UNIVERSIDAD COMPLUTENSE MADRID

Facultad de Informática

ANUNCIO DE CONFERENCIA

POSGRADO

Deciding language inclusion problems using quasiorders

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Entrada libre hasta completar el aforo

Resumen:

We study the language inclusion problem $L_1 \subseteq L_2$ where L_1 is regular or context-free. Our approach checks whether an overapproximation of L_1 is included in L_2. Such overapproximations are obtained using quasiorder relations on words where the abstraction gives the language of all words "greater than or equal to" a given input word for that quasiorder. We put forward a range of quasiorders that allow us to systematically design decision procedures for different language inclusion problems such as context-free languages into regular languages and regular languages into trace sets of one-counter nets.

Sobre Pierre Ganty:

Pierre holds a joint Ph.D. degree in Computer Science from the University of Brussels, Belgium and from the University of Genova, Italy that he obtained late 2007. After his Ph.D., Pierre did a nearly two-year postdoc at the University of California, Los Angeles. Pierre joined the IMDEA Software institute in the Fall 2009 as a tenure-track assistant research professor. He was granted tenure and promoted to associate research professor in December 2015. Currently he is supervising three Ph.D. students. Pierre is interested in automated verification whose goal is to prove the absence of errors in idealized models of computing systems in a fully automated way. Pierre focuses on models with infinitely many states which naturally arise when control or data is unbounded. He is also interested in formal language theory and its applications to practical problems like searching text stored in compressed form. Pierre's contributions range from theoretical results all the way down to implementation of analysis algorithms.