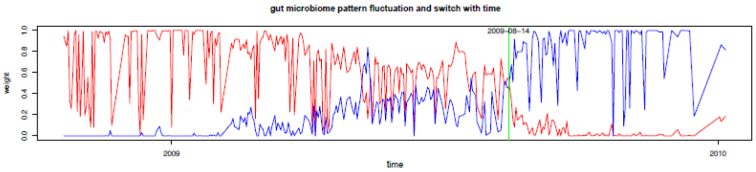
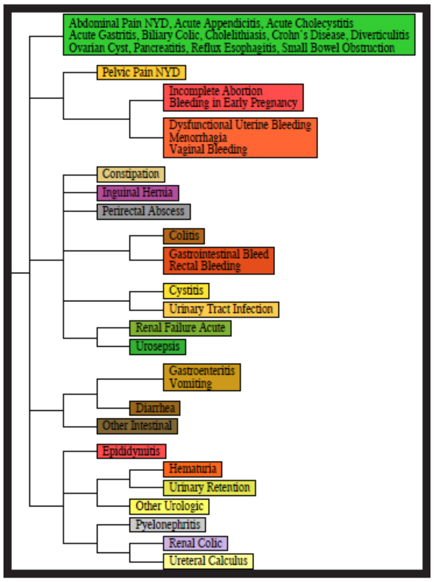
Hong Gu
Statistics

Hong Gu has research interests in data mining methods and statistical inference motivated by scientific problems, especially in genetics, genomics and metagenomics. Her research interests include:

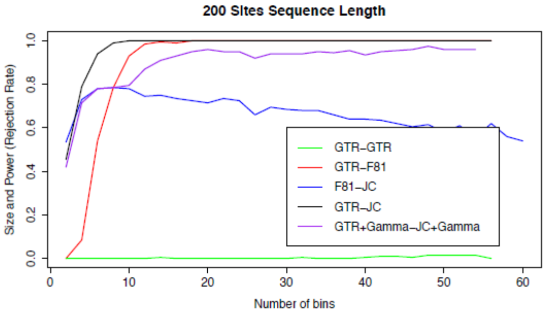


Microbial metagenomics data analysis: what are the typical microbial community compositions for a healthy or diseased status? How do these microbial communities interact with host genome and/or environment? Which microbiome can best predict the disease status? How does a healthy microbiome transition to a less healthy or diseased system?

Data mining methods and statistical inference: Big data typically means a large number of variables and a relatively small number of observations. Statistical methods and inference for such data are in high demand. In particular, missing data are commonplace for such data, how to perform inference for different missing patterns for both regression and classification problems?



Statistical methods in molecular evolution: How to conduct a model adequacy test for DNA and codon models? How to perform inference when the model is inadequate?



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