



## Einladung zum Gastvortrag / Invited Talk

### **Oscar Romero, PhD**

Universitat Politècnica de Catalunya (UPC-Barcelona Tech.)  
Departament d' Enginyeria de Serveis i Sistemes d'Informació (ESSI)

hält am Donnerstag, den **26. Juni 2014, 10:15-11:45 Uhr** im **Raum S2 048** (Science Park II)  
einen Gastvortrag zum Thema

## ***Semantic Aware Business Intelligence***

### **Abstract:**

This talk tackles the convergence of two of the most influential technologies in the last decade, namely business intelligence (BI) and the Semantic Web (SW). BI is used by almost any enterprise to derive important business-critical knowledge from both internal and (increasingly) external data. When using external data, most often found on the Web, the most important issue is knowing the precise semantics of the data. Without this, the results cannot be trusted. Here, SW technologies come to the rescue, as they allow semantics ranging from very simple to very complex to be specified for any web-available resource. SW-technologies do not only support capturing the "passive" semantics, but also support active inference and reasoning on the data. In this talk, we will present a characterization of BI environments in terms of what they require, followed by an introduction to the relevant SW foundation concepts. Then, it goes on to survey the use of SW technologies for data integration, including semantic data annotation and semantics-aware extract, transform, and load processes (ETL). Next, we will describe the relationship of multidimensional (MD) models and SW technologies, including the relationship between MD models and SW formalisms, and the use of advanced SW reasoning functionality on MD models. Finally, all the findings are discussed together and a number of directions for future research are posed.

### **About the Author:**

Oscar Romero has an MSc and a PhD in computing from the Universitat Politècnica de Catalunya. Currently, he holds a tenure-track 2 lecturer position at the Barcelona School of In-

**o. Univ.-Prof. Dipl.-Ing. Dr. Michael Schrefl**  
Institutsvorstand

**Institut für Wirtschaftsinformatik –  
Data & Knowledge Engineering**

Tel.: +43 732 2468-4271  
Fax: +43 732 2468-4275  
Mail: michael.schrefl@jku.at

Referentin:  
**Margit Brandl**  
Tel.: +43 732 2468-4270  
Mail: margit.brandl@jku.at

formatics and also the local coordinator of the Erasmus Mundus Master on Information Technologies for Business Intelligence (IT4BI). He is also a member of the MPI research group at the same university, specializing in software engineering, databases and information systems, where he has participated in 4 different research projects. His research interests mainly fall into the business intelligence field, namely data warehousing, OLAP and service-oriented BI, semantic-aware formalisms such as the semantic web, ontologies and description logics that can be used to overcome the semantic gap in BI environments, NOSQL and alternative storage techniques for large BI data sets and query recommendation, among others. He has authored articles and papers in international conferences and journals on these subjects.