Preface

The aims and scope of this International Journal on Computing Anticipatory Systems deal with the emergent new field of research and development in anticipatory systems science.

An anticipatory system was defined by Robert Rosen (1987, Pergamon Press) as a system containing a model of itself and/or of its environment which adapts its current behaviour in function of the prediction of its model. So the modelling techniques are an important aspect for anticipatory systems.

Starting with this definition, the main capability of an anticipatory system is its computing power. This is the reason why I introduced the concept of Computing Anticipatory System. The word "Computing" refers not only on numerical computation with computers but also to any types of computation in any ordered artificial and natural systems.

The first two volumes of this new International Journal of Computing Anticipatory Systems contain partial proceedings of CASYS'97, the First International Conference on Computing Anticipatory Systems, held at Liège, Belgium, August 11-15, 1997, and organised by the non-profit association CHAOS. The number of papers was so high that a selection of papers are also published in the AIP Conference Proceedings of the American Institute of Physics.

Indeed, this first conference CASYS'97 was actually a very big success. More then 100 papers were proposed by 175 authors and co-authors coming from 25 different countries.
During the conference, the first CASYS Award was given to Robert Rosen (USA), Honorary President of CASYS'97, for his outstanding scientific work on Anticipatory Systems and the first CHAOS Award was given to Ernst von Glasersfeld for his outstanding scientific work on Radical Constructivism.
Moreover, 17 papers presented at CASYS'97 received a Best Paper Award bestowed by the International Committees of CASYS'97 and our association CHAOS..

This volume 1 deals with 26 papers of 38 authors coming from 13 different countries in the field of Biological and Ecological Systems, Neural Networks and Systems of Computation.
The introduction of this first issue contains the paper of Walter Freeman (USA) who received a Best Paper Award bestowed by our association CHAOS.

I would like to warmly thank all the remarkable members of the International Program and Scientific Committees of CASYS'97.

Daniel M. Dubois,
Director of CHAOS,
President of CASYS.