



ACM TOMM Call for Papers

Special Issue on

Computational Intelligence for Biomedical Data and Imaging

Aims and Scope:

Researchers in machine learning including those working in image processing, computer vision, biomedical analysis and related fields when tied with experienced clinicians can play a significant role in understanding and working on complex medical data which ultimately improves patient care. To develop a novel machine learning algorithm specific to medical data is a challenge and need of the hour. Healthcare and biomedical sciences have become data-intensive fields, with a strong need for sophisticated data mining methods to extract the knowledge from the available information. Biomedical data contains several challenges in data analysis, including high dimensionality, class imbalance and low numbers of samples. Although the current research in this field has shown promising results, several research issues need to be explored as follows. There is a need to explore novel feature selection methods to improve predictive performance along with interpretation, and to explore large scale data in biomedical sciences.

This special session aims to bring together the current research progress (from both academia and industry) on novel machine learning methods to address the challenges to biomedical complex data. Special attention will be devoted to handle feature selection, class imbalance, and data fusion in biomedical and machine learning applications. It will attract medical experts who have access to interesting sources of data but lack the expertise in using machine learning techniques effectively.

Topics:

The main topics of this special session include, but are not limited to, the following:

- Computer aided detection and diagnosis
- Machine learning methods applied to biomedical data
- Deep learning for medical image analysis
- Biomedical image classification
- Evolutionary computing in bioinformatics
- Pattern recognition for medical imaging and genomics
- Big data analytics on biomedical applications
- Cloud computing based biomedical data analysis

Important Dates:

Submission Deadline: May 31, 2019
First Review Notification: July 31, 2019
Revision Submission: September 30, 2019
Final Decision: November 15, 2019
Camera Ready Version: November 30, 2019
Online Publication: December 2019

The review process will comply with the standard review process of the ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM) journal. Each paper will receive at least three reviews from experts in the field.

Submission Instructions:

Prospective authors are invited to submit their manuscripts electronically after the “open for submissions” date, adhering to the ACM Transactions on Multimedia Computing, Communications and Applications (ACM TOMM) journal guidelines (see <http://tomm.acm.org/authors.cfm>). Please submit your papers through the ACM online system (<https://mc.manuscriptcentral.com/tomm>) and be sure to select the special issue according to the relevant instructions. Manuscripts should not be published or currently submitted for publication elsewhere. Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere. If the submission is an extended work of a previously published conference paper, please include the original work and a cover letter describing the changes that have been made. According to ACM TOMM publication policy previously published conference papers can be eligible for publication provided that at least 25% new material is included in the journal version.

Guest Editors:

- Dr. M. Tanveer, IIT Indore, India. Email: mtanveer@iiti.ac.in
- Dr. Pritee Khanna, IIITDM, Jabalpur, India. Email: pkhanna@iiitdmj.ac.in
- Dr. Mukesh Prasad, UTS, Australia. Email: mukesh.prasad@uts.edu.au
- Prof. Chin-Teng Lin, UTS, Australia. Email: Chin-Teng.Lin@uts.edu.au