

Special Issue: Ninth Argentinean Symposium on Artificial Intelligence

Editors: Daniela Godoy and Ana Gabriela Maguitman

Preface

This special issue contains a selection of seven articles from ASAI 2007, the 9th Argentinean Symposium on Artificial Intelligence. ASAI is an annual event intended to be the main forum of the Artificial Intelligence community in Argentina. The 9th Argentinean Symposium on Artificial Intelligence was held during August 27th - 28th, 2007, in Mar del Plata Argentina and was part of the 36th JAIIO, the 36th Argentine Meetings on Informatics and Operations Research, organized by SADIO.

ASAI 2007 received 33 articles, which were evaluated by an international committee of experts coming from different areas of Artificial Intelligence. A total of 18 articles were selected and presented at the symposium. The technical sessions included topics such as Machine Learning & Data Mining, Neural Networks, Evolutionary Computation, Agents & Multi-Agents Systems, Natural Language Processing & Intelligent Information Retrieval, Bioinformatics and Pattern Recognition.

Besides the technical sessions, two invited speakers presented talks about their research during the symposium. The first speaker, Boris Stilman from the Department of Computer Science & Engineering of the University of Colorado, USA and STILMAN Advanced Strategies. Dr. Stilman talk, "Linguistic Geometry Paradigm: From Fighting Wars... To Computing Them" introduced the audience to Linguistic Geometry, a new type of game theory. The second invited talk was in charge of Fernando Das Neves from Snoop Consulting, Argentina. Dr. Das Neves talk, "Extraño en Tierra Extraña: Machine learning en una empresa de software" presented an overview of how machine learning techniques can be applied to solve a number of problems that arise at a software company.

The seven articles selected for this special issue cover diverse Artificial Intelligence topics. *Learning Hidden Markov Models with Hidden Markov Trees as Observation Distributions*, by Diego H. Milone and Leandro E. Di Persia, proposes a novel learning architecture for signal sequences analyzed on a short-term basis. *ISOMAP based metrics for clustering*, by Ariel E. Bayá and Pablo M. Granitto, introduces a clustering technique to group data that are not shaped in the conventional way. The technique has proved to be successful in clustering points forming arbitrary shapes or paths through a high-dimensional space. In the paper *AWSC: An approach to Web service classification based on machine learning techniques*, Marco Crasso, Alejandro Zunino and Marcelo Campo discuss and evaluate AWSC, a method that combines text-mining and machine learning techniques for automatically determining the category of a Web service from several pre-defined categories. *Derivatives of Pearson Correlation for Gradient-based Analysis of Biomedical Data* by Marc Strickert, Frank-Michael Schleif, Udo Seiffert and T. Villman is a proposal where feature rating and data visualization methods are used to reveal interesting data properties, with special application to mass spectroscopy data analysis. *A procedure to automatically enrich verbal lexica with subcategorization frames* by Irene Castellón, Laura Alonso Alemany, and Nevena Tinkova Tincheva combines supervised and unsupervised learning techniques to aid syntactical analysis by automatically assigning subcategorization frames to previously unseen verbs of Spanish. *An Evolutionary Approach for Feature Selection applied to ADMET Prediction* by Axel J. Soto, Rocío L. Cecchini, Gustavo E. Vazquez, and Ignacio Ponzoni introduces a technique that combines genetic

algorithms with decision trees for descriptor selection aimed to predict physicochemical properties. The last paper in this special issue, *Reconocimiento de patrones en el tráfico de red basado en algoritmos genéticos* by Carlos Catania and Carlos García Garino, discusses a method for intruder detection which applies genetic algorithms techniques to learn patterns of normal traffic instances.

Acknowledgements

We want to thank the authors of the papers and the reviewers for their effort. We also wish to thank SADIO for their assistance in organizing ASAI 2007. Finally, we are grateful to the “Revista Iberoamericana de Inteligencia Artificial” for publishing this special issue, which reflects many of the current research trends in our community.

Contact Information

Dra. Daniela Godoy
ISISTAN Research Institute
Facultad de Ciencias Exactas, UNCPBA
Tandil, Argentina
E-mail: dgodoy@exa.unicen.edu.ar

Dra. Ana Gabriela Maguitman
Departamento de Ciencias e Ingeniería de la
Computación
Universidad Nacional del Sur, UNS
Bahía Blanca, Argentina
E-mail: agm@cs.uns.edu.ar