Call for Papers

Special issue on
Multiobjective Optimization and Data Mining in Medical Informationization

We invite authors to submit articles on the applications of operational research, big data technology and theory of computation in knowledge discovery, data integration and intelligent decision of management, as well as the advance in the medical informationization industry.

In this era, informationization is the inevitable development trend of the medical industry. From the individual patient information query to the allocation of thousands of resources and staff, all the information operations involved is a part of the process of informationization. In the past few decades, the computing hardware and software has continued to grow exponentially. Furthermore, breakthrough in operational research and arrival of the era of big data has helped us to find a better solution for human information needs. However, there still are some challenging problems for providing a better service. For most given problems, multi-objective optimization and data mining can provide the optimal solution. And machine learning such as artificial neural network, deep learning, evolutionary algorithm, and genetic algorithm are some of the other well-established techniques we can explore for solutions generation. In the medical industry, using these algorithms can help hospital find the potential factors which affect patients’ health more accurately and improve diagnosis. It can also identify health trends that bridge the gaps among fragments of seemingly unrelated information. In addition, the process of informationization also promotes the development of bioinformatics, including membrane computing, gene expressions, genetic computing, etc. These new technologies can offer much higher quality and personalized service for patients.

This special issue focuses on the applications for problems in the medical domain, covering the solution for special problems or finding the potential correlation between diseases and some factors that seem unrelated. The main goal of this special issue is to provide the overview of the current state-of-the-art advances in the process of informationization. Potential topics include, but are not limited to:

- Medical system analysis and information management.
- Mobile applications to provide online medical consultants including diagnosis, therapy planning, and treatment follow-ups, etc.
- Computer methods in medical diagnostics.
- Big data techniques towards medical domain such as collection, analysis, learning, processing of widely used medical data through wearable devices.
- Health informatics and modeling biological systems.
- Management of biomedical data to assist with clinical decision-making and therapy guidance.
READ THIS NOTE BEFORE SUBMISSION: Prospective authors should submit an electronic copy of their complete manuscript through the journal Manuscript Tracking System to the following timetable:

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