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This volume contains the proceedings of the 11th Colloquium on Trees in Algebra and Programming (CAAP'86).

From 1976 to 1980, this Colloquium was held in Lille, France, under the name CLAAP for *Colloque de Lille sur les Arbres en Algèbre et en Programmation*. Since 1981, the Colloquium has begun a more european life with the name CAAP; and as M. Dauchet (one of the founders with A. Arnold) used to say in French : *Il a perdu son L pour mieux voler*.

After l'Aquila, Italy (1983), Bordeaux, France (1984), and Berlin, Germany (1985), the CAAP comes this year to NICE on MARCH, 24th-26th 1986.

The trees are well-known to be the basic structure for Computer Science, so usually the topics covered by the Conference are beyond the strict domain of trees and extend to many areas in Computer Science.

Following the CAAP tradition, the 20 accepted papers for CAAP'86, selected from a total of 44 papers, are representative of the main topics in theoretical Computer Science.

The selected papers and invited lectures are presented in 7 sections :

- Language theory
- Algebraic theory of semantics
- Graphs and grammars
- Program schemes and programming
- Tree-automata and transducers
- Probability on trees
- Logic for computing

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