Introduction to linguistic computation and complexity theory

Lecturer: Cristiano Chesi

H: 10
Credits: 2
Semester: I
Compulsory course: A

Description

How can we describe explicitly the computation needed for linguistic processing?
In this course, I will introduce this question by familiarizing with an appropriate formal background while discussing some ideas presented in the recent literature: on the one hand, we will see how linguistic intuitions can be formalized precisely in a way that is compatible with their efficient implementation in computer programs dealing with Natural Language Processing (NLP); on the other, we will evaluate the cognitive plausibility of these computational models focusing on the revealed difficulty related to specific linguistic constructions.

Suggested readings

Chesi C. (2015) Il processamento in tempo reale delle frasi complesse. In atti del convegno "Compter Parler Soigner", E.M. Ponti (ed). Pavia University Press.
Chesi C. (2015) On directionality of phrase structure building. Journal of Psycholinguistic Research. 44(1) http://dx.doi.org/10.1007/s10936-014-9330-6
Partee B., A. ter Meulen & R. Wall (1990) Mathematical Methods in Linguistics, Springer, 1990, solo Capitoli 16 – 18 (pagg. 433-506)
Van Dyke, J. A., & McElree, B. (2006) Retrieval interference in sentence comprehension. Journal of Memory and Language, 55(2), 157-166.

Evaluation

The evaluation will be based on an oral exam.

Calendar

December 3rd, 2018 - 10:00-13:00
December 4th, 2018 - 10:00-13:00
December 6th, 2018 - 10:00-14:00

Classroom 1-15