Tuesday, April 8th

University Sheraton
801 University Ave
Syracuse, NY 13210

Complimentary parking in the Hotel Garage

5:30 - 6:30 pm: Registration & micro-mouse demonstration from the SU Team

6:00 pm: Networking

6:30 pm: Dinner- Buffet style, including vegetarian selections

7:30 pm: Presentation by guest speaker Dr. Michael Schatz

Guest Speaker Dr. Michael C. Schatz
Cold Spring Harbor Laboratory

Michael Schatz is an assistant professor in the Simons Center for Quantitative Biology at historic Cold Spring Harbor Laboratory. His research interests include developing large-scale sequence analysis methods for sequence alignment, de novo assembly, variation detection, and related analysis. Schatz received his Ph.D. in Computer Science from the University of Maryland in 2010, and his B.S. in Computer Science from Carnegie Mellon University in 2000, with 4 years at the Institute for Genomic Research in between. For more information see: http://schatzlab.cshl.edu.

IEEE
Advancing Technology for Humanity

Fellows Night

Join IEEE Syracuse Section for an evening of networking, dinner and technical presentations for Fellows Night

Big Data Meets DNA: How Biological Data Science is improving our health, foods, and energy needs

Dr. Michael C. Schatz
Cold Spring Harbor Laboratory

We are in the middle of an incredible transition in biology, driven by the rapidly improved throughput and falling costs of DNA sequencing. These technologies are used, among many other applications, for studying the genetic components of cancer, autism and other complex diseases, and to probe the natural world to develop more robust crops and biofuels. The scope of these projects, sequencing thousands upon thousands of individuals a year, was almost unthinkable ten years ago because of the exorbitant costs at the time. However, this year the $1000 genome has been announced, and the worldwide sequencing capacity exceeds 15 petabases a year. Amazingly, the costs are projected to continue to drop and the throughput to continue to improve at a rate exceeding Moore's law.

During this talk, I'll review some of the most significant developments in biological data science, including new insights into the genetics of autism, mapping the genomes of many plants and animals to discover the keys to their growth and development, and the potential for single molecule sequencing technologies to bring DNA analysis to remote areas of the world or even into your own home. I'll focus on the computational challenges and algorithms used to support this work, including with multicore CPU and GPU servers, clusters, and academic and commercial clouds. I'll conclude with an attempt to project 10 more years into the future to foresee what advances in networking, storage, compute, and analytics are needed to maintain this incredible growth.

Cost to attend:
Members and 1st guest- $20 each
Fellows, Life Members, Student Members and 1 guest- $10 each
Non-members (other than 1st guest of a member) $35 each

Reservations are required. Payment will be collected at the door the night of the event.

Register online at: http://whoozin.com/WQY-KPW-XEM7

Questions? Contact Gail Brenkus at 315-391-0798