

Patrizia Grifoni Arianna D'Ulizia Fernando Ferri, **Computational methods and grammars in language evolution: a survey**, Artificial intelligence review, Blackwell Scientific Publications – Exeter UK 2016

Abstract: The interest in language evolution by various disciplines, such as linguistics, computer science, biology, etc., makes language evolution models an active research topic and many models have been defined in the last decade. In this work, an overview of computational methods and grammars in language evolution models is given. It aims to introduce readers to the main concepts and the current approaches in language evolution research. Some of the language evolution models, developed during the decade 2003-2012, have been described and classified considering both the grammatical representation (context-free, attribute, Christiansen, fluid construction, or universal grammar) and the computational methods (agent-based, evolutionary computation-based or game theoretic). Finally, an analysis of the surveyed models has been carried out to evaluate their possible extension towards multimodal language evolution.