Mihail Popescu

List of Publications by Year
in descending order

156 papers	3,206 citations	304743 22 h-index	223800 46 g-index
160 all docs	160 docs citations	160 times ranked	3363 citing authors

#	Article	IF	Citations
1	Predicting disease risks from highly imbalanced data using random forest. BMC Medical Informatics and Decision Making, 2011, 11, 51.	3.0	462
2	A Microphone Array System for Automatic Fall Detection. IEEE Transactions on Biomedical Engineering, 2012, 59, 1291-1301.	4.2	241
3	A smart home application to eldercare: Current status and lessons learned. Technology and Health Care, 2009, 17, 183-201.	1.2	195
4	An acoustic fall detector system that uses sound height information to reduce the false alarm rate. , 2008, 2008, 4628-31.		122
5	Three phase tooth-concentrated multiple-layer fractional windings with low space harmonic content. , 2010, , .		115
6	Fuzzy Measures on the Gene Ontology for Gene Product Similarity. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2006, 3, 263-274.	3.0	106
7	Comparing Fuzzy, Probabilistic, and Possibilistic Partitions. IEEE Transactions on Fuzzy Systems, 2010, 18, 906-918.	9.8	105
8	Sensor Technology to Support Aging in Place. Journal of the American Medical Directors Association, 2013, 14, 386-391.	2.5	100
9	Improvements to the relational fuzzy c-means clustering algorithm. Pattern Recognition, 2014, 47, 3920-3930.	8.1	79
10	Automated In-Home Fall Risk Assessment and Detection Sensor System for Elders. Gerontologist, The, 2015, 55, S78-S87.	3.9	68
11	A New Paradigm of Technology-Enabled â€˜Vital Signs' for Early Detection of Health Change for Older Adults. Gerontology, 2015, 61, 281-290.	2.8	67
12	Adjustable Flux Three-Phase AC Machines With Combined Multiple-Step Star-Delta Winding Connections. IEEE Transactions on Energy Conversion, 2010, 25, 348-355.	5.2	59
13	Automatic karyotyping of metaphase cells with overlapping chromosomes. Computers in Biology and Medicine, 1999, 29, 61-82.	7.0	54
14	Efficient Source Separation Algorithms for Acoustic Fall Detection Using a Microsoft Kinect. IEEE Transactions on Biomedical Engineering, 2014, 61, 745-755.	4.2	54
15	Automatic Fall Detection Based on Doppler Radar Motion Signature. , 2011, , .		52
16	Acoustic fall detection using one-class classifiers. , 2009, 2009, 3505-8.		49
17	Cardiovascular Function and Ballistocardiogram: A Relationship Interpreted via Mathematical Modeling. IEEE Transactions on Biomedical Engineering, 2019, 66, 2906-2917.	4.2	41
18	Monitoring the Relative Blood Pressure Using a Hydraulic Bed Sensor System. IEEE Transactions on Biomedical Engineering, 2019, 66, 740-748.	4.2	40

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19	Linguistic summarization of long-term trends for understanding change in human behavior. , 2011, , .		34
20	Sleep Posture Classification Using Bed Sensor Data and Neural Networks. , 2018, 2018, 461-465.		34
21	Is VAT really single linkage in disguise?. Annals of Mathematics and Artificial Intelligence, 2009, 55, 237-251.	1.3	32
22	Quantifying care coordination using natural language processing and domain-specific ontology. Journal of the American Medical Informatics Association: JAMIA, 2015, 22, e93-e103.	4.4	32
23	Recognizing complex instrumental activities of daily living using scene information and fuzzy logic. Computer Vision and Image Understanding, 2015, 140, 68-82.	4.7	32
24	Acoustic fall detection using a circular microphone array. , 2010, 2010, 2242-5.		30
25	Automated Fall Detection With Quality Improvement â€œRewindâ€•to Reduce Falls in Hospital Rooms. Journal of Gerontological Nursing, 2014, 40, 13-17.	0.6	30
26	Clustering in ordered dissimilarity data. International Journal of Intelligent Systems, 2009, 24, 504-528.	5.7	29
27	Three phase tooth-concentrated interspersed windings with low space harmonic content. , 2010, , .		28
28	Radar walking speed measurements of seniors in their apartments: Technology for fall prevention. , 2012, 2012, 260-3.		27
29	Early Illness Recognition Using In-home Monitoring Sensors and Multiple Instance Learning. Methods of Information in Medicine, 2012, 51, 359-367.	1.2	25
30	Developing a Comprehensive Electronic Health Record to Enhance Nursing Care Coordination, Use of Technology, and Research. Journal of Gerontological Nursing, 2010, 36, 13-17.	0.6	25
31	Dunn&#x2019;s cluster validity index as a contrast measure of VAT images. , 2008, , .		24
32	Study of the Number of Slots/Pole Combinations for Low Speed Permanent Magnet Synchronous Generators. , 2007, , .		23
33	Effect of Health Information Technologies on Glycemic Control Among Patients with Type 2 Diabetes. Current Diabetes Reports, 2018, 18, 130.	4.2	22
34	VAMPIR - An Automatic Fall Detection System Using a Vertical PIR Sensor Array. , 2012, , .		21
35	Innovative Tools to Support Family Caregivers of Persons with Cancer: The Role of Information Technology. Seminars in Oncology Nursing, 2019, 35, 384-388.	1.5	21
36	Linguistic summarization of in-home sensor data. Journal of Biomedical Informatics, 2019, 96, 103240.	4.3	20

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37	An automatic in-home fall detection system using Doppler radar signatures. Journal of Ambient Intelligence and Smart Environments, 2016, 8, 453-466.	1.4	19
38	Computing With Words With the Ontological Self-Organizing Map. IEEE Transactions on Fuzzy Systems, 2010, 18, 473-485.	9.8	18
39	Detecting daily routines of older adults using sensor time series clustering. , 2014, 2014, 5912-5.		17
40	Monitoring patients in hospital beds using unobtrusive depth sensors. , 2014, 2014, 5904-7.		17
41	Similarity measure for anomaly detection and comparing human behaviors. International Journal of Intelligent Systems, 2012, 27, 733-756.	5.7	16
42	Home blood pressure data visualization for the management of hypertension: designing for patient and physician information needs. BMC Medical Informatics and Decision Making, 2020, 20, 195.	3.0	16
43	A Cluster Validity Framework Based on Induced Partition Dissimilarity. IEEE Transactions on Cybernetics, 2013, 43, 308-320.	9.5	15
44	An automatic fall detection framework using data fusion of Doppler radar and motion sensor network. , 2014, 2014, 5940-3.		15
45	A temporal analysis system for early detection of health changes. , 2016, , .		15
46	Non-Invasive In-Home Sleep Stage Classification Using a Ballistocardiography Bed Sensor. , 2019, , .		15
47	Comparing Aging in Place to Home Health Care: Impact of Nurse Care Coordination On Utilization and Costs. Nursing Economics, 2015, 33, 306-13.	0.3	14
48	Radar walk detection in the apartments of elderly. , 2012, 2012, 5863-6.		13
49	Detection of abnormal sensor patterns in eldercare. , 2013, , .		13
50	Random projections fuzzy c-means (RPFCM) for big data clustering. , 2015, , .		13
51	A Multidimensional Time-Series Similarity Measure With Applications to Eldercare Monitoring. IEEE Journal of Biomedical and Health Informatics, 2016, 20, 953-962.	6.3	13
52	Using Sensor Signals in the Early Detection of Heart Failure: A Case Study. Journal of Gerontological Nursing, 2020, 46, 41-46.	0.6	13
53	Fuzzy cluster analysis of bioinformatics data composed of microarray expression data and gene ontology annotations. , 2008, , .		12
54	Sleep stage recognition using respiration signal. , 2016, 2016, 2843-2846.		11

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55	A pathologist-in-the-loop IHC antibody test selection using the entropy-based probabilistic method. Journal of Pathology Informatics, 2012, 3, 1.	1.7	11
56	Linking Clinical Events in Elderly to In-home Monitoring Sensor Data: A Brief Review and a Pilot Study on Predicting Pulse Pressure. Journal of Computing Science and Engineering, 2008, 2, 180-199.	0.6	11
57	Efficient design of pulses with trapezoidal magnitude and linear phase response profiles. Magnetic Resonance in Medicine, 1997, 38, 137-145.	3.0	10
58	GENE ONTOLOGY SIMILARITY MEASURES BASED ON LINEAR ORDER STATISTICS. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2006, 14, 639-661.	1.9	10
59	A new cluster validity measure for bioinformatics relational datasets. , 2008, , .		10
60	Improving disease prediction using ICD-9 ontological features. , 2011, , .		10
61	An eldercare electronic health record system for predictive health assessment. , 2011, , .		10
62	Doppler radar sensor positioning in a fall detection system. , 2012, 2012, 256-9.		10
63	Fall detection using doppler radar and classifier fusion. , 2012, , .		10
64	Uncovering influence links in molecular knowledge networks to streamline personalized medicine. Journal of Biomedical Informatics, 2014, 52, 394-405.	4.3	10
65	Random projections fuzzy k-nearest neighbor(RPFKNN) for big data classification. , 2016, , .		10
66	TLPCM: Transfer Learning Possibilistic C-Means. IEEE Transactions on Fuzzy Systems, 2021, 29, 940-952.	9.8	10
67	Predicting health patterns using sensor sequence similarity and NLP. , 2012, , .		9
68	Estimating walking speed, stride length, and stride time using a passive floor based electronic scavenging system. , 2017, , .		9
69	Patient Judgments About Hypertension Control: The Role of Variability, Trends, and Outliers in Visualized Blood Pressure Data. Journal of Medical Internet Research, 2019, 21, e11366.	4.3	9
70	Locally adaptive detection algorithm for forward-looking ground-penetrating radar. Proceedings of SPIE, 2010, , .	0.8	8
71	Non-invasive monitoring of vital signs for older adults using recliner chairs. Health and Technology, 2021, 11, 169-184.	3.6	8
72	Early Detection of Health Changes in the Elderly Using In-Home Multi-Sensor Data Streams. ACM Transactions on Computing for Healthcare, 2021, 2, 1-23.	5.0	8

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73	Tracking personalized functional health in older adults using geriatric assessments. BMC Medical Informatics and Decision Making, 2020, 20, 270.	3.0	7
74	Artificial Intelligence-Driven Structurization of Diagnostic Information in Free-Text Pathology Reports. Journal of Pathology Informatics, 2020, 11, 4.	1.7	7
75	Fuzzy spatial pattern processing using linguistic hidden Markov models. IEEE Transactions on Fuzzy Systems, 2006, 14, 81-92.	9.8	6
76	A framework for computing crowd emotions using agent based modeling. , 2013, , .		6
77	Early illness recognition in older adults using transfer learning. , 2017, , .		6
78	A Comparison of Five Fuzzy Rand Indices. Communications in Computer and Information Science, 2010, , 446-454.	0.5	6
79	Combining Physiology-Based Modeling and Evolutionary Algorithms for Personalized, Noninvasive Cardiovascular Assessment Based on Electrocardiography and Ballistocardiography. Frontiers in Physiology, 2021, 12, 739035.	2.8	6
80	Relational Analysis of CpG Islands Methylation and Gene Expression in Human Lymphomas Using Possibilistic C-Means Clustering and Modified Cluster Fuzzy Density. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2007, 4, 176-189.	3.0	5
81	Detection of targets in forward-looking infrared imaging using a multiple instance learning framework. , 2011, , .		5
82	Correlation cluster validity. , 2011, , .		5
83	Comparing soft clusters and partitions. , 2011, , .		5
84	Improving acoustic fall recognition by adaptive signal windowing. , 2011, 2011, 7589-92.		5
85	Detection of buried objects in FLIR imaging using mathematical morphology and SVM. , 2012, , .		5
86	An extension of a confined space evacuation model to human geography. , 2012, , .		5
87	Improvement of acoustic fall detection using Kinect depth sensing. , 2013, 2013, 6736-9.		5
88	A framework for harmonizing sensor data to support embedded health assessment. , 2014, 2014, 1747-51.		5
89	Social practices of nurse care coordination using sensor technologies â€" Challenges with an alert system adoption in assisted living communities for older adults. International Journal of Nursing Sciences, 2021, 8, 289-297.	1.3	5
90	Evaluation of the Truth Value of Linguistic Summaries â€" Case with Non-monotonic Quantifiers. Advances in Intelligent Systems and Computing, 2015, , 69-79.	0.6	5

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91	Mechanism-Driven Modeling to Aid Non-invasive Monitoring of Cardiac Function via Ballistocardiography. Frontiers in Medical Technology, 2022, 4, 788264.	2.5	5
92	Identifying Genes and Their Interactions from Pathway Figures and Text in Biomedical Articles. , 2021, , .		5
93	eCCV: A new fuzzy cluster validity measure for large relational bioinformatics datasets. , 2009, , .		4
94	Anomaly detection in forward looking infrared imaging using one-class classifiers. , 2010, , .		4
95	An ontological fuzzy Smith-Waterman with applications to patient retrieval in Electronic Medical Records. , 2010, , .		4
96	Gaussian mixture models for measuring local change down-track in LWIR imagery for explosive hazard detection. Proceedings of SPIE, 2011, , .	0.8	4
97	FUMIL-Fuzzy Multiple Instance Learning for early illness recognition in older adults. , 2012, , .		4
98	Improving automatic sound-based fall detection using iVAT clustering and GA-based feature selection. , 2012, 2012, 5867-70.		4
99	Implementing bounded rationality in disaster agent behavior using OGA operators. , 2012, , .		4
100	Fuzzy relational self-organizing maps. , 2012, , .		4
101	A new illness recognition framework using frequent temporal pattern mining. , 2014, , .		4
102	Random projection below the JL limit. , 2016, , .		4
103	Effect of Health Information Technologies on Cardiovascular Risk Factors among Patients with Diabetes. Current Diabetes Reports, 2019, 19, 28.	4.2	4
104	Data Stream Trajectory Analysis Using Sequential Possibilistic Gaussian Mixture Model. , 2019, , .		4
105	A New Incremental Cluster Validity Index for Streaming Clustering Analysis. , 2019, , .		4
106	Explainable AI For Dataset Comparison. , 2019, , .		4
107	Use of Enhanced Data Visualization to Improve Patient Judgments about Hypertension Control. Medical Decision Making, 2020, 40, 785-796.	2.4	4
108	Home blood pressure data visualization for the management of hypertension: using human factors and design principles. BMC Medical Informatics and Decision Making, 2021, 21, 235.	3.0	4

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109	New Linguistic Description Approach for Time Series and Its Application to Bed Restlessness Monitoring for Eldercare. IEEE Transactions on Fuzzy Systems, 2022, 30, 1048-1059.	9.8	4
110	Topology Preservation in Fuzzy Self-Organizing Maps. Studies in Fuzziness and Soft Computing, 2014, , 105-114.	0.8	4
111	Impact of Web-Based Cognitive Behavioral Therapy for Insomnia on Stress, Health, Mood, Cognitive, Inflammatory, and Neurodegenerative Outcomes in Rural Dementia Caregivers: Protocol for the NiteCAPP CARES and NiteCAPP SHARES Randomized Controlled Trial. JMIR Research Protocols, 2022, 11, e37874.	1.0	4
112	Dirt road segmentation using color and texture features in color imagery. , 2012, , .		3
113	A novel web-based depth video rewind approach toward fall preventive interventions in hospitals. , 2014, 2014, 4511-4.		3
114	An Î±-Level OWA Implementation of Bounded Rationality for Fuzzy Route Selection. Studies in Fuzziness and Soft Computing, 2014, , 253-260.	0.8	3
115	Early illness detection in elderly using sensor networks: A review of the TigerPlace experience. , 2015, , .		3
116	Context preserving representation of daily activities in elder care. , 2017, , .		3
117	Walk Identification using a smart carpet and Mel-Frequency Cepstral Coefficient (MFCC) features. , 2018, 2018, 4249-4252.		3
118	Non-invasive Classification of Sleep Stages with a Hydraulic Bed Sensor Using Deep Learning. Lecture Notes in Computer Science, 2019, , 73-82.	1.3	3
119	An early illness recognition framework using a temporal Smith Waterman algorithm and NLP. AMIA ... Annual Symposium proceedings, 2013, 2013, 548-57.	0.2	3
120	Noninvasive cardiovascular monitoring based on electrocardiography and ballistocardiography: a feasibility study on patients in the surgical intensive care unit. , 2021, 2021, 951-954.		3
121	Predictors of preterm birth in birth certificate data. Studies in Health Technology and Informatics, 2008, 136, 555-60.	0.3	3
122	Ontological self-organizing maps for cluster visualization and functional summarization of gene products using Gene Ontology similarity measures. , 2008, , .		2
123	Adjustable flux three phase a.c. machines with combined multiple-step star-delta winding connections. , 2009, , .		2
124	Automatic cuing of human-in-the-loop detection system. Proceedings of SPIE, 2009, , .	0.8	2
125	Buried target detection in FLIR images using Shearlet features. Proceedings of SPIE, 2013, , .	0.8	2
126	Relational Fuzzy Self-Organizing Maps for Cluster Visualization and Summarization. International Journal of Uncertainty, Fuzziness and Knowlege-Based Systems, 2014, 22, 913-940.	1.9	2

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127	A human geospatial predictive analytics framework with application to finding medically underserved areas. , 2014, , .		2
128	Early illness recognition using frequent motif discovery. , 2015, 2015, 3699-702.		2
129	Early Sepsis Recognition Based on Ear Localization using Infrared Thermography. , 2018, , .		2
130	An Unsupervised Framework for Detecting Early Signs of Illness in Eldercare. , 2019, , .		2
131	Disparities in Text Messaging Interventions to Improve Diabetes Management in the United States. Diabetes Spectrum, 2021, 34, 34-41.	1.0	2
132	GoFuzzKegg: Mapping Genes to KEGG Pathways Using an Ontological Fuzzy Rule System. , 2007, , .		1
133	High efficiency general purpose small power induction motors: design and development. , 2007, , .		1
134	Patient stratification based on Activity of Daily Living score using Relational Self-Organizing Maps. , 2014, , .		1
135	Explosive hazard detection using MIMO forward-looking ground penetrating radar. , 2015, , .		1
136	A decision support system for home BP measurements. , 2017, , .		1
137	Empowering diabetes self-management by gamifying intelligent system: MyTrybeCare concept. , 2018, , .		1
138	Early sepsis recognition based on infrared thermography. International Journal of Data Mining and Bioinformatics, 2019, 22, 301.	0.1	1
139	A Novel Distance for Automated Surgical Skill Evaluation. , 2019, , .		1
140	Informatics Framework to Identify Consistent Diagnostic Techniques. , 2019, , .		1
141	<title>Generalized hidden Markov models for land mine detection</title>. , 2002, 4742, 349.		0
142	Mapping Genes to Pathways Using Ontological Fuzzy Rule Systems. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	0
143	Fuzzy Approaches for the Analysis CpG Island Methylation Patterns. , 0, , 141-165.		0
144	Numerical and experimental analysis of two permanent magnet claw poles wind generators. , 2008, , .		0

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145	Fuzzy Clustering of Large Relational Bioinformatics Datasets. , 0, , 379-399.		0
146	Using evolutionary computation to optimize an SVM used in detecting buried objects in FLIR imagery. Proceedings of SPIE, 2013, , .	0.8	0
147	A Theoretical study on the placement of microphone arrays for improving the localization accuracy of a fall. , 2014, 2014, 4523-6.		0
148	Messages from the technical program chairs. , 2016, , .		0
149	Surgery Task Classification Using Procrustes Analysis. , 2019, , .		0
150	Comments on "TLPCM: Transfer Learning Possibilistic C-Means" Errata and Observations. IEEE Transactions on Fuzzy Systems, 2021, 29, 702-704.	9.8	0
151	Analyzing three dimensional radar voxel data using the discrete Fourier transform for SAEH detection. , 2018, , .		0
152	Detecting explosive hazards in 3D radar imaging through clustering and sequential learning. , 2018, , .		0
153	OntoQuest: a physician decision support system based on ontological queries of the hospital database. AMIA ... Annual Symposium proceedings, 2006, , 639-43.	0.2	0
154	Hospital Personnel Attitude Toward Utilization of Depth Imaging Technology in Hospital Rooms. Missouri Medicine, 2016, 113, 79-84.	0.3	0
155	Identification of co-occurring diseases using ontological data mining techniques. AMIA ... Annual Symposium proceedings, 2007, , 1080.	0.2	0
156	Smart Processing for Systems under Uncertainty or Perturbation. Electronics (Switzerland), 2022, 11, 680.	3.1	0