



BigData in Bioinformatics
and Healthcare Informatics
Washington D.C., Oct 27th, 2014 in conjunction with
The IEEE International Conference on BigData

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Call for Papers

The 2nd International Workshop on Big Data in Bioinformatics and Healthcare Informatics (BBH14)



in Washington D.C.
on Oct 27, 2014

in conjunction with
The IEEE International Conference on Big Data

Venue



Hyatt Regency Bethesda
One Bethesda Metro Center
(7400 Wisconsin Ave)
Bethesda, Maryland, 20814
United States

Topics of Interest

Bioinformatics and
Biomedical Informatics

Healthcare Systems

Analysis of
Big Medical Data

Important Dates

Full paper submission:
Aug 4, 2014

Notification of acceptance:
Sep 15, 2014

Workshop:
Oct 27, 2014

Sincerely,

Your program chairs

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Topics of Interest

Bioinformatics and Biomedical Informatics

- Next-generation sequencing (NGS) data storage and analysis
- Large scale biological network construction and learning
- Population-based bioinformatics
- Genome structural change detection
- Large-scale bio-image and medical-image analysis
- Big data in molecular simulation and protein structure prediction
- Big data in systems biology
- Big data in precision medicine and stratified medicine
- Big data in drug discovery, development, and post-market surveillance
- Big data in semantics and bio-text mining

Healthcare Systems

- Real-time aspects of healthcare data infrastructure
- Security and privacy for clinical data in big data infrastructures
- Health IT implementations and demonstrations
- Case studies for healthcare analysis in distributed environments
- Benchmarking of big data infrastructure in healthcare
- Novel data analysis algorithms that enable integrated discovery of knowledge from structured and unstructured Electronic Medical Records (EMR)
- Analysis and visualizing for summarizing large patient data in EMRs
- Novel algorithms and applications dealing with noisy, incomplete, but large EMR data
- Integrating genomic data in today's medicine to improve human health
- Data science and modeling for health analysis
- Advances in new storage models for data variety (records, images, Magnetic Resonance Imaging (MRI), scans) for hospitals
- Big data challenges in accountable care settings
- Extracting meaning from multi-structured big data in real time to improve outcome
- Combining information from imaging (RIS, PACS), Electronic Health Records (EHR), laboratories, genomics to give coherent diagnosis and treatment
- Leveraging social networks for data aggregation
- Smart visualizations for big data streams
- Analysis of big data from home monitoring devices
- Design patterns and anti-patterns for development of solutions for big data

Analysis of Big Medical Data

- Real-time analysis of big medical data in the course of precision medicine
- Analysis of longitudinal and time-series data to discover new correlations
- Co-registration of patient data acquired over several time-points in their life
- Identification of important metadata that has to be tracked over a longitudinal duration
- Software platforms for enabling easy access to the patient's medical and clinical history
- Gap-handling in history-taking
- Quality improvement and noise-handling on longitudinal data
- Missing functionality in current clinical decision support systems using longitudinal data