SBIA, the Brazilian Symposium on Artificial Intelligence, is a biennial event intended to be the main forum of the AI community in Brazil. The SBIA 2004 was the 17th issue of the series initiated in 1984. Since 1995 SBIA has been accepting papers written and presented only in English, attracting researchers from all over the world. At that time it also started to have an international program committee, keynote invited speakers, and proceedings published in the Lecture Notes in Artificial Intelligence (LNAI) series of Springer (SBIA 1995, Vol. 991, SBIA 1996, Vol. 1159, SBIA 1998, Vol. 1515, SBIA 2000, Vol. 1952, SBIA 2002, Vol. 2507).

SBIA 2004 was sponsored by the Brazilian Computer Society (SBC). It was held from September 29 to October 1 in the city of São Luís, in the northeast of Brazil, together with the Brazilian Symposium on Neural Networks (SBRN). This followed a trend of joining the AI and ANN communities to make the joint event a very exciting one. In particular, in 2004 these two events were also held together with the IEEE International Workshop on Machine Learning and Signal Processing (MMLP), formerly NNLP.

The organizational structure of SBIA 2004 was similar to other international scientific conferences. The backbone of the conference was the technical program which was complemented by invited talks, workshops, etc. on the main AI topics.

The call for papers attracted 209 submissions from 21 countries. Each paper submitted to SBIA was reviewed by three referees. From this total, 54 papers from 10 countries were accepted and are included in this volume. This made SBIA a very competitive conference with an acceptance rate of 25.8%. The evaluation of this large number of papers was a challenge in terms of reviewing and maintaining the high quality of the preceding SBIA conferences. All these goals would not have been achieved without the excellent work of the members of the program committee – composed of 80 researchers from 18 countries – and the auxiliary reviewers.

Thus, we would like to express our sincere gratitude to all those who helped make SBIA 2004 happen. First of all we thank all the contributing authors; special thanks go to the members of the program committee and reviewers for their careful work in selecting the best papers. Thanks go also to the steering committee for its guidance and support, to the local organization people, and to the students who helped with the website design and maintenance, the papers submission site, and with the preparation of this volume. Finally, we would like to thank the Brazilian funding agencies and Springer for supporting this book.

Porto Alegre, September 2004

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