 4.2 | 40 |
| 62 | An Incremental Learning Algorithm of Ensemble Classifier Systems. , 2006, , . | | 13 |
| 63 | Fast Training of Linear Programming Support Vector Machines Using Decomposition Techniques. Lecture Notes in Computer Science, 2006, , 165-176. | 1.3 | 5 |
| 64 | Feature Selection Based on Kernel Discriminant Analysis. Lecture Notes in Computer Science, 2006, , 282-291. | 1.3 | 6 |
| 65 | Incremental learning of feature space and classifier for face recognition. Neural Networks, 2005, 18, 575-584. | 5.9 | 103 |
| 66 | Comparison between error correcting output codes and fuzzy support vector machines. Pattern Recognition Letters, 2005, 26, 1937-1945. | 4.2 | 24 |
| 67 | Boosting Kernel Discriminant Analysis with Adaptive Kernel Selection. , 2005, , 429-432. | | 4 |
| 68 | Training of Support Vector Machines with Mahalanobis Kernels. Lecture Notes in Computer Science, 2005, , 571-576. | 1.3 | 32 |
| 69 | How to Write and Present Papers. IEEJ Transactions on Electronics, Information and Systems, 2005, 125, 1-6. | 0.2 | 0 |
| 70 | KPCA-based training of a kernel fuzzy classifier with ellipsoidal regions. International Journal of Approximate Reasoning, 2004, 37, 189-217. | 3.3 | 17 |
| 71 | Steepest Ascent Training of Support Vector Regressors. IEEJ Transactions on Electronics, Information and Systems, 2004, 124, 2064-2071. | 0.2 | 1 |
| 72 | æ±ºå®šæœ¨ã‹åŸºã¥ãã•ãƒ‹ã‚¢ãµãƒ¼ãƒ™ã¯ãƒˆãƒ«ãƒžã·ãƒ³ã®æ§‹é€æ±ºå®šæ—¹ï¼ Transactions of the Institute of System | 0.1 | 1 |

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| 73 | Fuzzy least squares support vector machines for multiclass problems. Neural Networks, 2003, 16, 785-792. | 5.9 | 199 |
| 74 | A Fuzzy Classifier with Pyramidal Membership Functions. Studies in Fuzziness and Soft Computing, 2003, , 234-248. | 0.8 | 0 |
| 75 | A reinforcement learning algorithm for neural networks with incremental learning ability. , 2002, , . |  | 11 |
| 76 | Improvement of Generalization Ability of Multiclass Support Vector Machines by Introducing Fuzzy Logic and Bayes Theory. Transactions of the Institute of Systems Control and Information Engineers, 2002, 15, 643-651. | 0.1 | 1 |
| 77 | Incremental Learning Algorithm for Feedforward Neural Network with Long-Term Memory. Transactions of the Society of Instrument and Control Engineers, 2002, 38, 792-799. | 0.2 | 2 |
| 78 | High Speed Training of a Fuzzy Classifier with Polyhedral Regions. Transactions of the Institute of Systems Control and Information Engineers, 2002, 15, 673-680. | 0.1 | 1 |
| 79 | Fast Training of Support Vector Machines by Extracting Boundary Data. Lecture Notes in Computer Science, 2001, , 308-313. | 1.3 | 18 |
| 80 | Pattern Classification. , 2001, , . |  | 60 |
| 81 | A Fuzzy Classifier with Polyhedral Regions. Transactions of the Institute of Systems Control and Information Engineers, 2001, 14, 364-371. | 0.1 | 1 |
| 82 | Robust function approximation using fuzzy rules with ellipsoidal regions. , 2000, , . |  | 4 |
| 83 | Fast feature selection by analyzing class regions approximated by ellipsoids. , 2000, , . |  | 0 |
| 84 | Training three-layer neural network classifiers by solving inequalities. , 2000, , . |  | 0 |
| 85 | A fuzzy classifier with ellipsoidal regions for diagnosis problems. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 1999, 29, 140-148. | 2.9 | 24 |
| 86 | Function approximation based on fuzzy rules extracted from partitioned numerical data. IEEE Transactions on Systems, Man, and Cybernetics, 1999, 29, 525-534. | 5.0 | 50 |
| 87 | Fuzzy function approximators with ellipsoidal regions. IEEE Transactions on Systems, Man, and Cybernetics, 1999, 29, 654-661. | 5.0 | 18 |
| 88 | Modeling and Genetic Solution for Scheduling Problems with Regular and Non-Regular Objective Functions. Transactions of the Society of Instrument and Control Engineers, 1999, 35, 662-667. | 0.2 | 3 |
| 89 | Techniques in Fuzzy Rules Determination and Their Application to Pattern Classification. , 1999, , 1051-1079. |  | 1 |
| 90 | Dynamic cluster generation for a fuzzy classifier with ellipsoidal regions. IEEE Transactions on Systems, Man, and Cybernetics, 1998, 28, 869-876. | 5.0 | 37 |

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| 91 | Feature selection by analyzing class regions approximated by ellipsoids. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 1998, 28, 282-287. | 2.9 | 17 |
| 92 | Neural Networks and Fuzzy Systems. , 1997, , . | | 33 |
| 93 | A fuzzy classifier with ellipsoidal regions. IEEE Transactions on Fuzzy Systems, 1997, 5, 358-368. | 9.8 | 158 |
| 94 | A novel approach to feature selection based on analysis of class regions. IEEE Transactions on Systems, Man, and Cybernetics, 1997, 27, 196-207. | 5.0 | 55 |
| 95 | Convergence acceleration of the Hopfield neural network by optimizing integration step sizes. IEEE Transactions on Systems, Man, and Cybernetics, 1996, 26, 194-201. | 5.0 | 14 |
| 96 | Extraction of Fuzzy Rules for Classification Based on Partitioned Hyperboxes. Journal of Intelligent and Fuzzy Systems, 1996, 4, 215-226. | 1.4 | 3 |
| 97 | Tuning of a fuzzy classifier derived from data. International Journal of Approximate Reasoning, 1996, 14, 1-24. | 3.3 | 25 |
| 98 | LSI module placement using the kohonen network. Systems and Computers in Japan, 1996, 27, 92-105. | 0.2 | 0 |
| 99 | Fuzzy rules extraction directly from numerical data for function approximation. IEEE Transactions on Systems, Man, and Cybernetics, 1995, 25, 119-129. | 0.9 | 151 |
| 100 | A neural-network-based fuzzy classifier. IEEE Transactions on Systems, Man, and Cybernetics, 1995, 25, 353-361. | 0.9 | 87 |
| 101 | LSI module placement by the Hopfield neural network. , 1995, , . | | 0 |
| 102 | Global convergence of the Hopfield neural network with nonzero diagonal elements. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 1995, 42, 39-45. | 2.2 | 23 |
| 103 | A method for fuzzy rules extraction directly from numerical data and its application to pattern classification. IEEE Transactions on Fuzzy Systems, 1995, 3, 18-28. | 9.8 | 267 |
| 104 | Training neural net classifier to improve generalization capability. Systems and Computers in Japan, 1994, 25, 101-110. | 0.2 | 1 |
| 105 | Extracting algorithms from pattern classification neural networks. Neural Networks, 1993, 6, 729-735. | 5.9 | 15 |
| 106 | Global convergence and suppression of spurious states of the Hopfield neural networks. IEEE Transactions on Circuits and Systems Part 1: Regular Papers, 1993, 40, 246-257. | 0.1 | 74 |
| 107 | Dependency of Generalization Capability for a Multi-Layered Neural Network on its Number of Hideen Units.. IEEJ Transactions on Industry Applications, 1993, 113, 341-348. | 0.2 | 2 |
| 108 | Solving inequality constrained combinatorial optimization problems by the hopfield neural networks. Neural Networks, 1992, 5, 663-670. | 5.9 | 56 |

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| 109 | Determining Optimal Number of Hidden Units for Multi-Layered Neural Networks.. IEEJ Transactions on Industry Applications, 1992, 112, 1064-1070. | 0.2 | 1 |
| 110 | Synthesizing neural networks for pattern recognition. , 1991, , . | | 5 |
| 111 | Input layer optimization of neural networks by sensitivity analysis and its application to recognition of numerals. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 1991, 111, 130-138. | 0.4 | 32 |
| 112 | Input layer optimization of neural networks by sensitivity analysis and its application to recognition of numerals.. IEEJ Transactions on Industry Applications, 1991, 111, 36-44. | 0.2 | 1 |
| 113 | DETERMINING WEIGHTS OF THE HOPFIELD NEURAL NETWORKS. , 1991, , 1507-1510. | | 6 |
| 114 | Learning by parallel forward propagation. , 1990, , . | | 2 |
| 115 | Convergence of the Hopfield neural networks with inequality constraints. , 1990, , . | | 7 |
| 116 | Theories on the Hopfield neural networks. , 1989, , . | | 71 |
| 117 | High performance integrated Prolog processor IPP. , 1987, , . | | 19 |
| 118 | Determination of Power System Voltage Stability Part 3: Dynamical Approach. Systems and Computers in Japan, 1983, 103, 57-65. | 0.2 | 1 |
| 119 | Determination of Power System Voltage Stability Part 3: Dynamical Approach. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 1983, 103, 57-65. | 0.4 | 1 |
| 120 | Determination of Power System Voltage Stability, Part 3: Dynamical Approach. IEEJ Transactions on Power and Energy, 1983, 103, 349-356. | 0.2 | 0 |
| 121 | Power System Voltage Stability. IEEE Power Engineering Review, 1982, PER-2, 39-40. | 0.1 | 0 |
| 122 | Power System Voltage Stability. IEEE Transactions on Power Apparatus and Systems / Technical Operations Committee, 1982, PAS-101, 3830-3840. | 0.4 | 87 |
| 123 | Calculation of Energy Losses in a Distribution System. IEEE Transactions on Power Apparatus and Systems / Technical Operations Committee, 1980, PAS-99, 1347-1356. | 0.4 | 120 |
| 124 | Load Flow Convergence in the Vicinity of a Voltage Stability Limit. IEEE Transactions on Power Apparatus and Systems / Technical Operations Committee, 1978, PAS-97, 1983-1993. | 0.4 | 33 |
| 125 | Initial value selection of load flow calculations in the vicinity of a voltage stability limit. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 1977, 97, 60-69. | 0.4 | 4 |
| 126 | Determination of steadyâ€state switching sequence of power networks. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 1977, 97, 95-102. | 0.4 | 0 |

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| 127 | Initial Value Selection of Load Flow Calculations in the Vicinity of a Voltage Stability Limit. IEEJ Transactions on Power and Energy, 1977, 97, 23-30. | 0.2 | 0 |
| 128 | Determination of power system voltage stability. Part I: Theory. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 1976, 96, 70-77. | 0.4 | 22 |
| 129 | Determination of power system voltage stability. Part 2: Digital simulation. Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi), 1976, 96, 78-86. | 0.4 | 1 |
| 130 | Determination of Power System Voltage Stability, Part 2: Digital Simulation. IEEJ Transactions on Power and Energy, 1976, 96, 179-186. | 0.2 | 0 |
| 131 | Determination of Power System Voltage Stability, Part 1: Theory. IEEJ Transactions on Power and Energy, 1976, 96, 171-178. | 0.2 | 0 |
| 132 | A method for fuzzy rules extraction directly from numerical data. , 0, , . | | 0 |
| 133 | A genetic algorithm approach to multi-objective scheduling problems with earliness and tardiness penalties. , 0, , . | | 5 |
| 134 | Training of support vector regressors based on the steepest ascent method. , 0, , . | | 1 |
| 135 | Maximizing margins of multilayer neural networks. , 0, , . | | 3 |
| 136 | Decision-tree-based multiclass support vector machines. , 0, , . | | 73 |
| 137 | Analysis of support vector machines. , 0, , . | | 12 |
| 138 | Why pairwise is better than one-against-all or all-at-once. , 0, , . | | 9 |
| 139 | Incremental learning for online face recognition. , 0, , . | | 15 |
| 140 | SVM ensembles for selecting the relevant feature subsets. , 0, , . | | 1 |