

Prof. Stefan Riezler

Theoretical and Practical Grounding in Empirical Computational Linguistics

Abstract

Philosophy of science has pointed out a circularity problem in empirical sciences that arises if all known measuring procedures for a quantity of a theory presuppose the validity of this theory. This discuss how this problem relates to empirical computational linguistics, and define a criterion of T-non-theoretical grounding as guidance to avoid such circularities.

We exemplify how this criterion can be met by crowdsourcing, task-related data annotation, or data in the wild. In particular, we illustrate the benefits of grounded learning in the area of statistical machine translation, e.g., by grounding machine translation in a retrieval task for improved cross-lingual retrieval.

Bio

Prof. Stefan Riezler was appointed full professor and head of the chair of Linguistic Informatics at Heidelberg University in 2010, after spending a decade in the world's most renowned industry research labs (Xerox PARC, Google).

He received his PhD in Computational Linguistics from the University of Tübingen in 1998, and then conducted post-doctoral work at Brown University in 1999. Prof. Riezler's research focus is on machine learning and statistics applied to natural language processing problems, especially for the application areas of natural-language based web search and statistical machine translation.