

Biographical Sketch (Template)

Name: Liqing Zhang	Title: Associate Professor
Email: lqzhang@vt.edu	Department: Computer Science

Education/Training:

Institution/Location	Degree/Postdoc	Year(s)	Field of Study
University of California Irvine	Ph.D.	2002	Population Genetics, Molecular Evolution

Personal Statement:

My research interest has been related to systems biology, mainly through our analyses of various omics analyses. The point of systems biology is to consider the system as a whole, rather than isolating them into separate pieces, which has been the traditional approach used in biology. Examples of relevant projects include understanding the disease relationship through a systems biology approach, integrated analyses of various genomic, transcriptomic, proteomic, exome data in lung cancer, and identification/prediction of protein complex using network properties. Also relevant is the most recent collaboration with colleagues from the Dairy science department, crop science department, and Civil Engineering department to understand the dynamics of antibiotic resistance genes/bacteria in a farming system using a systems approach.

Selected Publications:

(5-10 recent publications in the area of systems biology; with hotlinks to the journal article or pubmed, please.)

Lewis SN, Nsoesie E, Weeks C, Qiao D, Zhang L. *Prediction of disease and phenotype associations from genome-wide association studies*. PLoS One. 2011;6(11):e27175. doi: 10.1371/journal.pone.0027175. PubMed PMID: 22076134; PubMed Central PMCID: PMC3208586. [\[Full Text\]](#)

Zhang L, Watson LT, Heath LS. *A network of SCOP hidden Markov models and its analysis*. BMC Bioinformatics. 2011 May 23;12:191. doi: 10.1186/1471-2105-12-191. PubMed PMID: 21635719; PubMed Central PMCID: PMC3119068. [\[Full Text\]](#)

Urgard E, Vooder T, Võsa U, Välk K, Liu M, Luo C, Hoti F, Roosipuu R, Annilo T, Laine J, Frenz CM, Zhang L, Metspalu A. *Metagenes associated with survival in non-small cell lung cancer*. Cancer Inform. 2011;10:175-83. doi: 10.4137/CIN.S7135. PubMed PMID: 21695068; PubMed Central PMCID: PMC3118451. [\[Full Text\]](#)

Chen W, Tran H, Liang Z, Lin H, Zhang L. *Identification and analysis of the N(6)-methyladenosine in the Saccharomyces cerevisiae transcriptome*. Sci Rep. 2015 Sep 7;5:13859. doi: 10.1038/srep13859. PubMed PMID: 26343792; PubMed Central PMCID: PMC4561376. [\[Full Text\]](#)

Current and/or Recently Completed Research Grants: (as applicable)

Agency	Grant Number	PI: Peter Vikesland	Dates 10/15-9/20
Title: PIRE: Halting Environmental Antimicrobial Resistance Dissemination (HEARD)			
Using integrated and systems approaches to understand environmental antimicrobial resistance through large-scale sampling and metagenomics sequencing data.			
Agency	Grant Number	PI	Dates
Title:			
(brief description of goals)			