

Preface

Intelligent systems are computer systems capable of perceiving, reasoning, learning, and acting rationally, always maximizing an evaluation function. Several kinds of algorithmic methods could be used in the implementation of this type of system, methods such as neural networks, Bayesian networks, kernel machines, feature extraction and dimension reduction, deep learning, reinforcement learning, self-organizing maps, optimization methods in learning, fuzzy systems, and evolutionary computation, among others.

With the increase in the number of personal computers, smart phones, and computer servers, the need for the development of intelligent systems has also experienced an important increment. Moreover, the current speed of computer processors allows for the implementation of algorithms that run on bigger databases. Many of these applications are implemented as Web services that can be accessed via smart phones and tablets.

Now more than ever the development of intelligent systems is playing a main role in fields such as biology, computer vision, robotics, search engines, and big data, to name a few. An increasing number of new algorithms and applications are proposed and developed each year.

This book contains the written contributions of the First International Symposium on Intelligent Computing Systems (ISICS) that was held in Mérida (México), during March 16–18, 2016. To further increase the body of knowledge in this specific area of computer science was the aim of ISICS 2016, by providing a forum for attendees to exchange ideas and discuss state-of-the-art results. The ISICS 2016 was committed to the promotion, preservation, and collaboration of research and practice, focusing on the fields of artificial intelligence, computer vision, and image processing.

We received 22 submissions from 15 different countries around the world. Each submission was evaluated by at least three members of the Program Committee and external reviewers. Based on these reviews, 12 papers were selected for long oral presentation. In addition to the contributed papers, four keynote speaker presentations were included in the conference program.

We want to thank the authors for their contributions, the scientific Program Committee members for their reviews and especially our invited speakers, Prof. Raúl Rojas (FU-Berlin), Prof. Carlos Coello Coello (CINVESTAV), Prof. Ángel Kuri Morales (ITAM), and Prof. Petar Kormushev (ICL). We are very grateful to the Universidad Nacional Autónoma de México (UNAM), the Centro de Investigaciones Matemáticas (CIMAT), and the Universidad Autónoma de Yucatán (UADY) for their support in the organization of ISICS 2016. Finally, we wish to thank Prof. Carlos Brito-Loeza (UADY) and Prof. Arturo Espinosa-Romero (UADY) for their invaluable help in coordinating the double-blind peer-review process.

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