Generating Answerable Questions from Ontologies

- **Aim**: This research is to **generalise** the process of the generation of questions from the TBox of ontologies

- **Description and results**:
  - Generating **educational** questions
  - **10 types of questions** with their axiom prerequisites (72 templates)
  - **3 ontologies**: AWO, Stuff and BioTop
  - **Results** from 7 evaluators (1330 points) based on the median:
    - **Syntax**: 80% very good
    - **Semantics**: 73% very good or good

- **Examples of generated questions**
  - Which insect participates in flying?
  - Is phloem a proper part of some stem?
  - A material object is a part of some universe. True or False?

- **Limits of the approach**
  - **3 Ontologies = Generalisation?**
  - The different ways to formalise knowledge (Representation styles, Foundational ontologies, Ontology Design Pattern, ...) have not been studied
  - Types of questions investigated manually

- **Future work**
  - More efficient algorithm
  - Generating more advanced questions
  - Enlarging the scope of the research for other purposes (e.g. ontology validation) by automating the process for other types of questions

- **Fig. 1**: Aggregate results

- **Fig. 2**: Quality for each ontology