

**2016 International Workshop on**  
**Biomolecular Networks and Human Diseases**

**in conjunction with**  
**IEEE International Conference on Bioinformatics & Biomedicine (BIBM'16)**

**Dec 15-18, 2016 Shenzhen, China**

**Introduction**

Now it is widely acknowledged that genetically inherited diseases or disorders (e.g., cancer, AIDS, obesity) stems from the dysfunction of molecular biological systems, not only their isolated components (e.g., genes, proteins, metabolites). Molecular biological systems typically include gene regulatory networks, protein-protein interaction networks, metabolic networks, and signal transduction networks. With advances in high throughput measurement techniques such as microarray, RNA-seq, ChIP-chip, yeast two hybrid analysis, and mass spectrometry, large-scale biological data have been and will continuously be produced. Such data contain insightful information for understanding the mechanism of molecular biological systems and have proved useful in diagnosis, treatment, and drug design for genetically inherited diseases or disorders.

**Topics**

For this workshop, we strongly encourage authors to submit their original studies in modeling/construction, analysis, synthesis, and control of disease-related biomolecular networks. Possible topics of interest include, but are not limited to the following:

- Biomolecular network modeling and analysis
- Prediction of disease molecules from biomolecular networks
- Controllability and observability of biomolecular networks
- Drug target identification from biomolecular networks
- Biomolecular network based drug repositioning
- Dynamic analysis of biomolecular networks
- Parameter estimation of nonlinear dynamic molecular systems
- Specific disease-related molecular networks
- Disease-related protein complex or functional module detection
- Application tools for biomolecular network visualization and analysis

## Special Issue

The selected papers from this workshop will be invited to a special issue of Complexity (*Impact factor=3.514*).

## Important dates

TBD

## Program Chairs

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## Potential Program Committee Members (Tentative):

- **Xuewen Chen**, Department of Computer Science, Wayne State University, USA
- **David K.Y. Chiu**, School of Computing and Information, University of Guelph, Ontario Canada
- **Reda Alhajj**, Department of Computer Science, University of Calgary, Calgary, Alberta, Canada
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- **Xiujuan Lei**, School of Computer Science, Shaanxi Normal University, Xi'an Shaanxi, China
- **Tony Kusalik**, Department of Computer Science, University of Saskatchewan, Canada
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- **Guy G Poirier**, College of Medicine, Laval University, Canada
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