On a problem of formulation (and solution) of score-ILP and order-ILP tasks

Peter Vojtáš
Department of Software Engineering
Faculty of Mathematics and Physics
Charles University, Prague

In our presentation we will discus the problem of formulation of score-ILP and order-ILP tasks both from theoretical both from practical point of view.
From theoretical point of view, classical ILP task is formulated using positive E+ and negative E- examples and a background knowledge B. Task is to find a set of hypothesis coherent with examples and enabling to extend classification to other objects.
In score-ILP and order-ILP we are given a scoring of examples and/or an ordering of examples. A background knowledge B is given too. The task is to find hypothesis coherent with (not contradicting) examples.
From practical point of view - a user is able to score a small number of examples using a small number of scoring values (expressions, icons, ...). Having the set H and trying to extend it to a large number of object we face the problem, that there are possibly too many objects with best score (maximal in the ordering).
Last problem touched is how to measure the success of such learning in practical applications.
All these problems will be discussed, alternative solutions mentioned and/or compared and some solutions reported.