■ Book Announcement

Title:	Graph Structure and Monadic Second-Order Logic. A Language-Theoretic Approach
Author(s):	Bruno Courcelle, Université de Bordeaux and Joost Engelfriet, Universiteit Leiden,
Editorial:	Cambridge University Press
Series:	Encyclopedia of Mathematics and its Applications Volume 138
ISBN:	9780521898331
Pages:	730

Abstract

Finite graphs and relational structures can be described algebraically, enabling them to be constructed out of more basic elements. Separately the properties of graphs can be studied in Monadic Second-order Logic. These two features are brought together for the first time in a presentation that unifies and synthesizes research over the last 25 years.

The authors not only provide a thorough description of the theory, but also detail its applications, on the one hand to the construction of FPT graph algorithms, and, on the other to the extension of Formal Language Theory to finite graphs (context-free grammars, recognizability and transductions). The book will be of interest to graduate students and researchers in Graph Theory, Finite Model Theory, Formal Languages, and Complexity Theory.

Further information :
courcell@labri.fr, engelfri@liacs.nl
http://www.cambridge.org/gb/knowledge/isbn/item5758776