THESIS PROPOSAL – 30 CREDITS

# Search Query Optimiser for Patents

## Background

Searching for patent information differs significantly from normal search due to the structural complexity of patent documents as well as the use of a specific terminology that is not always commonly known or used. There is a risk that companies miss out on important trends in technology or materials if they do not keep a continuous watch on the patent activities within their field. This is normally done via a search alert that signals the user when any new patents relevant to the search query are published. The art of developing a search query is quite complex, and therefore companies often take the help of some search specialist. Once the search query is in place, many companies believe that they have full control – but technologies change, new competitors enter the market, new materials appear, and consumer behaviour might change, too, which may have a major impact on technology and product choice. It is therefore desirable to continuously update and optimise the search query, to ensure relevance as the technology evolves.

## Project description

The goal of this project is to develop and evaluate a method for unsupervised optimisation of an existing search query for a search alert to adapt to observed changes in the response of the search alert administrator (owner) to newly captured patents. The method should interactively suggest changes to the search query and present a ranked list of patents identified using the new query, which will let the user assess the usefulness of the suggested changes.

## Customer

IamIP Sverige AB, Stockholm

## Contact

Marco Kuhlmann, marco.kuhlmann@liu.se

## Student profile

Knowledge about natural language processing (via courses such as TDDE09) and/or text mining (via courses such as TDDE16, 732A92).