

Preface

The **Adaptive Informatics Research Centre (AIRC, adaptiivisen informatiikan tutkimusyksikkö)** was nominated as one of the national Centers of Excellence (CoE) by the Academy of Finland for the period 2006 - 2011. It is financed by the Academy, Tekes, HUT, and Nokia Co.

The present report covers the activities of AIRC during the years 2008 and 2009. It concentrates on the research projects, but also lists the degrees and awards given to the staff. The achievements and developments of the previous two years have been reported in the Biennial Report 2006 - 2007. The web pages of AIRC, <http://www.cis.hut.fi/> also contain up-to-date texts.

During 2008 - 2009, the AIRC was operating within the new Department of Information and Computer Science (ICS), belonging to the Faculty of Information and Natural Sciences of Helsinki University of Technology. Professor Erkki Oja was the director of AIRC, and Professor Samuel Kaski was the vice-director, with Professors Olli Simula and Juha Karhunen participating in its research projects. In addition, 16 post-doctoral researchers, ca. 45 graduate students, and a number of undergraduate students were working in the AIRC projects in 2009. In terms of the personnel and budget, AIRC comprises about two thirds of the ICS Department.

To briefly list the main numerical outputs of AIRC during the period 2008 - 2009, the laboratory produced 10 D.Sc. (Eng.) degrees and 31 M.Sc. (Eng.) degrees. The number of scientific publications appearing during the period was 176, of which 37 were journal papers. It can be also seen that the impact of our research is clearly increasing, measured by the citation numbers to our previously published papers and books, as well as the number of users of our public domain software packages.

A large number of talks, some of them plenary and invited, were given by our staff in the major conferences in our research field. We had several foreign visitors participating in our research, and our own researchers made visits to universities and research institutes abroad. The total number of visit months both to and from AIRC was 187. The research staff were active in international organizations, editorial boards of journals, and conference committees, including NIPS 2008, AKRR / ESTSP 2008 and ICML / MLG / UAI / COLT 2008. Also, some prizes and honours, both national and international, were granted to members of our staff. All these are detailed in this report.

The second meeting of the Scientific Advisory Board of AIRC was held on May 12 - 13, 2008. The evaluation report written by the members of the Board, Professors Risto Miikkulainen and José C. Príncipe, was quite positive. It begins by stating that “The group ... continues to be a reference in the international research community in the area of adaptive informatics. Therefore, the prestigious status of Center of Excellence bestowed by the Academy of Finland is a well deserved recognition. The vision and scientific impact of the CoE is on par with the best centers in the world in this area, not only in terms of productivity, but primarily because of the quality of its scientific production and in the novelty of its contributions.”

Another evaluation for the whole ICS laboratory was carried out in summer 2009 in the context of the international evaluation of all the departments of the new Aalto University, which started its operations in January 2010. The ICS laboratory won the first place among the 46 departments, shared with the Department of Applied Physics, with an almost perfect numerical score of 24 / 25. In that evaluation, the foreign experts state e.g. that “The research quality of the department is outstanding ...(it) has a long tradition of excellence in research and doctoral education... The citation impact is very impressive ... the department is one of the top five centers in the world in their research area.”

Erkki Oja

Professor
Director,
Adaptive Informatics
Research Centre

Samuel Kaski

Professor
Vice-Director,
Adaptive Informatics
Research Centre