



The University of Chicago  
Department of Statistics

STATISTICS COLLOQUIUM SERIES

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**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.

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