



Journal of Medical Imaging and Health Informatics (JMIHI)

2019's SCI-IF 0.659

<http://www.aspbs.com/jmihi/>



A medium to disseminate novel experimental and theoretical research results in the field of biomedicine, biology, clinical, rehabilitation engineering, medical image processing, biocomputing, D2H2, and other health related areas.

Call for Papers

SPECIAL ISSUE ON

EMERGING CHALLENGES AND ADVANCEMENTS IN HEALTH INFORMATICS WITH NEW GENERATION UNSUPERVISED LEARNING

Artificial Intelligence (AI) is a highly effective method for fighting the pandemic COVID-19. AI can be described as Machine Learning (ML), Natural Language Processing (NLP), and Computer Vision applications for present purposes to teach computers to use large data-based models for pattern recognition, description, and prediction. Such functions can help identify (diagnosing), forecasting, and describing (treating) infections and aiding in controlling socio-economic impacts. The risk of the pandemic in terms of life and economic loss would be terrible; much confusion engulfed predictions of how bad and how effective non-pharmaceutical and pharmaceutical solutions would be. A worthy goal is to strengthen AI, one of the most popular data analytics tools developed in the past decade or so, to help reduce these uncertainties. Data scientists have been willing to take up the opportunity. In AI, machine learning and its subset (Deep Learning) methods are employed in various applications to solve multiple problems that occur due to uncertainty. But these problems were solved with the help of data collected from the history of occurrences of the event. Most machine learning and deep learning algorithms are trained to address the supervised learning problem, where the algorithms know the prediction requirement.

On the other hand, the clustering methods of data mining algorithms can group unknown data into structures. Based on knowledge discovery, this method finds a way to cluster the data without supervision. Most of these algorithms use distant metrics to complete the process. Combining the operation of machine learning and the clustering algorithms may also be the solutions to the problem. The benefits of Unsupervised learning that push us towards in-depth research is its ability to tackle the challenges that humans might find impossible either due to limited capacity or a bias. An idea of exploring raw and

unknown data does not necessarily know the health analyst is working to recover. This behavior is beneficial when it comes to segmenting patients. It can easily separate data into groups without any form of bias that might hinder a human due to pre-existing knowledge about the nature of the data on the customers. Also, it comes closer to human cognitive functions as just like a human brain; it deduces patterns from around the world and slowly learns more about the world over time. Even though the unsupervised learning methodology has an enormous potential to unravel the possibilities of next-generation AI in health informatics, it has few implementation hurdles.

The focus of this special issue is to provide a platform and opportunity for the researchers to find the solution for the current pandemic and future hazards. This special issue addresses the emerging challenges and advancements in health informatics based on the next generation of self-learning methodologies.

SUBJECT COVERAGE

TOPICS MAY INCLUDE, BUT NOT LIMITED TO THE FOLLOWING:

- Deep Clustering network for health informatics
- The selection of diverse datasets and problems to test and validate the research outcomes.
- The exploration of the optimal deep learning methodology for data classifications.
- Current approaches on deep clustering.
- Generative Adversarial Network models for the self-learning.
- Challenges on adjusting Hyper-parameters, lack of interpretability, lack of theoretical framework.
- Joint unsupervised learning methodologies.
- Health information standards and regulations
- Security, privacy, and disparities of health information access
- Knowledge sharing in online health communities
- Affordances and constraints of health information technologies
- Ubiquitous computing for chronic condition management
- Consumer access to health information
- Electronic medical records
- Traditional data which is generated in the past decades seeks the requirement for the modern algorithms and process segment/classification.
- An optimised strategy to implement intelligent automation in analysing data.
- Adequate parameter selection to avoid overfitting or underfitting.
- Data science and health analytics

IMPORTANT DATES

Submission of manuscripts: 05 DEC 2020

Notification to Authors: 10 MAR 2021

Final versions due: 25 JUL 2021

GUEST EDITOR(S)

Prof. Dr. B. Nagaraj M.E., Ph.D., MIEEE

Dean - Innovation Centre
Rathinam Group of Institutions
Coimbatore, Tamilnadu, India
dean.sa@rathinam.in

Prof. Dr. Danilo Pelusi,

University of Teramo, Italy
Dept. of Communication Engineering
dpelusi@unite.it

Prof. Valentina E. Balas

Professor-Automation and Applied Informatics,
Aurel Vlaicu University of Arad, Romania.
valentina.balas@uav.ro

Prof. B. Nagaraj is working as a Professor and Dean in Rathinam Group of Institutions, Coimbatore, India. He received his M.E. and PhD degrees from Anna University, and Karpagam University in 2004 and 2010, respectively. In 2005 he joined a Lecturer in Kamaraj College of Engineering, India and he worked there for 12 years (till May 15th, 2013) in various positions. His technical expertise and research interests include a control system, Automation, soft computing, and high-speed signal processing. He received Best Researcher Award from Karunya University for the best research paper in the year 2010. He is the author or co-author of more than 48-refereed publications in journals and conferences. He applied for five patents and is published in Indian Patent Journal. He is a member of various professional bodies like IEEE, MAENG, IACSIT, ISTE, and IETE. He is a reviewer for different reputed journals like Elsevier, Wiley, Inderscience, etc., and he has been the Guest Editor for a few special issues in Hindawi, Elsevier, Inderscience, Springer, etc.

Prof. Danilo Pelusi, received the Ph.D. degree in computational astrophysics from the University of Teramo, Italy, where he is currently an Associate Professor with the Faculty of Communication Sciences. His research interests include fuzzy logic, neural networks, information theory, evolutionary algorithms, and machine learning. He has served as a Program Member of many conferences and as an Editorial Board Member of many journals. He is also an Associate Editor of the IEEE Transactions on Emerging Topics in Computational Intelligence, IEEE Access, the International Journal of Machine Learning and Cybernetics (Springer), and Array (Elsevier). He is also a Guest Editor for Elsevier, Springer, and Inderscience journals. He is also a Reviewer of reputed journals, such as the IEEE Transactions on Fuzzy Systems and the IEEE Transactions on Neural Networks and Learning Systems.

Prof. Valentina E. Balas is currently Full Professor in the Department of Automatics and Applied Software at the Faculty of Engineering, "Aurel Vlaicu" University of Arad, Romania. She holds a Ph.D. in Applied Electronics and Telecommunications from Polytechnic University of Timisoara. Dr. Balas is author of more than 280 research papers in refereed journals and International Conferences. Her research interests are in Intelligent Systems, Fuzzy Control, Soft Computing, Smart Sensors, Information Fusion, Modeling and Simulation. She is the Editor-in Chief to International Journal of Advanced Intelligence Paradigms (IJAIP) and to International Journal of Computational Systems Engineering (IJCSysE), member in Editorial Board member of several national and international journals and is evaluator expert for national, international projects and

PhD Thesis. Dr. Balas is the director of Intelligent Systems Research Centre in Aurel Vlaicu University of Arad and Director of the Department of International Relations, Programs and Projects in the same university. She served as General Chair of the International Workshop Soft Computing and Applications (SOFA) in eight editions 2005-2018 held in Romania and Hungary. Dr. Balas participated in many international conferences as Organizer, Honorary Chair, Session Chair and member in Steering, Advisory or International Program Committees. She is a member of EUSFLAT, SIAM and a Senior Member IEEE, member in TC – Fuzzy Systems (IEEE CIS), member in TC - Emergent Technologies (IEEE CIS), member in TC – Soft Computing (IEEE SMCS). Dr. Balas was past Vice-president (Awards) of IFSA International Fuzzy Systems Association Council (2013-2015) and is a Joint Secretary of the Governing Council of Forum for Interdisciplinary Mathematics (FIM), - A Multidisciplinary Academic Body, India.

Submission Instructions:

Authors are encouraged to discuss with a guest editor to determine the suitability of their intended submissions. Before submission authors should carefully read over the journal's Author Guidelines, which are located at http://www.aspbs.com/jmihi/inst-auth_jmihi.htm . Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System at <http://mstracker.com/submit1.php?jc=jmihi> , according to the following timetable: Original, high-quality contributions that are not yet published or that are not currently under review by other journals or peer-reviewed conferences are sought. Papers will be peer-reviewed by independent reviewers and selected based on originality, scientific quality, and relevance to this Special Issue. The journal editors will make final decisions about the acceptance of the papers.

Note: The publisher has implemented with immediate effect that all papers submission must provide its respective plagiarism report on the value of similarity index (to be less than 12%): without this, no papers will be processed.

Manuscript-Processing Fees:

All new manuscripts submitted to this journal will be subjected to a Manuscript Processing Fee. Research article publishing is not without occurring costs and the costs have been steadily increasing. To defray part of the publication cost, the journal will charge manuscript-processing fees, to be paid by the authors or their affiliated research institutions. The publication fee will be used to defray part of the occurring expenses associated with manuscript processing, editorial workflow, typesetting, proofreading, printing, online-hosting, and archiving. Authors or their affiliated research institutions are required to pay US\$1080 for their articles for a special issue article from all Countries. The authors will receive the PDF version of their research papers in final form. When submitting a manuscript through online, it will be processed with an understanding that the corresponding authors fully agree to pay all manuscript-processing fees upon acceptance. The author who submits the manuscript to the journal is fully responsible for the manuscript-processing fees. Accepted peer reviewed manuscripts will not be processed and forwarded to production until all fees are paid in full to the publisher. The Publisher will issue an invoice of manuscript processing fees after a manuscript has been accepted for publication. The Corresponding author will be asked to submit a signed Copyright Transfer Agreement (CTA) along with manuscript processing fees.