



Department of Computer Science and Engineering

Presents

Ying Xu, University of Georgia

**Genomic location is information:
computational elucidation of bacterial genomic structures**

We have recently discovered that genomic locations of genes in bacteria are highly constrained by the cellular processes that are involved in. So for the first time, we understand that the locations of genes follow both global and local rules. This realization has led to a new paradigm for tackling and solving some very challenging genomic analysis problems. I will discuss about this new discovery and a number of applications that we are currently doing, including gene assignments of pathway holes and complete genome assembly.

Bio: Ying Xu is the "Regents and Georgia Research Alliance Eminent Scholar" Chair of bioinformatics and computational biology and Professor in the Biochemistry and Molecular Biology Department, and the Director of the Institute of Bioinformatics, University of Georgia (UGA). Before joining UGA in Sept 2003, he was a senior staff scientist and group leader at Oak Ridge National Laboratory (ORNL). He also holds a ChangJiang Chair Professor position at Jilin University of China and guest professorship at Peking University, and Zhejiang University of China, and National Central University and National Cheng-Kung University of Taiwan. He received his Ph.D. degree in theoretical computer science from the University of Colorado at Boulder in 1991 (Ph.D. thesis supervised by Hal Gabow). Between 1991 and 1993, he was a visiting assistant professor at Colorado School of Mines. He started his bioinformatics career in 1993 when he joined Ed Uberbacher's group at ORNL to work on the GRAIL project. His current research interests include (a) computational inference and modeling of biological pathways and networks, particularly for microbial organisms, (b) cancer bioinformatics, (c) comparative genome analyses, and (d) protein structure prediction and modeling. He has over 200 publications, including four books. He has also given over 150 invited/contributed talks at conferences, research organizations and universities. He enjoys teaching, and has (co)taught a number of bioinformatics courses at both the graduate and undergraduate levels. Over the years, he has been actively involved in community services within the field of computational biology and bioinformatics.

Thursday, October 27, 2011 @3:30 - 4:45 PM

University at Buffalo – North Campus – Room TBA

This talk is free and open to the public - Refreshments for attendees after the talk in Bell 224

For more information, please email cse-dept@cse.buffalo.edu or contact (716) 645-3180