School of Management and Marketing
Seminar Notice

TITLE : **Data Mining and Marketing: Detecting Cross-Category Interdependencies from Shopping Baskets**

SPEAKER : **Dr Thomas Reutterer**
Vienna University of Economics and Business Administration
Austria

BIOGRAPHY

Dr Thomas Reutterer holds a Ph.D. and a postdoctoral degree ('Habilitation'; venia docendi). He is an Associate Professor at the Institute of Retailing and Marketing from the Vienna University of Economics and Business Administration (VUEBA). He was a Visiting Professor at the University of Sydney, prior business experience are including a one-year commitment as a consultant with Simon-Kucher & Partners, Marketing & Strategy Consultants. His current research interests are including retail pricing and category management, market basket analysis and cross-category effects, customer relationship management (CRM) as well as dynamic customer segmentation. Dr. Reutterer authored and co-authored numerous articles in leading international journals such as *Marketing Science*, the *European Journal of Operational Research (EJOR)*, *Computers & Operations Research*, the *Journal of Interactive Marketing*, *Lecture Notes in Computer Science*, the *Journal of Retailing and Consumer Services,* and *Industrial Marketing Management*. His research was awarded with several prizes; among others, he was member of one of the 2005 finalist teams for the, INFORMS Society of Marketing Science Practice Prize', which is awarded for outstanding implementation of marketing science concepts and methods. [more information]

Major Research Interests include

- Customer Relationship Management (CRM)
- Marketing Models and Adaptive Methodology (Participant of a former SFB, Initiative #3)
- Market Basket Analysis and Assortment Management
- Market Segmentation and Product Positioning
- Retail-Marketing and Retail Revenue Management

DAY/DATE : Wednesday, **27 February 2008**

TIME : 12.30-1.30p.m.

VENUE : **40A.G81**

ABSTRACT

Data mining techniques are becoming increasingly popular and widely used add-ons to the more conventional methodological toolbox in modern marketing research practice and are utilized in such diverse fields of applications as text mining and market basket analysis. The primary objective of such data driven analytical approaches is to extract and to represent relevant marketing information hidden in huge data sets in a managerially meaningful fashion. This presentation highlights one particular intersection between data mining and marketing, namely the analysis of market baskets for detection of cross-item purchase interdependencies. A market or shopping basket typically arises as the result of a consumer's multicategory decision on the choice or non-choice of items among retail assortments during a shopping-trip. We demonstrate the adoption of selected data mining techniques for analyzing such market baskets using real-world supermarket transaction data. The employed methods comprise conventional affinity analysis, an algorithm for robust *k*-medoid clustering, as well as tools for mining and evaluating association rules among categories included in a typical supermarket assortment. The analytical procedures are illustrated using the

arules package available under R, a freely available language and environment for statistical computing and graphics.

Keywords
Data mining, market basket analysis, cross-category effects

Lunch will be provided. **RSVP** thanks.

SMM Research Seminar Series Convenor,
Joshua Chang