Preface

The international conference "WORDS" was held in Rouen, France, from 22–26 September 1997. About sixty researchers interested in Combinatorics on Words attended this long-awaited event.

No simple relation of causality can ever give rise to a system of thinking. Scientific theories are not an exception to the rule of this complex process, where concepts are elaborated, and questions formulated. A systematic study of words first appeared at the beginning of the twentieth century, when three now famous papers were published by the Norwegian, Axel Thue (in 1906, 1912, 1914). He explored the properties of infinite words and repetitions, and research into these topics is still progressing, as attested by the numerous fruitful studies that were presented at the conference.

Some decades later in the century, Post would also make use of the concept of Words. Similarly, Words became a basic concept in the combinatorial group theory (the Burnside Problem), in number theory (Van der Waerden's theorem), and in the theory of semigroups, where the concept unifies fundamental results from the theory of Automata, the theory of Complexity, and the study of Formal Languages.

About 20 years ago, Marcel Paul Schützenberger presented a series of questions concerning words. The originality, diversity and difficulty of these questions were the basis of an independent theory of Words. Specific events, such as the meeting "Fête des Mots", organised by Dominique Perrin in 1980, or the first edition of "Combinatorics of Words", published by Lothaire in 1983, have been devoted to the theory.

Research will continue in such well-known domains as Codes, Unavoidability, Periodicity, and many others. The present volume collects 14 referred papers, whose results give a good overview of the various topics presented in the conference. These high-quality studies raise numerous questions and open up new areas of research, thus confirming the vitality of the Theory of Words.

J. Néraud

Guest Editor