

Rich Syntactic and Semantic Models in Error Detection and Intelligent Language
Tutoring Systems
Luis Morgado da Costa
Nanyang Technological University

ABSTRACT

In this talk I will frame the current bottleneck in Computer Assisted Language Learning (CALL) systems and provide a solution to this problem by introducing rich syntactic and semantic models to these systems, as well as offering a different way to see the problem of Error Detection. I will introduce concepts such as *ambiguity*, *mal-rules*, *feedback* and *meaning reconstruction* and discuss how they can be applied to improve Error Detection and Intelligent Language Tutoring Systems. I will share some preliminary results on our efforts to help students improve their academic writing skills at NTU, and conclude with some comments about the future directions of this project.

BIOGRAPHY



Luis Morgado da Costa is cognitive scientist with a wide range of interests, currently **focusing my work on computational linguistics. He's currently a PhD student at the** Interdisciplinary Graduate School, Nanyang Technological University (NTU), in Singapore. Before that, He was a research associate in the Computational Linguistics Lab, Division of Linguistics and Multilingual Studies, also at NTU. I'm a member of DELPH-IN, sharing the communal commitment of open source development of develop natural language processing tools for deep linguistic processing of natural languages, and of the Global Wordnet Association. He have a broad range of research interests, ranging from Natural Language Parsing and Generation, Computational Lexicography, Computer Assisted Language Learning, Memory and Neural basis of Learning, as well as general Mandarin Chinese and Japanese Linguistics. The main focus of my research is to model diverse aspects of linguistic knowledge in ways it can be applied to many different tasks (Machine Translation, Word Sense Disambiguation, Computer Assisted Language Learning, etc). He work mainly with English, Mandarin Chinese and Japanese languages, but I've also worked with other languages such as Portuguese, Indonesian and Abui.