Professor Paul Tarau

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Logic Programming, Natural Language Processing, Computational Mathematics,
Combinatorics of Lambda Terms, Abstract Machines, Agent Infrastructures

Logic Programming

Three open source Prolog systems (available on github)

Bijective Goedel numberings for recursively defined data types and Prolog terms

Efficient Prolog-based type-inference and random term generation algorithms

Logic Programming-based agent infrastructures

Member of Executive Committee of the Association of Logic Programming

Combinatorics of Lambda Terms

A Logic Programming Playground for Lambda Terms, Combinators, Types and Tree-based Arithmetic Computations

Tree-based Arithmetic Computations

Compact tree-based representation of the largest known prime number (22+ million digits):
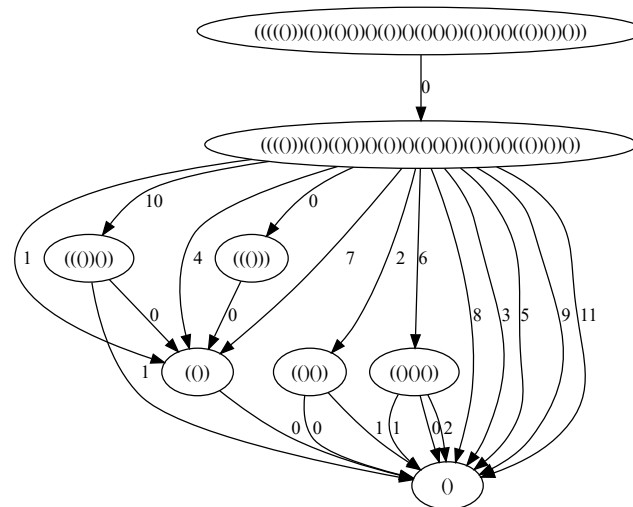
Natural Language Processing

TextRank algorithm for automatic summary and keyword extraction (1500+ citations)

Logic Grammars

Reasoning-enabled dialog systems

Categorial Grammars and Logic Forms