RASMUS BRO
Department of Food Science
University of Copenhagen

Chemometrics—Mathematics and Statistics in Chemistry

MONDAY, February 6, 2012, at 4:00 PM
133 Eckhart Hall, 5734 S. University Avenue
Refreshments following the seminar in Eckhart 110.

ABSTRACT

Chemometrics deals with data analytical problems in chemistry and related areas. In this talk, the background and use of chemometrics is exemplified in areas such as food safety, environmental analysis, clinical trials and human nutrition. Numerous examples are given on how we use multivariate approaches to visualize and understand complex biological problems. Special attention is devoted to so-called tensor methods that have very distinct and unique properties in relation to many chemical problems. Specifically, tensor methods enable one to do what can be termed mathematical chromatography. That is, mathematically one can separate and identify and quantify different chemicals directly in a mixture. This gives completely new opportunities in many areas and several such will be highlighted.