

# Third IAPR International Conference on Pattern Recognition in Bioinformatics

## Special Session: SS2 Pattern Recognition in Bio-molecular Interaction Networks

The complex biological phenomena such as embryonic stem cell differentiation and cancer progression have been comprehended and modeled by eliciting essential gene expression patterns, co-regulated and differentially co-regulated gene and protein modules, DNA-protein and other bio-molecular networks. Regularity mining by pattern recognition approaches such as neural networks, SVM, genetic algorithms, association and sequential rule mining have been combined on high-throughput biological data to meet such purpose. This had led to a numerous approaches to data analysis and data mining and visualization providing useful classification and prediction tools. However, the field of identifying patters in bio-molecular networks and using them to understand the basic biological phenomenon can derive great mileage with the development of novel neural network algorithms, statistical pattern recognition methods, evolutionary and hybrid algorithms, feature selection methods. The subsequent challenge of quantitative and integrative analyses and adequate interpretation of voluminous data with potentially low signal to noise ratio, high dimension and essential incompleteness of genome-scale data sets has to be adequately addressed.

### Topics include, but are not limited to:

Feature extraction, classification and clustering based on Bio-molecular interaction networks, Computational analysis and modeling of gene expression and transcription control, Genome, transcriptome and proteome complexity estimation, Prediction and modeling different types of bio-molecular networks

### Important dates:

- Paper Submission: 15 April 2008
- Decision Notification: 15 May 2008
- Camera-Ready Submission: 15 Jun 2008

### Paper Submission:

Submission of papers will be electronic and through the conference website:

<http://callforpapers.com.au/prib2008/submitpaper.php>

Instructions to authors is available at <http://www.infotech.monash.edu.au/about/news/conferences/prib08/>

Submissions must be formatted using the Springer LNCS style and must not exceed 12 pages in length. Simultaneous submission to journals or other conferences with published proceedings is not allowed. All submitted papers will be peer reviewed and the accepted papers will be published in the conference proceedings as an edited volume in *Lecture Notes in Bioinformatics* by Springer or supplementary proceedings.

### Special Session Organizers:

R. Krishna Murthy Karuturi	Anbupalam Thalamuthu	Vladimir Kuznetsov
Genome Institute of Singapore	Genome Institute of Singapore	Bioinformatics Institute
60 Biopolis ST, Singapore	60 Biopolis ST, Singapore	60 Biopolis ST, Singapore
<i>Email:</i> karaturikm@gis.a-star.edu.sg	<i>Email:</i> anbupalamt@gis.a-star.edu.sg	<i>Email:</i> vladimirk@bii.a-star.edu.sg
<i>Web:</i> www.gis.a-star.edu.sg/ internet/site/ investigators.php	<i>Web:</i> www.gis.a-star.edu.sg/ internet/site/ investigators.php	<i>Web:</i> www.bii.a-star.edu.sg/ contact_us/ staff_dir.php