

Advances in Intelligent Systems and Computing

Volume 566

Series editor

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Preface

Nowadays, the Internet is the biggest medium providing, maintaining and transporting different kinds of data for its users around the world. Not only with its evolution into the ‘Internet of Things’ and the tendency towards cloud computing, the Internet transformed itself into a significant source of (precious and usable) ‘Big Data’. Therefore, it becomes increasingly clear that data and network structures as well as user behaviour cannot be considered in an isolated manner any longer. These changes, developments and multiple cross-connections are reflected by the new term ‘Data Networks’.

All data generated by the Internet and its use definitely belong to the category of big data and require, due to their volume and dynamics, a new kind of efficient data mining methods to turn them into useful information and, ultimately, knowledge. Since a large portion of the data available are sensitive and often of a very private nature, their safe, secure and well-protected handling is increasingly gaining importance. Last but not least, interfaces are more and more incorporating multimedia and natural language processing, adding to their complexity of design and execution.

Considering these trends with special respect to big data, the purpose of the 13th International Conference on Computing and Information Technology (IC²IT) is to present emerging algorithms, methods and technologies with a high degree of originality, novelty and innovation addressing the conference theme ‘Mastering Data and Networking’. The 34 contributions to the conference were selected by the programme committee for oral presentation and inclusion in this book out of 101 submissions.

Following the above argument, the volume’s major part constituted by the first two sections discusses various aspects of data mining and corresponding applications. Feature selection in high-dimensional spaces, suitable clustering mechanisms and predictions are still the major, not yet fully solved problems in this area. The key to most networking optimisation problems addressed in the subsequent Section 3 is to properly determine critical parameters. Beside speed and overhead optimisation, energy problems of autonomous systems become here more and more important. Then, in Section 4, light is shed on natural language processing, where

the aspects extraction of trends and popularity and recognition of emotions are becoming key issues beside the classical topics detection and classification.

The editors hope and wish that this collection of contributions covering different areas of computer science will spark, not only during the conference, inspiring discussions among colleagues. They intend to contribute to the deep understanding that is required to solve the problems raised by today's complex environments, and that interdisciplinary cooperation is beneficial for this purpose.

Last but not least, the editors would like to thank all authors for their submissions and the programme committee members for their great work and valuable time. This book could not have been completed without the effort of staff, especially of Ms. Watchareewan Jitsakul, of the Information Technology Faculty at King Mongkut's University of Technology North Bangkok as well as of all other collaborators in Thailand and abroad. Finally, we are grateful to Springer-Verlag and Janusz Kacprzyk as the editor responsible for the series 'Advances in Intelligent System and Computing' for their great support in publishing these conference proceedings already for the fifth time in sequence as well as for the smooth cooperation all along.

March 2017

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