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Languages, Ontologies and Automatic Grammar Generation

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Facultad de Informática
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Entrada libre hasta completar el aforo

Resumen:

In this talk I intend to review some basic and high-level concepts like formal languages, grammars and ontologies. Languages to transmit knowledge from a sender to a receiver; grammars to formally specify languages; ontologies as formals specifications of specific knowledge domains. After this introductory revision, enhancing the role of each of those elements in the context of computer-based problem solving (programming), I will talk about a project aimed at automatically infer and generate a Grammar for a Domain Specific Language (DSL) from a given ontology that describes this specific domain. The transformation rules will be presented and the system, Onto2Gra, that fully implements that "Ontological approach for DSL development" will be introduced.

Sobre Pedro Rangel:

Pedro Rangel Henriques got a degree in "Electronics Engineering", at FEUP (Porto University), and finished a Ph.D. thesis in "Formal Languages and Attribute Grammars" at Minho University. In 1981 he joined the Computer Science Department of University of Minho, where he is a teacher/researcher. Since 1995 he is the coordinator of the "Language Processing group" at "Algoritmi Research Center". He teaches different courses in the broader area of programming: Programming Languages and Paradigms; Compilers; Language Engineering; etc. Grammar Engineering and Software Analysis and Transformation; etc. Pedro Rangel Henriques has supervised 13 Ph.D. thesis, and more than 30 M.Sc. thesis, and many graduating trainingships/projects, in the areas of: language processing (textual and visual), and structured document processing; code analysis, program visualization/animation and program comprehension; knowledge discovery from databases, data-mining, and data-cleaning. He is co-author of the "XML & XSL: da teoria a prática " book, publish by FCA in 2002, has published 6 chapters in books, and 26 journal papers, and has been enrolled in 28 R&D projects.