

## Preface

This volume contains the proceedings of the Third International Workshop on Cooperative Information Agents, held in Uppsala, Sweden, July 31–August 2, 1999.

Modern information environments consist mainly of large, distributed and heterogenous resources which are connected via the Internet, Intranets, or virtual private networks. These environments are open and may dynamically change over time. To cope with such information environments means, in particular, to deal with uncertain, incomplete and vague information. The effective handling of uncertainty is critical in designing, understanding, and evaluating computational systems tasked with making intelligent decisions. It is also crucial to the ultimate success and broad application of information agents on the Internet, as well as in any industrial context. Moreover, any comfortable, reliable human-agent interaction via appropriate types of avatars, and the multi-dimensional representation of the information space available for individual users in the Internet, remains a challenging research topic. The same holds for efficient service mediation by systems of collaborating information agents. In particular, the research area of cooperative adaptive and mobile agents for information management on the Internet is still an uncharted territory in agent technology.

The interdisciplinary CIA workshop series covers the whole thematic range of intelligent and cooperative information agents. Each workshop will focus on a few selected themes of particular relevance and current interest. The CIA-99 workshop were built on the success of CIA-98 ('Learning, Mobility and Electronic Commerce for Information Discovery in the Internet', LNAI Series, Vol. 1435), and CIA-97 ('DAI meets Databases', LNAI Series, Vol. 1202). Main topics of the CIA-99 workshop were mobile information discovery, advances in collaboration, mediation and negotiation, as well as personal assistance and human-agent interaction. This workshop features 10 invited lectures and 16 regular papers selected from 46 submissions.

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