

Advances in Soft Computing

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Preface

The research scenario in advanced systems for protecting critical infrastructures and for deeply networked information tools highlights a growing link between security issues and the need for intelligent processing abilities in the area of information systems. To face the ever-evolving nature of cyber-threats, monitoring systems must have adaptive capabilities for continuous adjustment and timely, effective response to modifications in the environment. Moreover, the risks of improper access pose the need for advanced identification methods, including protocols to enforce computer-security policies and biometry-related technologies for physical authentication. Computational Intelligence methods offer a wide variety of approaches that can be fruitful in those areas, and can play a crucial role in the adaptive process by their ability to learn empirically and adapt a system's behaviour accordingly.

The International Workshop on Computational Intelligence for Security in Information Systems (CISIS) proposes a meeting ground to the various communities involved in building intelligent systems for security, namely: information security, data mining, adaptive learning methods and soft computing among others. The main goal is to allow experts and researchers to assess the benefits of learning methods in the data-mining area for information-security applications. The Workshop offers the opportunity to interact with the leading industries actively involved in the critical area of security, and have a picture of the current solutions adopted in practical domains.

This volume of *Advances in Soft Computing* contains accepted papers presented at CISIS'08, which was held in Genova, Italy, on October 23rd–24th, 2008. The selection process to set up the Workshop program yielded a collection of about 40 papers. This allowed the Scientific Committee to verify the vital and crucial nature of the topics involved in the event, and resulted in an acceptance rate of about 60% of the originally submitted manuscripts.

CISIS'08 has teamed up with the *Journal of Information Assurance and Security (JIAS)* and the *International Journal of Computational Intelligence Research (IJCIR)* for a suite of special issues including selected papers from CISIS'08. The extended papers, together with contributed articles received in response to subsequent open calls, will go through further rounds of peer refereeing in the remits of these two journals.

We would like to thank the work of the Programme Committee Members who performed admirably under tight deadline pressures. Our warmest and special thanks go to the Keynote Speakers: Dr. Piero P. Bonissone (Coolidge Fellow, General Electric Global Research) and Prof. Marios M. Polycarpou (University of Cyprus). Prof. Vincenzo Piuri, former President of the IEEE Computational Intelligence Society, provided invaluable assistance and guidance in enhancing the scientific level of the event.

Particular thanks go to the Organising Committee, chaired by Dr. Clotilde Canepa Fertini (IIC) and composed by Dr. Sergio Decherchi, Dr. Davide Leoncini, Dr. Francesco Picasso and Dr. Judith Redi, for their precious work and for their suggestions about organisation and promotion of CISIS'08. Particular thanks go as well to the Workshop main Sponsors, Ansaldo Segnalamento Ferroviario Spa and Elsag Datamat Spa, who jointly contributed in an active and constructive manner to the success of this initiative.

We wish to thank Prof. Dr. Janusz Kacprzyk (Editor-in-chief), Dr. Thomas Ditzinger (Senior Editor, Engineering/Applied Sciences) and Mrs. Heather King at Springer-Verlag for their help and collaboration in this demanding scientific publication project.

We thank as well all the authors and participants for their great contributions that made this conference possible and all the hard work worthwhile.

October 2008

Emilio Corchado
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