

BigLS – Big Data in Life Sciences

The Second ACM International Workshop on Big Data in Life Sciences (BigLS 2014)

September 20, 2014 – Newport Beach, CA

Held in conjunction with the 5th ACM Conference on Bioinformatics, Computational Biology and Biomedical Informatics (ACM BCB)

The ever-growing volume and diversity of biological and biomedical data continues to pose new challenges and increasing demands on computing and data management. The inherent complexity of this Big Data forces us to rethink how we collect, store, combine and analyze it.

BigLS is a workshop dedicated to the broad theme of Big Data in life sciences. The goal of the workshop is to bring together leading researchers and practitioners working on a diverse range of Big Data problems relating to biology and medicine, and engage them in a discussion about current Big Data problems, the state of computational tools and analytics, the challenges and the future trends within life sciences. The workshop focus is on, but is not limited to, the following broad themes:

- Scalable algorithms and techniques for Big Data analytics in molecular biology
- Statistical and integrative approaches to Big Data biology and informatics
- High performance computing methods and software for Big Data biology
- Scientific workflows and platforms for Big Data in life sciences
- Software and hardware solutions for managing Big Data in biomedical informatics

In addition to regular papers catering to the above spectrum of topics, we also invite “position papers” to highlight some of the grand challenge scientific problems from a biological standpoint, existing or emerging, that require Big Data analytics, along with related challenges and advances.

The workshop will feature contributed papers as well as invited talks from leading experts in the field. All submissions will be evaluated based on their originality, technical soundness, significance, presentation, and interest to the workshop attendees. All accepted papers will be included in the ACM BCB proceedings published by the ACM Digital Library.

Keynote address by Larry Smarr

The BigLS workshop is devoted to promoting the highest standards in research and education. As a part of this mission, BigLS features keynote presentations by recognized leaders and luminaries who significantly advanced the domain. This year keynote presentation will be delivered by Larry Smarr – the founding Director of the California Institute for Telecommunications and Information Technology (Calit2), a UC San Diego/UC Irvine partnership, and the Harry E. Gruber Professor in Computer Science and Engineering (CSE) at UCSD’s Jacobs School.

Important Dates:

- Papers submission: June 19, 2014 (no deadline extensions!)
- Authors notification: July 22, 2014
- Camera-ready papers: August 9, 2014
- Workshop: September 20, 2014

Workshop Co-Chairs:

- Ananth Kalyanaraman, Washington State University, Pullman, WA 99164
- Jaroslaw Zola, Rutgers University, Piscataway, NJ 08854

Program Committee:

- Ilkay Altintas, San Diego Supercomputer Center
- Mehmet Koyuturk, Case Western Reserve University
- Ben Langmead, Johns Hopkins University
- Saumyadipta Pyne, CR Rao AIMSCS, India
- Kamesh Madduri, Pennsylvania State University
- Folker Meyer, Argonne National Laboratory
- Parisa Rashidi, University of Florida
- Gail Rosen, Drexel University
- Fabio Vandin, University of Southern Denmark, Denmark

More information about the workshop can be found at: <http://www.bigls.org/>