

TouIST, a Pedagogical Tool for Logic, Algebra, and Discrete Mathematics

Sergei Soloviev

Abstract. TouIST is an automatic translator (developed at IRIT, Toulouse) that provides a simple language to generate logical formulas from a problem description. Coupled with SAT, QBF or SMT solvers, it allows us to model many static or dynamic combinatorial problems. This can be very helpful as a teaching support for logics, algebra and discrete mathematics. A series of examples (based on my personal experience of work with TouIST) will be presented.

References

- [1] O. Gasquet, D. Longuin, E. Lorini, F. Maris, P. Régnier, S. Soloviev. TouIST, a Teacher- and Student-Friendly Language for Propositional Logic and Discrete Mathematics. *Computer tools in education*, no. 2, pp. 13-25, **2021** (Engl.); doi:10.32603/2071-2340-2021-2-13-25
- [2] O. Gasquet, D. Longin, F. Mari, P. Régnier, and M. Valais, “Compact Tree Encodings for Planning as QBF,” *Inteligencia Artificial (Ibero-American Journal of Artificial Intelligence)*, vol. 21(62), pp. 103–114, 2018; doi: 10.4114/intartif.vol21iss62pp103-113

Sergei Soloviev
IRIT, University of Toulouse 3
118 route de Narbonne
31062 Toulouse
France
Sergei.Soloviev@irit.fr