

# ***Knowledge Discovery and Management in Biomedical Information Systems***

**A Special Issue with**

## **INFORMATION SYSTEMS FRONTIERS**



### **Overview**

The rapid growth of research and development using different advanced techniques, e.g. AI and Machine Learning, in biological and medical information systems has drawn worldwide attention to the management of knowledge discovered in, for instance, gene databases and public healthcare portals. However, challenges remain - ranging from various fundamental issues, e.g. difficulty in data acquisition and heterogeneity of biological information, to the lack of methodology that supports the fusion, processing and management of abundant biomedical and genomic data and eventually the management and interpretation of knowledge that arises from such discoveries for the purpose of problem solving and decision making in translational medicine, e.g. clinical medical practice. Therefore, the goal of this special issue is to attract researchers and professionals in various backgrounds, e.g. computer science, biomedical informatics, information systems, health care, biomedical science and engineering, and industrial systems, to share their latest research endeavors and explore the frontiers of cutting-edge research of knowledge discovery and management in biomedical information systems.

### **Topics and Scope**

Interesting topics include, but are not limited to,

- Information modeling in health care and biomedical systems
- Health information technology\Information & Communication Technology in biomedical science
- Medical image retrieval and mining
- Data\Tex\Web\Multimedia mining in bioinformatics, medical and health care
- AI based clinical decision support
- Social network mining in health care
- Biomedical data acquisition and system engineering
- Knowledge guided Human Computer Interaction in biomedical and health care professions
- Knowledge based drug discovery and design (personalized drugs)
- Semantic web and the management of biomedical and health care literature
- Ontology induction and management in biological and medical professions
- Ontology based biomedical and health care mining and application
- Biological database integration and management
- Computational genomics and related health assessment
- Radio-frequency identification (RFID) and mobile database, computing and management in biomedical
- Privacy and legal issues in medical information and knowledge management systems
- Case study

- ...

The target audience of this special issue includes academic researchers, engineers, professionals working on relevant topics in computer science, information system, biological, medical and health care professions, and industrial systems and the graduate students who wish to learn and spot research opportunities in this rapidly growing area.

### **Important Dates**

- Announcement of CFP, 1st Nov, 2007
- Manuscript submission deadline, 1st March, 2008
- First Review to be completed, 1st June, 2008
- Notification to authors, 15th June, 2008
- Deadline for receipt of revisions: 1st August, 2008
- Second review to be completed, 1st October, 2008
- Notification to authors, 15th October, 2008
- Final version, 15th November, 2008
- Publication, early-mid 2009.

### **Submission**

All papers must be original and are not published, submitted and/or currently under review elsewhere. Each submission will be peer reviewed according to the ISF's standard and requirement.

Authors are first invited to forward a brief intent which clearly addresses the main content, issues and potential contributions of your final manuscript to the Guest Editors before **30<sup>th</sup> November, 2007**. For the manuscripts, authors should follow the ISF's format requirement, in preparing their full papers. More details can be found at <http://www.som.buffalo.edu/isinterface/ISFrontiers/> or at Springer's [Instructions for Authors](#).

Please direct all your correspondence, intent and manuscript submissions to the Guest Editors through email. We will acknowledge you upon our receipt of your intent and full paper.

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