

Preface

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The autonomous decision capability embedded in software or robot agents is one of the major issues of Artificial Intelligence. It is a core property for artificial intelligence applications such as e-commerce, serious games, ambient computing, social or collective robotics, companion robots, unmanned vehicles.

Autonomous agents decide and act in a given context or environment and under domain constraints, and possibly interact with other agents or human beings e.g. to share tasks or to execute tasks on behalf of others. It is thus important to define regulation and control mechanisms to ensure sound and consistent behaviours both at the agent's individual level and at the multi-agent level. Organisation models, conversation policies, normative systems, constraints, logical frameworks address the problem of how agents' autonomous behaviours should be controlled, paving the way for formal or pragmatic definitions of agents' Rights and Duties. The issue is all the more important as autonomous agents may encounter new situations, evolve in open environments, interact with agents based on different design principles, act on behalf of human beings and share common resources. For instance: should an autonomous agent take over the control from a human operator? under which circumstances?

The aim of this workshop is to promote discussions and exchanges on the different issues raised by autonomous agents' Rights and Duties and models that can be proposed to represent and reason on Rights and Duties, namely:

- autonomous agents and privacy protection
- rights and duties for learning agents
- authority sharing between autonomous agents and human users or operators
- rights and duties of autonomous agents towards other agents; towards human users or operators
- rights and duties of human users or operators towards autonomous agents (especially robots)
- consistency, conflicts among rights and duties in multi-agent and human/agent systems
- mutual intelligibility, explanations
- rights and duties vs failures
- rights and duties of autonomous agents and ethical issues
- control of autonomous agents within organisations, institutions, normative systems
- sociology and law in the modelling of rights and duties: authority, power, dependence, penalty, contracts
- trust and reputation for autonomous agents regulation
- emergence and evolution of rights and duties
- knowledge representation and models for rights and duties
- reasoning on rights and duties

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- validation of rights and duties in autonomous agents

Ten papers were submitted to RDA2, seven of them have been accepted for presentation after being reviewed by three or four members of the Program Committee. The accepted papers have been organized in two sessions:

1. Ethics and legal framework for rights and duties of autonomous agents (four papers)
2. Rights and duties conflict management by autonomous agents (three papers)

The RDA2 workshop would not have been possible without the support of many people. First of all we would like to thank the members of the Program Committee for providing timely and thorough reviews. We are also very grateful to all the authors who submitted papers to RDA2 Workshop. We would like also to thank Antônio Carlos da Rocha Costa who has accepted to give an invited talk in the workshop. We would like also to thank the organizers of ECAI 2012.

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