

8th International Conference
on
**Bioinformatics and Computational
Biology (BICoB-2016)**

PROGRAM

April 4 – 6, 2016

Las Vegas, Nevada, USA

Sponsored by



International Society for
Computers and Their Applications

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8th International Conference on Bioinformatics and Computational Biology (BICoB-2016)

SPONSOR

International Society for Computers and Their Applications (ISCA)

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Monday, April 4th, 2016

8:00 a.m. - 4:00 p.m. REGISTRATION – Coffee/tea/pastries – RR Registration Desk

8:45 a.m. - 9:00 a.m. WELCOME - Room:

Hisham Al-Mubaid, University of Houston - Clear Lake, USA

9:00 a.m. – 10:00 a.m. KEYNOTE SPEAKER

Dr. Gordon K. Lee

San Diego State University, USA

**Research Challenges in Intelligent Robotic Systems:
From Evolutionary Methods to KASER's and KANSEI**

Location: Red Rock 6

10:00 a.m. – 10:30 a.m. COFFEE BREAK – RR Registration Desk

SESSION 1A:

Biomedical Informatics

Monday, April 4, 2016, 10:30 a.m. - 12:00 p.m., Valley of the Fire

Session Chair: Qin Ding

- 1. Prediction of Future Hospital Admissions – What is the Tradeoff between Specificity and Accuracy?**
Leva Vasiljeva and Ognjen Arandjelovic
- 2. Biomedical Text Classification with Improved Feature Weighting Method**
Duong Nguyen, Mohamed Shenify and Hisham Al-Mubaid
- 3. Wearable Computing for Fully Automated Myocardial Infarction Classification**
Getie Zewdie and Momiao Xiong
- 4. Generating Hypothesis: Using Global and Local Features in Graph to Discover New Knowledge from Medical Literature**
Vishrawas Gopalakrishnan, Kishlay Jha, Aidong Zhang and Wei Jin

12:00 p.m. – 1:30 p.m. LUNCH BREAK ON OWN

SESSION 2A:

STRUCTURE AND FUNCTION

Monday, April 4, 2016, 1:30p.m. - 03:10 p.m., Valley of the Fire

Session Chair: Amir Vajdi

- 1. Clustering Protein Conformations Using a Dynamic Programming Based Similarity Measurement**
Amir Vajdi and Nurit Haspel
- 2. Identification of Ubiquitylation Sites Through Nondominated Sorting Genetic Algorithm II**
Paulo Cardoso, Reginaldo Santos, Manoel Lima, Claudomiro Sales, Regiane Kawasaki and Vitcor Coelho
- 3. A Principled Comparative Analysis of Dimensionality Reduction Techniques on Protein Structure Decoy Data**
Rohan Pandit and Amarda Shehu
- 4. Protein Structure Normal Mode Analysis on the Positive Semidefinite Matrix Manifold**
Xiao-Bo Li, Forbes Burkowski and Henry Wolkowicz)

3:00 p.m. – 3:30 p.m. Coffee Break

SESSION 3A:

GENOMICS I

Monday, April 4, 2016, 3:30 p.m. - 05:10 p.m., Valley of the Fire

Session Chair: Hasan Jamil

- 1. GiGA: Giraph-based Genome Assembler for Gigabase Scale Genomes**
Praveen Kumar Kondikoppa, Arghya Kusum Das, Sayan Goswami, Richard Platania and Seung-Jong Park
- 2. A Pipeline for Identifying Integration Sites of Mobile Elements in the Genome using Next-Generation Sequencing**
Raunaq Malhotra, Daniel Elleder, Le Bao, David R Hunter, R. Acharya and Mary Poss
- 3. Using Disk Based Index and Box Queries for Genome Sequencing Error Correction**
Yarong Gu, Qiang Zhu, Xianying Liu, Youchao Dong, C. Titus Brown and Sakti Pramanik
- 4. A Scalable Solution for Finding Overlaps Between Sequences Using Map-Reduce**
Maan Haj Rachid and Qutaibah Malluhi

Tuesday, April 5th 2016

8:30 a.m. – 4:00 p.m. REGISTRATION – Coffee/tea/pastries – RR Registration Desk

9:00 a.m. – 10:00 a.m. KEYNOTE SPEAKER

BICOB – 2016 Keynote Talk

Dr. Vineet Bafna

University of California – San Diego

Learning to live the high life: decoding the genetic basis of adaptation

Location: Red Rock 6

10:00 a.m. – 10:30 a.m. COFFEE BREAK

SESSION 4A:

BIOMEDICAL INFORMATICS II

Tuesday, April 5, 2016, 10:30 a.m. - 12:00 p.m., Valley of the Fire
Session Chair: Raunaq Malhotra

- 1. MapBase: Declaratively Approaching Quality Biological ID Mapping using an On-demand Data Warehouse**
Hasan Jamil
- 2. miRDiabetes: A microRNA-Diabetes Association Database Constructed by Classification on Literature**
Hui Guo and Qin Ding
- 3. Parameter Estimation and Sensitivity Analysis of Biological systems with Memory**
Fathalla Rihan

**12:00 p.m. – 2:00 p.m. CONFERENCE LUNCHEON
AND BEST PAPER AWARD**

LOCATION: Red Rock 7–8

SESSION 5A:**SYSTEMS BIOLOGY**

Tuesday, April 5, 2016, 2:00 p.m. – 3:40 p.m., Valley of the Fire
Session Chair: Mohamed Shenify

1. **Synthesizing Large-Scale Species Trees using Guidance Trees**
Jucheol Moon and Oliver Eulenstein
2. **An alignment-free method for profiling microbial community**
Diem-Trang Pham, Shanshan Gao and Vinhthuy Phan
3. **An Evaluation of Different Clustering Methods and Distance Measures Used for Grouping Metabolic Pathways**
Sarah Kim, Matthew Pena, Mark Moll, George Giannakopoulos, George Bennett and Lydia Kavraki
4. **Fast NeighborNet: Improving the Speed of the Neighbor-Net Phylogenetic Network Algorithm with Multithreading and a Relaxed Search Strategy**
Jacob Porter

3:30pm – 4:00pm Coffee Break

SESSION 6A:**GENOMICS II**

Tuesday, April 5, 2016, 4:00 p.m. – 5:40 p.m., Valley of the Fire
Session Chair: Hasan Jamil

1. **Compromise or optimize? The breakpoint anti-median**
Caroline Larlee, Alex Brandts and David Sankoff
2. **Repeat complexity of genomes as a means to predict the performance of short-read aligners**
Quang Tran, Shanshan Gao, Nam S. Vo and Vinhthuy Phan
3. **Sequential and Parallel LASSO: Novel Scalable Methods for eQTL Mapping**
Anhong He, Benika Hall, Jia Wen, Yingbin Liang and Xinghua Shi
4. **Bit-Parallel Alignment with Substitution Scoring**
Joshua Loving, Elizabeth Becker and Gary Benson