**Hokamp 2017 – Lexically Constrained Decoding for Sequence Generation using Grid Beam Search**

* Introduction of Grid Beam Search (GBS)🡪 basic idea: extend the beam search to allow the inclusion of pre-specified lexical constraints.
  + **Lexical constraints:** phrases or words, which **must be present** in the generating output sequence.
  + **Idea:** general way to incorporate additional knowledge into a models output without requiring any modification of the model parameters
  + **Field tests**  with ‘Neural interactive-predictive translation = user picks part of the hypothesis which is incorrect and provides the correct translation for that portion of the output 🡪 correction = constraint for the next coding cycle. Can be repeated as many times as somebody wants to.
* They can show, that it is more efficient and they can reach better results

**Post and Vilar, 2018 – Fast lexically constrained decoding with dynamic beam allocation for neural machine translation**

* Present an algorithm for lexically constrained decoding with a complexity of *O*(1) in the number of constraints 🡪 which is more efficient compared to the usual linear of exponential complexity with respect to the number of constraints.