



BRIGHAM YOUNG  
UNIVERSITY

CS Department Colloquium Series



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**THURSDAY, FEBRUARY 8, 2007**

1170 TMCB, 11:00 A.M.

# Health Care Applications of Data Mining

## Abstract

Growth in data warehousing has led to ever-increasing application of data mining methods to health care related phenomena. The presenter will review this developing area, providing specific application examples and outlining key issues. The presenter will also describe recent studies comparing the performance of multiple machine learning methods with that of the dominant pharmacokinetic modeling method, a nonlinear mixed effects model, in predicting blood serum concentration of an anesthetic, remifentanyl.

## Biography

Mollie R. Poynton PhD, APRN, BC is an assistant professor in the University of Utah College of Nursing informatics program. She also serves as an adjunct assistant professor in the University of Utah School of Medicine, Department of Biomedical Informatics. At University of Utah, she teaches coursework in nursing informatics, knowledge discovery in databases, and decision support systems. Her program of research focuses on applications of data mining methods to human health-related behavior, primarily smoking cessation. She has also collaborated on an interdisciplinary project examining machine learning methods as a tool for pharmacokinetic and pharmacodynamic modeling. She regularly presents at regional, national, and international meetings, and has published in journals ranging from *Clinical Nurse Specialist* to *Journal of Biomedical Informatics*. Currently president of the Utah Nursing Informatics Network, she serves on committees and working groups for the American Nurses Association and the American Medical Informatics Association. Dr. Poynton is both a health informaticist and a nationally certified family nurse practitioner.

**Donuts will be provided**