



**Biomedical and Health Informatics Lecture Series**  
Course Website: [Link](#)

**Tuesday, May 29, 2012**  
**12:00 - 12:50 p.m., Room T-663**

**Neil Abernethy, PhD**

Assistant Professor, Biomedical Informatics and Medical Education  
Joint Assistant Professor, Health Services, School of Public Health  
University of Washington

**"Analyzing a Large Recipe Database to  
Advance Nutrition Research"**

New approaches to nutrition research are being developed based on data mining and consumer health informatics. To assess the nutritional impact of real-world diets, we are creating tools to analyze over 1,200,000 recipes linked to the USDA nutrient data. These tools will enable health researchers and consumers to quantify the nutritional value of foods, compare cuisines, identify unhealthy foods, and recommend nutritious substitutions for single ingredients or whole recipes. I will describe the methods to prepare the database and analyze it using network visualization and hierarchical clustering. We will then discuss the relevance of the project to combating obesity and next steps for the research.

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Neil Abernethy is an Assistant Professor with joint appointments in Biomedical Informatics and Medical Education in the School of Medicine, and in Health Services in the School of Public Health. His research interests include models of infectious disease, global health, social network analysis, and integration of genomic, clinical, surveillance, and geographic data. Dr. Abernethy holds a Ph.D. in Biomedical Informatics from Stanford University, where he investigated computational methods to merge and analyze diverse data sources and for outbreak management. He has also conducted epidemiologic studies of tuberculosis at UCSF and bioinformatics research at North Carolina State University and Stanford University. More recently, he worked on staff at the Data Centre for the Medical Research Council in The Gambia.

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**NOTE:** Podcasts from MEBI 590 Lecture Series talks for this quarter are available at  
<http://courses.washington.edu/mebi590/schedule.htm>

Podcasts from previous quarters are available at  
<http://courses.washington.edu/mebi590/past.lecture.schedules.html>