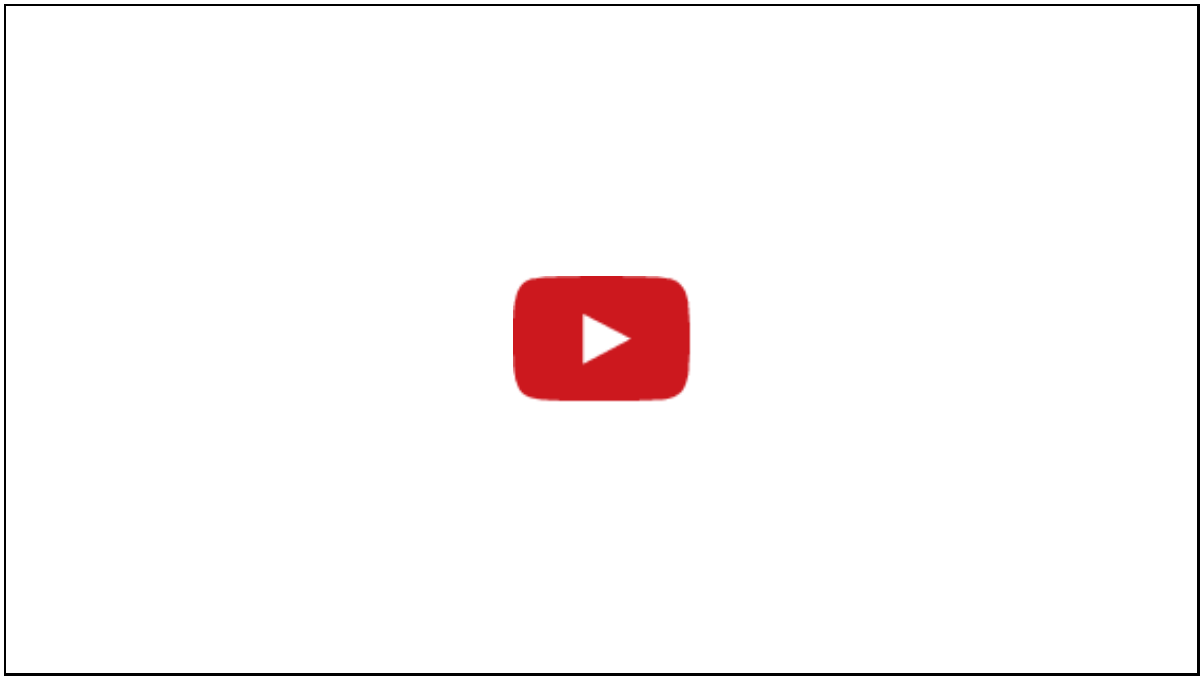
Week 1: Video Lectures

1. Introduction: Motivation, history and applications of MT



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2 / 2

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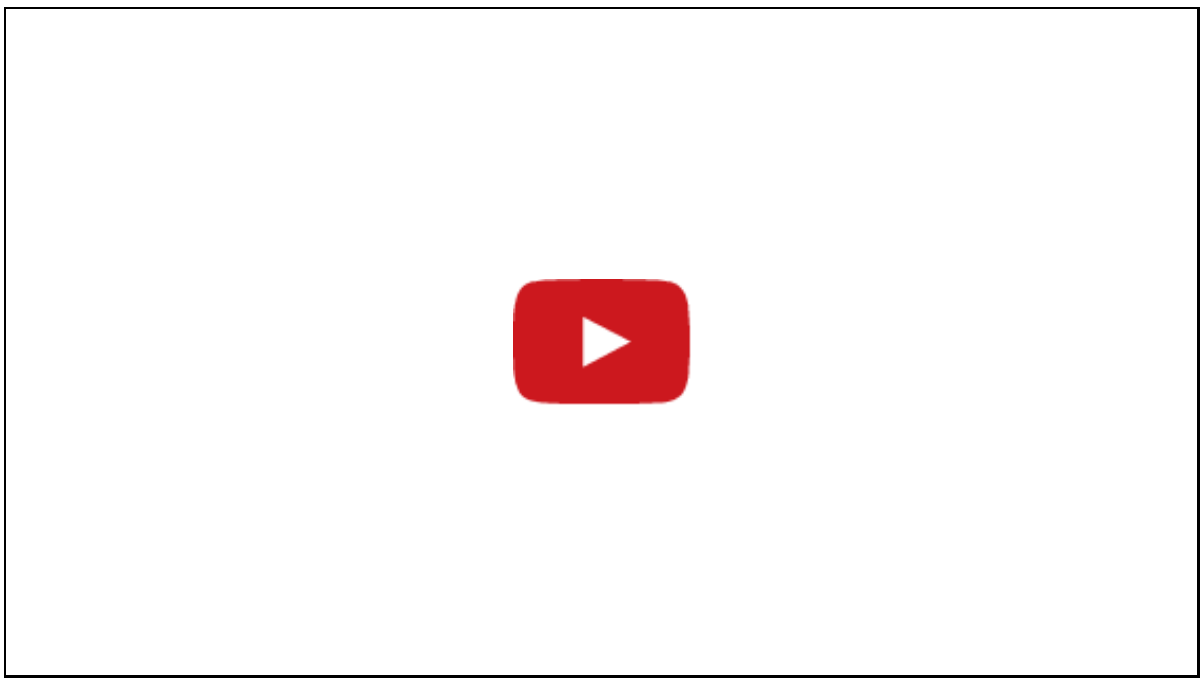
Content: This is the first lecture with theoretical content of the course. This lecture is an introduction to Machine Translation (MT), which includes its motivation, history and applications. The student should get an idea of why and how the field of MT is relevant both commercially and academically.

Lecturer: Marta R. Costa-jussà

2. Introduction: MT Approaches



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Content: MT has been approached from different types of view including linguistic and statistical. This lecture describes different MT approaches that have been developed along history, putting more emphasis on those that are more popular nowadays such as transfer rule-based and corpus-based.

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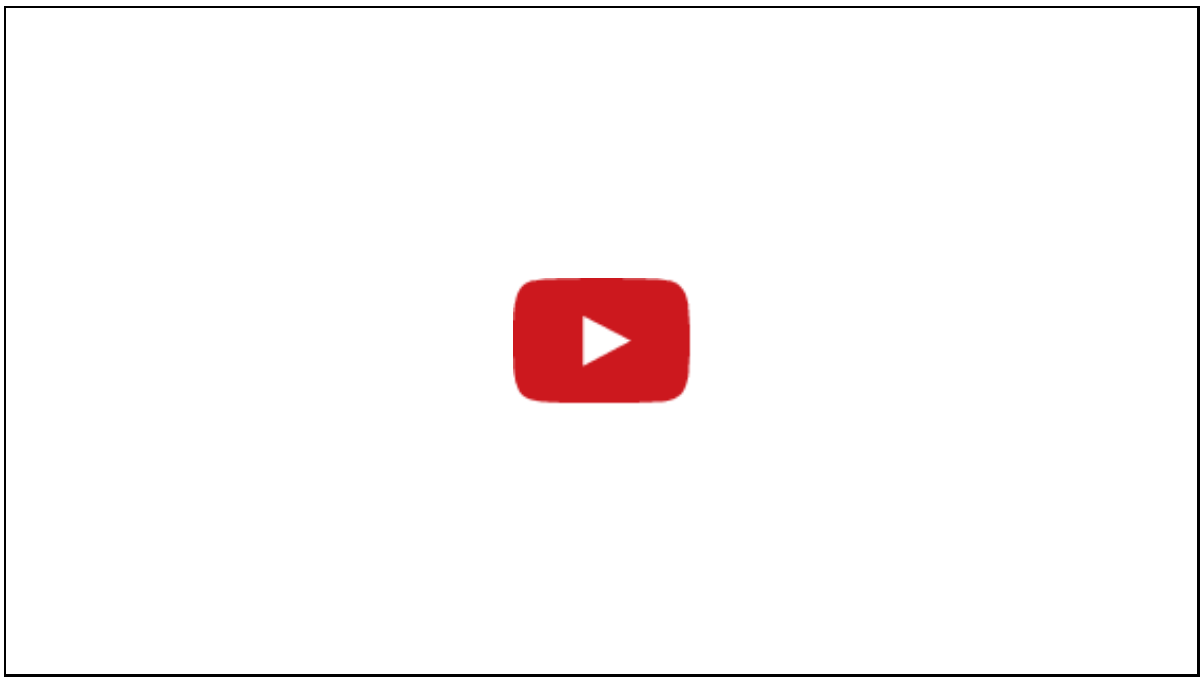
3. Introduction: SMT Challenges



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Content: Although statistical machine translation (SMT) has been progressing during more than 20 years, there are still many problems to be solved. This lecture shows the main challenges for SMT organized by linguistic levels (i.e. lexical, morphological, syntactical and semantic). These challenges include going from a low-inflected language to a high-inflected language; different grammatical structures from the source and target; and word sense disambiguation.

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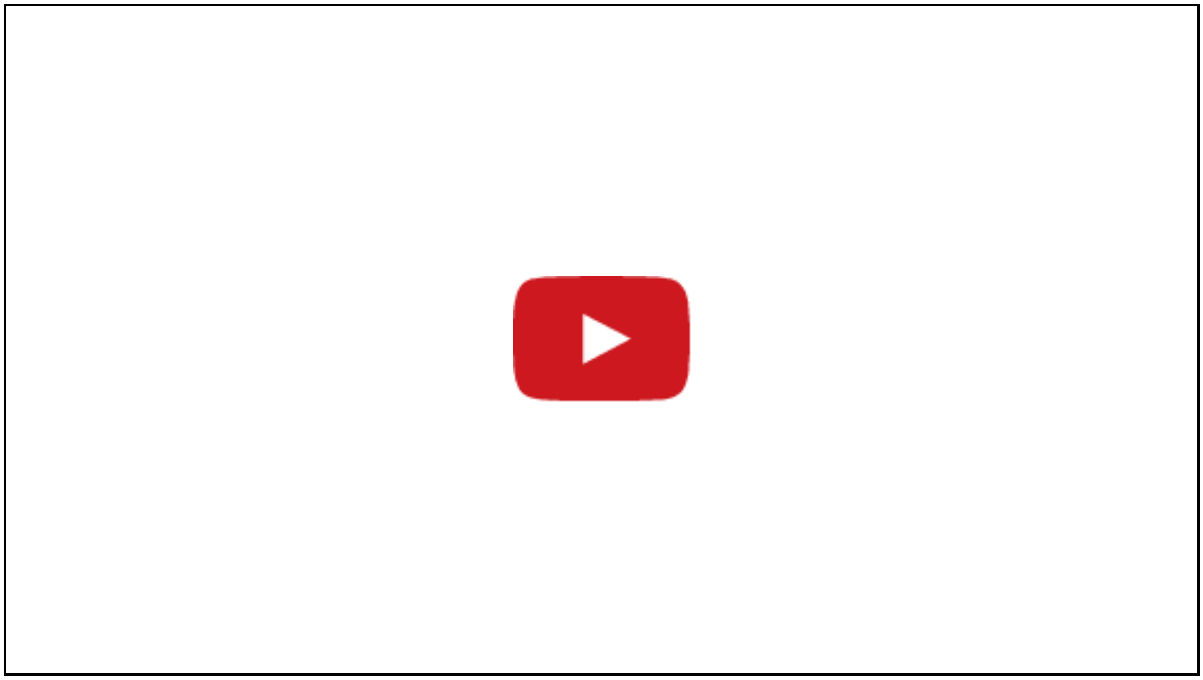
4. Rule-based MT



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Content: Rule-based MT systems have been very relevant in the history of MT and there are still state-of-the-art systems that use this technology. In fact, a lot of commercial systems are rule-based or at least hybrid technologies using some part of rule-based concepts. This lecture covers more details about the rule-based MT system, its structure and components by explaining the architecture of the Apertium platform including the morphological dictionaries and transfer rules.

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