

## **Schema Matching Revisited**

**Marco Antonio Casanova**

Department of Informatics  
Pontifical Catholic University of Rio de Janeiro

***Abstract.** Schema matching is fundamental in classical database application domains, such as data integration and data warehousing. In this talk, we survey and express our position with respect to three approaches that address schema matching. The first and oldest approach, that we call the syntactic approach, is to align two schemas based on syntactical hints, such attribute data types and naming (syntactical) similarities. This approach depends on the implicit assumption that syntactical proximity implies semantic similarity, which is often unwarranted. The second approach, that we call the semantic approach, uses semantic clues to generate hypotheses about schema alignments. Such approach is far more robust than the syntactic approach, but it seems to apply only when the schemas to be aligned are simple. The third and last approach, that we call the standards approach, is to select an appropriate standard, if one exists, to guide the design of the exported schema. If none exists, the designer should select fragments of upper level ontologies that cover the concepts pertaining to the application domain. If carefully applied, the standards approach would transform an intractable problem – schema matching – into a non-problem.*