Preface

The Mexican International Conference on Artificial Intelligence (MICAI), a yearly international conference series organized by the Mexican Society for Artificial Intelligence (SMIA), is a major international AI forum and the main event in the academic life of the country’s growing AI community. In this year Mexico celebrates the 50th anniversary of development of computer science in the country: in 1958 the first computer was installed at the National Autonomous University of Mexico (UNAM). Nowadays, computer science is the country’s fastest growing research area.

This volume contains the papers presented at the Special Session of the 7th Mexican International Conference on Artificial Intelligence, MICAI 2008, held on October 26–31, 2008, in Atizapán de Zaragoza, Mexico. For the Special Session, 266 submissions were considered. This volume contains revised versions of 65 papers selected according to the results of an international reviewing process. Thus the acceptance rate was 24.4%. The book is structured into 13 thematic fields representative of the main current areas of interest for AI community:

- Logic, Reasoning, and Knowledge-Based Systems
- Ontologies
- Natural Language Processing
- Machine Learning and Data Mining
- Pattern Recognition
- Neural Networks
- Genetic and Hybrid Intelligent Systems
- Computer Vision and Image Processing
- Robotics, Planning, and Scheduling
- Uncertainty, Probabilistic Reasoning, and Fuzzy Logic
- Multi-Agent Systems and Distributed AI
- Bioinformatics and Medical Applications
- Applications

The conference featured excellent keynote lectures by leading AI experts:

- Gerardo Jiménez Sánchez, Mexico,
- Stephanie Forrest, USA,
- Francisco Cervantes Pérez, México,
- Simon Haykin, Canada,
- Steven M. LaValle, USA,
- Georg Gottlob, UK / Austria.

The conference program included an oral technical session, keynote lectures, a special session, tutorials (some of them given by the keynote speakers in their respective areas of expertise), workshops, a Doctoral Consortium, and the First Mexican Symposium on Artificial Intelligence (COMIA), which were published in separate proceeding volumes.
The following papers received the Special Session Best Paper Award and the Special Session Best Student Paper Award, respectively:

1st place:  *Use of intelligent emotional agents in the animation of autonomous virtual creatures*, by Héctor Rafael Orozco Aguirre, Félix Francisco Ramos Corchado, Luis Alfonso Razo Ruvalcaba, Jaime Alberto Zaragoza Ríos, and Daniel Thalmann, Mexico / Switzerland;

2nd place:  *A feature extraction method based on morphological operators for automatic classification of leukocytes*, by Pilar Gómez-Gil, Manuel Ramírez-Cortés, Jesús González-Bernal, Ángel García Pedrero, César I. Prieto-Castro, Daniel Valencia, Rubén Lobato, and José E. Alonso, Mexico;

3rd place:  *Interpretation of mammographic using fuzzy logic for early diagnosis of breast cancer*, by Jorge R. Pérez-Gallardo, Beatriz Hernández-Vera, Alberto A. Aguilar-Lasserre, and Rubén Posada-Gómez, Mexico;

Student:  *New approaches for the school timetabling problem*, by Ana Cerdeira-Pena, Luisa Carpente, Antonio Fariña, and Diego Seco, Spain.

The special session best student paper was selected among papers of which first author was a full-time student.

We thank all the people involved in the organization of this conference. In the first place, the authors of the papers constituting this book: it is the excellence of their research work that gives value to the book. We thank the members of the Program Committee and additional reviewers for their great and very professional work on reviewing and selecting the papers for the conference. Our very special thanks go to Ángel Kuri and to Alejandro Peña Ayala for his help in the reviewing process.

We would like to express our sincere gratitude to the Tecnológico de Monterrey, Campus Estado de México for the warm hospitality to all MICAI 2008 attendees. Special thanks go to the Vice President of Rectoría Zona Centro, Dr. Roberto Rueda Ochoa, and to the Director General of Campus Estado de México, Dr. Pedro Grasa Soler, both at Tecnológico de Monterrey, for their valuable participation and support for the organization of this Conference. Our gratitude also goes to the Division of Research and Graduate Studies and the Division of Engineering and Architecture at Campus Estado de México of the same Institute. We are grateful to the Conference Staff and Local Organizing Committee, led by Neil Hernández and Raúl Monroy.

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Mexico City  
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September 2008

Program Chairs