

LGruDat: Logical Foundations of Databases

Corrections to Lecture 1

Tadeusz Litak

November 3, 2013

The corrected lecture notes [have been published online](#)—please note that they contain a number of changes to conventions and notation we are going to follow.

- I changed the abbreviation for our first-order syntax to FORC: (*first-order relational calculus*)
- After having a detailed look at the literature, I disposed of our *existential convention* allowing “underquantified” queries: that is, those $\bar{v} \mid \alpha$ for which $\bar{v} \subsetneq \text{free}(\alpha)$. See Definition 4.2.7 and Section 5.3 in the *Foundations of Databases* book or Definition 2.2.1 in Kanellakis’ overview (one of recent additions to the reference list). From now on, we always assume that the variables occurring in \bar{v} are exactly those in $\text{free}(\alpha)$. However, as conventions in the literature allow for \bar{v} being a sequence rather than a set—i.e., with variables possibly reappearing or reordered—we allow this too.
- I fixed notations for modifications and extensions of a valuation we used in the definition of satisfaction
- Also, following Kanellakis’ overview I started using the term “unrestricted” for the setup where domains of models are not assumed to be finite
- I realized that the symbol \Vdash is mostly used for *forcing*, e.g., of a formula by a point in a Kripke frame. Therefore, I restored the more familiar \models for satisfaction of a formula.