



## Some logical issues in discrete mathematics and algorithmic thinking

VIVIANE DURAND-GUERRIER

*Abstract.* The role of logic in mathematics education has been widely discussed from the seventies and eighties during the “modern maths period” till now, and remains still a rather controversial issue in the international community. Nevertheless, the relevance of discrete mathematics and algorithmic thinking for the development of heuristic and logical competences is both one of the main points of the program of Tamás Varga, and of some didactic teams in France. In this paper, we first present the semantic perspective in mathematics education and the role of logic in the Hungarian tradition. Then, we present insights on the role of research problems in the French tradition. Finally, we raise some didactical issues in algorithmic thinking at the interface of mathematics and computer science.

*Key words and phrases:* didactics of mathematics – logic – semantics – discrete mathematics – algorithmic thinking.

*MSC Subject Classification:* 97E30.

VIVIANE DURAND-GUERRIER  
IMAG - UMR 5149  
UNIVERSITÉ DE MONTPELLIER  
CASE COURRIER 051  
PLACE EUGÈNE BATAILLON, 34090 MONTPELLIER  
FRANCE  
*E-mail:* [viviane.durand-guerrier@umontpellier.fr](mailto:viviane.durand-guerrier@umontpellier.fr)