

Special Issue on  
**Evolving Intelligent Systems in Healthcare to Aid  
Resource-Poor Communities**

# CALL FOR PAPERS

The limited number of skilled healthcare providers to deliver healthcare services in resource-poor settings is definitely affecting population health. Most of the time, residents in resource-poor settings in developing countries are unable to enjoy the benefit of the advanced medical diagnostic tests and treatment facilities that are available in urban regions. This limitation tends to have a negative impact on the patient's health, and the delay in treatment might endanger the life of a patient. Thus, an intelligent medical/healthcare information system such as early diagnosis of medical conditions helps resource-poor communities to identify the possible disease earlier and to increase their awareness of health conditions.

Evolutionary algorithms have been around for a long time. These algorithms have been used to solve specific problems conventionally. The solutions that perform best on some metrics are obtained in each generation. These algorithms have achieved some successes, and they can be more computationally intensive than other approaches such as deep learning, which has exploded in popularity in recent years. Instead of optimizing for a specific goal, it embraces a creative exploration of all possible solutions. By doing so, it has paid off with ground-breaking results. Biological evolution is also the only system to produce human intelligence, which is the ultimate goal of many AI researchers. Healthcare/medical fields need a diagnostics system with good accuracy that provides quick results. The evolutionary algorithms have the potential to improve existing healthcare systems, especially the ones that assist resource-poor setting communities.

This Special Issue aims to gather original research articles and review articles that cover the challenges and applications of evolving intelligent systems, including analysis, techniques, and applications. Thus, research that explores novel applications of evolving intelligent systems are particularly encouraged. Although this Special Issue considers a wide range of evolving intelligent systems topics, submissions should be focused primarily on systems that benefit resource-poor communities.

Potential topics include but are not limited to the following:

- ▶ Intelligent recommender systems for healthcare authorities in resource-poor communities based on the concept of Evolving in Dynamic Environments
- ▶ Self-monitoring evolving systems to trace the spread of epidemic diseases in rural areas
- ▶ Neural networks with evolving structure for mobile app healthcare systems to aid medical staff in resource-poor communities
- ▶ Automatic novelty detection in evolving systems applied to early diagnosis of medical conditions to aid resource-poor communities
- ▶ Evolving intelligent systems in time series prediction with applications to predict the spread of epidemic diseases in rural areas
- ▶ Evolving intelligent systems, rural area outpatient monitoring system based on evolving behaviour models
- ▶ Evolving Fuzzy Clustering Methods and Fuzzy Rule-based Classifiers for diagnosing common diseases in resource-poor communities
- ▶ Evolving Fuzzy Decision Support-based mobile expert system for medical diagnosis of common diseases in resource-poor communities

Authors can submit their manuscripts through the Manuscript Tracking System at <https://review.hindawi.com/submit?specialIssue=922428>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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