Preface

Contemporary science is clearly interdisciplinary in nature. Combining the knowledge and scientific experience gained in independent research domains and areas now allows new and astounding solutions to be developed. These, thanks to the development of computational techniques and computer infrastructure, make it possible to execute tasks which were once impossible. One such interesting research area concerns the intelligent management of secret information. Management theory has only recently paid attention to the need to introduce modern solutions in this field. Such solutions depart from the traditional approach to the matter of information flow within organisational structures and are focused on the essence of data stored in computer systems, which are highly valuable in terms of information. Ensuring the confidentiality and integrity of this data only became possible when the first algorithms of modern cryptography were introduced. This cryptography became widespread as years passed and started playing a significant role in communication processes as well as strategic information management problems. Thus were advanced mathematical techniques used in this field for practical tasks performed within the scope of information management theory. In the context of new areas of cryptographic algorithm application for confidential and secure management of secret data, the development of another branch of informatics, particularly concerning new fields of application for computer linguistic methods, is worth noting. Since their very creation, such algorithms have been developed in various directions, and they now make it possible to improve existing solutions originating from cryptography which are used to manage secret data.

These new opportunities constitute the leading subject of this book, which, at the same time, serves as a guide around the most up-to-date topics related to computer linguistic techniques used in management theory and economics.

This book is the result of work carried out to combine mathematical linguistic methods with information sharing algorithms to develop new protocols of so-called linguistic threshold schemes for managing data within various organisational structures.

The interdisciplinary nature of the proposed solutions poses a new challenge for further research in and application of the proposed linguistic threshold schemes.

The authors hope that the book the reader is holding in their hands will introduce them in an interesting and accurate way to the details of informatics as well as its links with management theory and information hiding methods.

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