

**CALL FOR PAPERS
SPECIAL SESSION ON**

“AI techniques for Healthcare applications and diagnosis”

Track II: Knowledge, Machine and Deep Learning for Chronic Diseases Prevention and Management (KMDL'2020)

**for ICECOCS'20
December 2nd – 3rd, 2020 ▪ Kenitra, Morocco**

Session Co-Chairs :

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Session description

Chronic diseases constitute a major cause of mortality, and the World Health Organization (WHO) attributes 38 million deaths a year to non-communicable diseases. Likewise, chronic diseases such as heart disease, cancer, asthma, diabetes and some viral diseases are the leading causes of death and disability in the world.

More recently, knowledge has been increasingly seen as a key competitive resource in organizations and this has influenced selection and recruitment practices in many organizations. Today, it is an essential necessity for healthcare organizations to manage both tacit and explicit knowledge effectively in order to provide the best possible healthcare by solving problems and making the most ideal and flawless. In addition, knowledge engineering is an intelligent process by which the gathered raw health data is transformed into knowledge in order to be used for “integrate and interpret knowledge for individualized healthcare”. Knowledge engineers use artificial intelligence (AI) concepts and techniques in developing knowledge-based systems.

Likewise, machine learning is a field of artificial intelligence that uses statistical techniques to give computer systems the ability to “learn from health data”, without being explicitly programmed. Meanwhile, deep learning is one of machine learning methods based on artificial neural networks. During the past few years, with the advances in deep learning, many new computation models have been proposed and significantly applied in natural language processing, neuroscience, biomedical, biometrics, information security, etc. In another side, Deep Learning in medicine is one of the most rapidly and new developing fields of science. Currently, almost every medical device intended for imaging has a more or less extended image and signal analysis and processing module which can use deep learning. It provides quantitative data necessary to make a diagnosis with predicting diagnosis.

This special issue on Knowledge, Machine and Deep Learning invites researchers and practitioners to present novel contributions addressing theoretical and practical aspects of knowledge management, machine learning and deep learning. The special issue will feature a collection of high quality theoretical articles for improving the knowledge management and learning process. State-of-the-art applications based on deep reinforcement learning and knowledge graph are also very welcome.

The topics of interest include, but are not limited to:

- Information and knowledge management tools for chronic disease
- Knowledge models for chronic disease
- Data science and knowledge engineering for chronic disease
- Machine and deep learning techniques for chronic disease
- Supervised, Unsupervised and Reinforcement learning for chronic disease
- Data mining and its applications in chronic diseases
- Natural language processing and text mining for chronic diseases prevention
- Social media for chronic disease and participatory activities
- Service-oriented computing for chronic diseases management
- Geo-Information technologies for chronic diseases diagnosis
- Fuzzy Logic and its application in chronic disease prevention
- Big Data and large scale methods for chronic disease (diagnostic or therapeutic)
- Internet of Things (IoT) and cloud computing for chronic disease diagnosis
- Applications, algorithms, tools directly related to machine deep learning
- Datasets for machine learning/deep learning experiments in chronic diseases

SUBMISSION

Papers must be submitted electronically for peer review through EDAS by **July 5th, 2020**:

IMPORTANT: All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

July 5th, 2020: deadline for paper submission

August 25th, 2020: notification of acceptance/reject

September 20th, 2020: deadline for final paper

October 1st 2020: Early Registration

November 3rd 2020: Late Registration