

# INTRODUCTION

In recent years, there has been a remarkable growth of research interest in the field of intelligent and cognition systems. That how intelligence and cognition have appeared in the course biological evolution on earth has always been a subject for scientific studies. The derivative project of whether and how intelligence and cognition can be created artificially has in recent decades made strong impact on the first project. The question is posed by different disciplines. The existence of very different favoured research methodologies, acceptable levels of research and generally research cultures is an important problem. The exchange of research experiences requires much effort due to the rapid growth and interdisciplinary nature of this area of investigation.

The International Conference on Intelligent and Cognitive systems aims at providing a forum for presentation of the latest scientific results and research achievements, exchange of ideas and research experiences, and examination of theoretical problems and applications in the field of intelligent and cognitive systems. Its scope includes intelligent systems and the foundation of cognitive sciences, theoretical computer science, knowledge based and semantic systems, information technology and automation, cybernetics and man-machine interface systems, neural networks, reasoning and logic based systems, biological computing, language and symbolic systems, mathematical system theory, psychology of cognition, sociocognition and sociology of knowledge, neuroscience, and neuroengineering. Promotion of interdisciplinary research and encouragement of scientific collaboration nationally as well as internationally among the researchers and interested users in various organizations are also among the conference objectives.

Like in other countries in the world, research on intelligent and cognitive systems has grown considerably in recent years. It is to be noted that the share of scientific papers in this field contributed to the specialized conferences from the third world is usually higher than in other fields. Also, in the application domain, there are several instances where the implementation of the related projects in the third world has preceded that of the advanced industrial countries. The International Conference on Intelligent and Cognitive systems, while introducing the research work carried out in Iran internationally and facilitating the exchange of scientific results between researchers from Iran and elsewhere, will in the long run promote the implementation of the technology related to intelligent and cognitive systems in our country.

Within the scope of this conference, three symposia in the field of Cognitive Sciences, Neural Network, and Fuzzy Systems have been programmed. The latter two symposia have been motivated by the explosive growth in the research interest in those fields in Iran as well as internationally while the first Symposium has been included so as to promote research in that area.

I should take this occasion to express my gratitude to the members of the program committees for these symposia chaired by Dr. Vahid (CSS), Dr. Rouhani and Dr. Mirzaii (NNS), Dr. Tahani and Dr. Sadati (CSS). I also wish to express my sincere thanks to my colleagues who accepted various programming and organization responsibilities in this conference, as well as to the institution and organization that have supported this conference. It is unfortunate that I cannot acknowledge the very significant contribution of each one individually. It should be emphasized, however,

that without the assistance of these colleagues and organizations the conference could not have been held the papers in this volume have been organized in sections devoted to the three symposia. General topic papers have also been grouped in the section devoted to cognitive sciences.

The papers collected in this Proceedings present the latest scientific results and will no doubt serve as an important reference for all scientists, researchers, and experts interested in the field of intelligent and cognitive systems.

**Caro Lucas**  
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