

# Sandhya Samarasinghe

## List of Publications by Year in descending order

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77  
papers

1,432  
citations

393982

19  
h-index

414034

32  
g-index

77  
all docs

77  
docs citations

77  
times ranked

1751  
citing authors

#	ARTICLE	IF	CITATIONS
1	Neural Networks for Applied Sciences and Engineering. , 0, , .		207
2	Complex time series analysis of PM10 and PM2.5 for a coastal site using artificial neural network modelling and k-means clustering. Atmospheric Environment, 2014, 94, 106-116.	1.9	117
3	Determination and modelling of energy consumption in wheat production using neural networks: â€œA case study in Canterbury province, New Zealandâ€. Energy, 2011, 36, 5140-5147.	4.5	107
4	Artificial Neural Network Modelling. Studies in Computational Intelligence, 2016, , .	0.7	88
5	Prediction of lamb tenderness using image surface texture features. Journal of Food Engineering, 2006, 77, 492-499.	2.7	63
6	A field study of energy consumption in wheat production in Canterbury, New Zealand. Energy Conversion and Management, 2011, 52, 2526-2532.	4.4	47
7	Classification of lamb carcass using machine vision: Comparison of statistical and neural network analyses. Journal of Food Engineering, 2007, 82, 26-34.	2.7	46
8	Detection of mastitis and its stage of progression by automatic milking systems using artificial neural networks. Journal of Dairy Research, 2010, 77, 168-175.	0.7	42
9	Determination of fuel consumption and indirect factors affecting it in wheat production in Canterbury, New Zealand. Energy, 2010, 35, 5400-5405.	4.5	39
10	Neural Networks for Applied Sciences and Engineering. , 2006, , .		36
11	CO2 emissions from farm inputs â€œCase study of wheat production in Canterbury, New Zealandâ€. Environmental Pollution, 2012, 171, 126-132.	3.7	32
12	Mixed-method integration and advances in fuzzy cognitive maps for computational policy simulations for natural hazard mitigation. Environmental Modelling and Software, 2013, 39, 188-200.	1.9	28
13	Neural networks for predicting fracture toughness of individual wood samples. Silva Fennica, 2007, 41, .	0.5	28
14	A Review of Systems Biology Perspective on Genetic Regulatory Networks with Examples. Current Bioinformatics, 2008, 3, 197-225.	0.7	27
15	Mathematical modelling of p53 basal dynamics and DNA damage response. Mathematical Biosciences, 2015, 259, 27-42.	0.9	27
16	Stress intensity factor of wood from crack-tip displacement fields obtained from digital image processing. Silva Fennica, 2004, 38, .	0.5	27
17	Novel recurrent neural network for modelling biological networks: Oscillatory p53 interaction dynamics. BioSystems, 2013, 114, 191-205.	0.9	26
18	Ca2+ dysregulation in the endoplasmic reticulum related to Alzheimerâ€™s disease: A review on experimental progress and computational modeling. BioSystems, 2015, 134, 1-15.	0.9	25

#	ARTICLE	IF	CITATIONS
19	Boolean Calcium Signalling Model Predicts Calcium Role in Acceleration and Stability of Abscisic Acid-Mediated Stomatal Closure. <i>Scientific Reports</i> , 2018, 8, 17635.	1.6	25
20	A novel semi-quantitative Fuzzy Cognitive Map model for complex systems for addressing challenging participatory real life problems. <i>Applied Soft Computing Journal</i> , 2016, 48, 91-110.	4.1	23
21	Digital image analysis based automated kiwifruit counting technique. , 2008, , .		22
22	Robustness of G1/S checkpoint pathways in cell cycle regulation based on probability of DNA-damaged cells passing as healthy cells. <i>BioSystems</i> , 2010, 101, 213-221.	0.9	21
23	DifFUZZY: a fuzzy clustering algorithm for complex datasets. <i>International Journal of Computational Intelligence in Bioinformatics and Systems Biology</i> , 2010, 1, 402.	0.1	21
24	Use of neural networks to detect minor and major pathogens that cause bovine mastitis. <i>Journal of Dairy Science</i> , 2009, 92, 1493-1499.	1.4	20
25	Microarray gene expression: A study of between-platform association of Affymetrix and cDNA arrays. <i>Computers in Biology and Medicine</i> , 2011, 41, 980-986.	3.9	20
26	Prediction of lamb carcass grades using features extracted from lamb chop images. <i>Journal of Food Engineering</i> , 2006, 74, 116-124.	2.7	19
27	Systems biology of synaptic plasticity: A review on N-methyl-d-aspartate receptor mediated biochemical pathways and related mathematical models. <i>BioSystems</i> , 2014, 122, 7-18.	0.9	18
28	Modelling heat and mass transfer in drying of biological materials: a simplified approach to materials with small dimensions. <i>Ecological Modelling</i> , 1996, 86, 163-167.	1.2	15
29	Modelling bidirectional modulations in synaptic plasticity: A biochemical pathway model to understand the emergence of long term potentiation (LTP) and long term depression (LTD). <i>Journal of Theoretical Biology</i> , 2016, 403, 159-177.	0.8	14
30	A comprehensive complex systems approach to the study and analysis of mammalian cell cycle control system in the presence of DNA damage stress. <i>Journal of Theoretical Biology</i> , 2017, 429, 204-228.	0.8	14
31	Computational investigation of Amyloid- $\beta^2$ -induced location- and subunit-specific disturbances of NMDAR at hippocampal dendritic spine in Alzheimer's disease. <i>PLoS ONE</i> , 2017, 12, e0182743.	1.1	14
32	Modelling fuel consumption in wheat production using artificial neural networks. <i>Energy</i> , 2013, 49, 337-343.	4.5	13
33	Modelling the dynamics of CaMKII-NMDAR complex related to memory formation in synapses: The possible roles of threonine 286 autophosphorylation of CaMKII in long term potentiation. <i>Journal of Theoretical Biology</i> , 2015, 365, 403-419.	0.8	13
34	Artificial neural networks to identify naturally existing disease severity status. <i>Neural Computing and Applications</i> , 2014, 25, 1031-1041.	3.2	12
35	Computational experiments reveal the efficacy of targeting CDK2 and CKIs for significantly lowering cellular senescence bar for potential cancer treatment. <i>BioSystems</i> , 2013, 111, 71-82.	0.9	11
36	A Novel Data-Driven Boolean Model for Genetic Regulatory Networks. <i>Frontiers in Physiology</i> , 2018, 9, 1328.	1.3	11

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37	Integrated Analysis of Gene Network in Childhood Leukemia from Microarray and Pathway Databases. BioMed Research International, 2014, 2014, 1-7.	0.9	10
38	Mathematical modelling of core regulatory mechanism in p53 protein that activates apoptotic switch. Journal of Theoretical Biology, 2019, 462, 134-147.	0.8	10
39	The estimation of parameters for stochastic differential equations using neural networks. Inverse Problems in Science and Engineering, 2007, 15, 629-641.	1.2	8
40	An unbiased sensitivity analysis reveals important parameters controlling periodicity of circadian clock. Biotechnology and Bioengineering, 2010, 105, 250-259.	1.7	8
41	Displacement fields of wood in tension based on image processing: Part 1. Tension parallel- and perpendicular- to grain and comparisons with isotropic behaviour. Silva Fennica, 2000, 34, .	0.5	8
42	Microarray Data Integration: Frameworks and a List of Underlying Issues. Current Bioinformatics, 2010, 5, 280-289.	0.7	7
43	Modelling variability in full-field displacement profiles and Poisson ratio of wood in compression using stochastic neural networks. Silva Fennica, 2009, 43, .	0.5	6
44	Displacement fields of wood in tension based on image processing: Part 2. Crack-tip displacements in mode-I and mixed-mode fracture. Silva Fennica, 2000, 34, .	0.5	6
45	Synthesizing Neurophysiology, Genetics, Behaviour and Learning to Produce Whole-Insect Programmable Sensors to Detect Volatile Chemicals. Biotechnology and Genetic Engineering Reviews, 2009, 26, 179-204.	2.4	5
46	A Computational Framework for Autonomous Self-repair Systems. Lecture Notes in Computer Science, 2018, , 153-159.	1.0	5
47	A Novel Computational Approach for Biomarker Detection for Gene Expression-Based Computer-Aided Diagnostic Systems for Breast Cancer. Methods in Molecular Biology, 2021, 2190, 195-208.	0.4	5
48	A nutrient dependant switch explains mutually exclusive existence of meiosis and mitosis initiation in budding yeast. Journal of Theoretical Biology, 2014, 341, 88-101.	0.8	4
49	A Comprehensive Conceptual and Computational Dynamics Framework for Autonomous Regeneration Systems. Artificial Life, 2021, 27, 80-104.	1.0	4
50	Towards a generalized colour image segmentation for kiwifruit detection. , 2009, , .		3
51	Robustness of circadian rhythms in the presence of molecular fluctuations: An investigation based on a mechanistic, statistical theory and a simulation algorithm. BioSystems, 2011, 106, 57-66.	0.9	3
52	Computational modeling and experimental validation of odor detection behaviors of classically conditioned parasitic wasp, <i>Microplitis croceipes</i> . Biotechnology Progress, 2015, 31, 596-606.	1.3	3
53	A new hierarchical approach to multi-level model abstraction for simplifying ODE models of biological networks and a case study: The G1/S Checkpoint/DNA damage signalling pathways of mammalian cell cycle. BioSystems, 2021, 203, 104374.	0.9	3
54	A co-operative hybrid algorithm for fault diagnosis in power transmission. , 0, , .		2

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55	Global sensitivity analysis of a model related to memory formation in synapses: Model reduction based on epistemic parameter uncertainties and related issues. <i>Journal of Theoretical Biology</i> , 2017, 419, 116-136.	0.8	2
56	A system of recurrent neural networks for modularising, parameterising and dynamic analysis of cell signalling networks. <i>BioSystems</i> , 2017, 153-154, 6-25.	0.9	2
57	Novel domain expansion methods to improve the computational efficiency of the Chemical Master Equation solution for large biological networks. <i>BMC Bioinformatics</i> , 2020, 21, 515.	1.2	2
58	Using activity time windows and logical representation to reduce the complexity of biological network models: G1/S checkpoint pathway with DNA damage. <i>BioSystems</i> , 2020, 191-192, 104128.	0.9	2
59	Three neural network case studies in biology and natural resource management. , 2002, , .		1
60	Machine Learning for Childhood Acute Lymphoblastic Leukaemia Gene Expression Data Analysis: A Review. <i>Current Bioinformatics</i> , 2010, 5, 118-133.	0.7	1
61	Improved Ultrasound Based Computer Aided Diagnosis System for Breast Cancer Incorporating a New Feature of Mass Central Regularity Degree (CRD). <i>Studies in Computational Intelligence</i> , 2016, , 213-233.	0.7	1
62	Towards abstraction of computational modelling of mammalian cell cycle: Model reduction pipeline incorporating multi-level hybrid petri nets. <i>Journal of Theoretical Biology</i> , 2020, 496, 110212.	0.8	1
63	Exploration of fracture dynamics properties and predicting fracture toughness of individual wood beams using neural networks. <i>Silva Fennica</i> , 2009, 43, .	0.5	1
64	Age and Attitude toward Climate Change in Seoul, Korea. <i>The Korea Spatial Planning Review</i> , 2012, 74, 221-232.	0.2	1
65	Robustness of CDK2 in triggering cellular senescence based on probability of DNA-damaged cells passing G1/S checkpoint. , 2011, , .		0
66	Robustness of CDK2 in Triggering Cellular Senescence based on Probability of DNA-damaged Cells Passing G1â•S Checkpoint. , 2011, , .		0
67	A GENERALIZED STOCHASTIC SOLUTE TRANSPORT MODEL FOR MULTISCALE DISPERSION IN POROUS MEDIA. <i>Journal of Porous Media</i> , 2012, 15, 153-170.	1.0	0
68	The meioticâ€“mitotic initiation switch in budding yeast maintains its function robustly against sensitive parameter perturbations. <i>BioSystems</i> , 2014, 124, 61-74.	0.9	0
69	Order in the Black Box: Consistency and Robustness of Hidden Neuron Activation of Feed Forward Neural Networks and Its Use in Efficient Optimization of Network Structure. <i>Studies in Computational Intelligence</i> , 2016, , 15-43.	0.7	0
70	Stochastic Neural Networks for Modelling Random Processes from Observed Data. <i>Studies in Computational Intelligence</i> , 2016, , 83-107.	0.7	0
71	Neural Networks for Robotic Detection of Mastitis in Dairy Cows: Netherlands and New Zealand Perspectives. <i>Lecture Notes in Networks and Systems</i> , 2018, , 989-996.	0.5	0
72	Modelling Energy Use and Fuel Consumption in Wheat Production Using Indirect Factors and Artificial Neural Networks. <i>Lecture Notes in Computer Science</i> , 2012, , 25-32.	1.0	0

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73	Neural Networks and Fuzzy Clustering Methods for Assessing the Efficacy of Microarray Based Intrinsic Gene Signatures in Breast Cancer Classification and the Character and Relations of Identified Subtypes. <i>Methods in Molecular Biology</i> , 2015, 1260, 285-317.	0.4	0
74	Regulation of Meiosis Initiation before the Commitment Point in Budding Yeast: A Review of Biology, Molecular Mechanisms and Related Mathematical Models. <i>Current Bioinformatics</i> , 2015, 10, 208-224.	0.7	0
75	Fundamental Boolean network modelling for childhood acute lymphoblastic leukaemia pathways. <i>Quantitative Biology</i> , 2022, 10, 94-121.	0.3	0
76	Computational Modelling of Synaptic Plasticity: A review of models, parameter estimation using deep learning, and stochasticity. , 2021, , .		0
77	SYNTHESIZING NEUROPHYSIOLOGY, GENETICS, BEHAVIOUR AND LEARNING TO PRODUCE WHOLE-INSECT PROGRAMMABLE SENSORS TO DETECT VOLATILE CHEMICALS. , 0, , 179-204.		0