

---

CURRICULUM VITÆ  
OF  
PAOLO TORRONI

---

SEPTEMBER 1, 2006

## Personal Details

Name	Paolo Torroni
Date of Birth	March 4, 1973
Gender	Male
Address	Department of Electronics, Computer Science and Systems University of Bologna Viale Risorgimento 2 40136 Bologna, Italy
E-mail	Paolo.Torroni@unibo.it
Phone	+39 051 209 3767
Fax	+39 051 209 3073
Home Page	<a href="http://lia.deis.unibo.it/~pt/">http://lia.deis.unibo.it/~pt/</a>

# Contents

<b>1 Short Biography</b>	<b>4</b>
<b>2 Professional Occupation</b>	<b>5</b>
2.1 Academic Appointments . . . . .	5
2.2 Non-Academic Experience . . . . .	5
<b>3 Education</b>	<b>6</b>
<b>4 Honours and Awards</b>	<b>8</b>
<b>5 Teaching Activity</b>	<b>9</b>
5.1 Academic Courses . . . . .	9
5.2 Advisorship and Examination Activity . . . . .	9
<b>6 Research Goals</b>	<b>11</b>
6.1 Logic-Based Multi-Agent Systems . . . . .	11
Co-ordination of agent reasoning . . . . .	11
Logic and argumentation-based negotiation . . . . .	12
Agent interaction: specification and verification . . . . .	12
6.2 Other Work . . . . .	13
6.3 Current Research Directions . . . . .	13
<b>7 Professional Activities</b>	<b>14</b>
7.1 Events Organization and Management . . . . .	14
7.2 Program Committees . . . . .	15
7.3 Seminars, Talks and Tutorials . . . . .	16
7.4 Refereeing Activities . . . . .	17
7.5 Research Projects . . . . .	17
7.6 Stays Abroad (more than 2 months) . . . . .	18
7.7 Memberships . . . . .	18
<b>8 Selected Bibliography</b>	<b>19</b>
8.1 Edited Books . . . . .	19
8.2 Journals and Magazines . . . . .	19
8.3 PhD Thesis . . . . .	20
8.4 Refereed Conferences . . . . .	20
8.5 Refereed Workshops . . . . .	23
8.6 Miscellanea . . . . .	26
8.7 Software . . . . .	27
<b>9 Other skills</b>	<b>28</b>
<b>10 Referees</b>	<b>29</b>

# 1 Short Biography

I hold a permanent position as Assistant Professor in computing at the Faculty of Engineering of the University of Bologna, in Italy, since March 2005. I am a lecturer for an undergraduate course on fundamentals of computing, which covers computer architectures and programming in C. Before becoming a faculty member, I have worked as a post-doctoral researcher on a number of research projects.

I obtained my PhD in computer science and electronic engineering from the Department of Electronics, Computer Science and Systems (DEIS) of the University of Bologna in 2002, with a thesis on reasoning and interaction in logic-based multi-agent systems. Since I enrolled in the PhD programme, I have focussed my research interests mainly on Artificial Intelligence (AI) issues, specifically on logic-based and agent-based approaches to computing and systems engineering. I have been active in the scientific communities of AI, multi-agents, and logics, by serving as a PC member and reviewer for some of the most prestigious international conferences and journals (IJCAI, ECAI, AAMAS, JELIA, COMMA, JAIR, TPLP, AMAI, JIS, AAIJ), by co-organizing international workshops (the first three editions of DALT in 2003–2005, and two editions of CLIMA, in 2004 and 2005), by presenting my group's work to an international audience through dissemination seminars, invited tutorials and presentations, and by publishing articles on several international conferences and journals. I am co-editor of five books published by Springer, the most recent being a state-of-the-art survey on Computational Logic in Multi-Agent Systems. In 2001, I won the best paper award at a high-standard workshop (ATAL) with over 70 submission. During my involvement in EU-funded and national projects, alongside my theoretical research work I have implemented conspicuous parts of programs mainly using C++, Java, Prolog, and Unix programming. I collaborate with Italian and foreign research groups, and I have been active in organizing and proposing ideas for research projects involving several Italian and foreign institutions.

From 1999 to 2005, I have been a teaching assistant for computer science courses (C, OOP and Java) and operating systems courses (concurrency and Unix programming). Since 2000, I advise students working on undergraduate and MEng projects, and since 2004 I am involved with graduate student advising and examination activities.

My main interests and activities outside of research are music, reading, cooking, photography, biking, swimming, skiing and foreign cultures. I am fluent in English and Portuguese, and have an advanced knowledge of French, Spanish, Turkish, and German.

## 2 Professional Occupation

### 2.1 Academic Appointments

- Since 2005      **Department of Electronics, Computer Science and Systems (DEIS), University of Bologna, Italy.**  
Assistant professor in computing.
- 2002-2005      **Department of Electronics, Computer Science and Systems, University of Bologna, Italy.**  
Post-doctoral researcher in computer science.  
Worked on logic-based multi-agent systems theory and implementation: in 2002, within a project named “implementation of multi-agent architectures for distributed systems planning,” and 2002-2005, within a project named “a computational logical model for the description, analysis and verification of global and open societies of heterogeneous *computees*.”

### 2.2 Non-Academic Experience

- 1998-1999      **University of Bologna, Italy.**  
Project contracts for the design of the new information system of the University of Bologna.  
Analyzed and proposed key elements in the core logical scheme of a large scale information system (the University of Bologna has more 100.000 students and offers around 10.000 courses). Designed, coded in Microsoft Access and tested a prototype implementation of a strategic part of the information system, which has been used for data collection and integration purposes by all faculty administrations of the University of Bologna along a period of two years. Published a technical report (see Selected Bibliography, [M1]).

### 3 Education

1998-2002

**Department of Electronics, Computer Science and Systems, University of Bologna, Italy.**

Obtained PhD in computer science with specialisation in artificial intelligence under the supervision of Prof. Paola Mello and Prof. Maurelio Boari.

Title of dissertation: “Reasoning and interaction in logic-based multi-agent systems.”

Devised a theoretical framework for collaborative agent reasoning based on abductive logic programming. Studied contexts including multi-agent diagnosis, hypothetical reasoning, and dialogue-based negotiation. Studied and proven properties of the framework. Implemented the ALIAS multi-agent system and the LAILA reasoning coordination language using Java and several distributions of Prolog. Experimented on a number of case studies. Produced journal, conference, and workshop papers. Gave presentations at conferences and workshops.

*Schools attended*

- CP-AI-OR school on Optimization, Le Croisic, France (March 2002),
- International School on Computational Logics, Maratea, Italy (September 2000),
- First European Agent Systems Summer School, Utrecht, The Netherlands (July 1999).

*Period abroad (with scholarship)*

Department of Computing, Imperial College London, from September 2000 to March 2001. Research pursued in collaboration with Dr. Francesca Toni and Dr. Fariba Sadri. Main outcomes of this research visit: ATAL 2001 best paper award and seminal work for writing a successful EU project proposal (42 months, 1.9 Ml euro).

1991-1998

**Faculty of Engineering, University of Bologna, Italy.**

Obtained MEng in computer science, with honors, with specialisation in computer systems and information processing, under the supervision of Prof. Dario Maio and Prof. Stefano Rizzi.

Title of thesis: “Contract Net Protocol for planning in robotic systems”.

Experimented with original clustering algorithms. Implemented a simulation for agent-based path planning optimization in multi-agent systems in the context of logistics, using Microsoft Visual C++ and MFC.

*Main courses*

Computer science, calculus, algebra, physics, mechanics, chemistry, thermodynamics, digital and analog electronics, digital

signal processing, digital circuits, operating systems, operations research, telecommunications networks, computer networks, programming languages, artificial intelligence, databases and advanced information systems, security, economics and management.

*Year abroad (with studentship)*

Instituto Superior Técnico, Lisbon, Portugal. Taken 5 exams (in Portuguese).

1992-1994

**Conservatory “G.B. Martini” of Bologna, Italy.**

Music composition school, with M.o Biancamaria Furgeri. Gained admission after a (very competitive) public contest.

*Main courses*

Piano, composition, harmony and counterpoint, sight-playing and transposition, sight-reading, history of music.

1985-1991

**Liceo Classico “M. Minghetti” of Bologna, Italy.**

Obtained high school diploma in classical studies.

*Main subjects*

Italian literature, Latin and ancient Greek language and literature, English, arts, philosophy, history, mathematics, science.

## 4 Honours and Awards

- |           |  |
|-----------|--|
| 2002-2005 | 3-year research grant awarded by the University of Bologna and the European Union, for the project titled: “A computational logic model for the description, analysis and verification of global and open societies of heterogeneous <i>computees</i> .” |
| 2001-2002 | 1-year resarch grant awarded by the University of Bologna, for the project titled: “Implementation of multi-agent architectures for planning in distributed systems.”  |
| 2001      | Best Paper Award at ATAL 2001, the Eight International Workshop on Agent Theories, Applications and Languages (over 70 submissions, 40% acceptance rate).  |
| 1998-2001 | 3-year PhD scholarship in computer science and electronic engineering awarded by the University of Bologna.  |
| 1995-2002 | Several grants (Erasmus, Giovani Ricercatori, Marco Polo) and other fellowships for research and study visits abroad.  |
| 1992-1994 | Admissions and grants to attend piano and music composition schools at the Conservatory of Bologna.  |



## 5 Teaching Activity

### 5.1 Academic Courses

- Since 2005      **Faculty of Engineering, University of Bologna, Italy.**  
Lecturer in the Computing Fundamentals course for Electric Engineering and Automation Engineering.<sup>1</sup> Prepared the course and lectured for approximately 40 hours in lecture theaters to classes of 80 to 130 students. The syllabus includes basic notions of problem analysis, algorithms, flow charts, computer architectures, programming environment and languages. A great share of the course is devoted to teaching how to program in C.
- 2004-2005      **Faculty of Engineering, University of Bologna, Italy.**  
Teaching assistant for the Computer Programming course of prof. S. Contadini. Prepared slides and lectured for approximately 30 hours in computer labs and in lecture theaters to classes of around 80 students. Taught C programming basics. Conducted oral exams.
- 2000-2004      **Faculty of Engineering, University of Bologna, Italy and Nettuno Consortium, Italy.**  
Tutor for the Operating Systems courses of prof. A. Ciampolini and of prof. M. Boari. Prepared material and taught Unix shell and system call basic programming to classes of 10 to 200 students, for 10 hours per course per year. Prepared, conducted and marked exams.
- 2000            **Italian Authority for Informatics (AIPA), Italy.**  
Tutor for the Operating Systems–Open Systems course of prof. M. Boari. Prepared slides of the course. Provided on-line and off-line remote tutoring on operating systems.
- 1999            **Faculty of Engineering, University of Bologna, Italy.**  
Teaching assistant for two Computing Fundamentals courses of prof. A. Ciampolini and prof. A. Omicini. Prepared material and taught computer science programming in a lab to classes of around 80 students, for 20 hours per course per year. Tutored student on a weekly basis. Prepared and marked exams.

### 5.2 Advisorship and Examination Activity

- Since 2004      Co-advisor of PhD students at the Department of Electronics, Computer Science and Systems of the University of Bologna, Italy.
- 2005            External referee in the PhD examination committee of a PhD thesis on temporal logic-based multi-agent system specification and execution at the University of Liverpool, UK.

---

<sup>1</sup>Course Home Page: <http://lia.deis.unibo.it/Courses/FondA0506-ELE/>

1999-now

Advisor of several students working on undergraduate and MEng projects in computer science, mostly on topics related to artificial intelligence and operating systems. Served as a committee member of several MEng examinations.

## 6 Research Goals

My research interests are in the broad area of Artificial Intelligence (AI), and in particular focus on intelligent autonomous agents reasoning and coordination, and Multi-Agent Systems (MAS). Below, I present my ongoing work in Logic-Based Multi-Agent Systems and I introduce my other research interests.

### 6.1 Logic-Based Multi-Agent Systems

MAS are communities of problem-solving entities that can perceive and act upon the environment to achieve their individual goals as well as joint goals. Work on such systems integrates many technologies and concepts in AI and other areas of computing as well as other disciplines. Over recent years, the agent paradigm gained popularity, due to its applicability to a full spectrum of domains, from search engines to aids to electronic commerce and trade, e-procurement, recommendation systems, distributed diagnosis, simulation and routing, knowledge management and distributed systems configuration. In such domains, a centralized approach based on a single solver in charge of managing all aspects of a distributed computation would be inadequate. A multi-agent approach, instead, seems to be more promising in that it would allow for collaboration of multiple solvers, which will coordinate with each other and exhibit autonomy of reasoning and decision making in solving relevant sub-tasks.

Although commonly implemented by means of imperative languages, mainly for reasons of efficiency, agent-related concepts have recently increased their influence in the research and development of computational logic-based systems [IJ5,IJ8]. Computational logic provides a general framework for studying syntax, semantics and procedures for agents. Besides, it lends itself to the specification and verification agent interaction, and to the implementation and description of environments, tools, and standards for MAS.

In the context of logic-based MAS, my research activity has focussed on three main aspects: coordination of agent reasoning, agent negotiation, and agent interaction.

**Co-ordination of agent reasoning** One of the main engineering principles of MAS is locality. Each agent is responsible for operations within a limited domain, and will base most of his reasoning on domain-specific knowledge. However, when many agents interact with each other, each one operating based on its own knowledge and beliefs, it may become necessary for agents to take into account information and results produced by other agents. It is then necessary to extend classical reasoning techniques so as to enable agents to cope with multiple and incomplete knowledge, and to interact with each other, for information sharing and possibly for consistency maintenance purposes. In this context, abduction is a well known hypothetical reasoning mechanism in AI aimed at explaining observations or guessing causes of effects, based on an incomplete knowledge.

Agents characterised by exhibiting abductive reasoning capabilities are called abductive agents. Since my doctoral research activity started [PhD], I have been investigating different interaction patterns for abductive agents. I have been working on extending existing abductive logic programming-based proof-procedures towards multi-agent reasoning and on the application of the devel-

oped techniques to different scenarios. Among the main results achieved in this direction are the Abductive LogIc AgentS architecture (ALIAS) presented in [IJ2], and the language LAILA, defined in [NJ1,IJ1] to coordinate the reasoning activity of multiple abductive agents. I have contributed to the implementation of ALIAS and LAILA [S1,NC1], and to their testing in several application domains, including negotiation over resources [IJ2], distributed diagnosis [IW3], recommendation systems [IW2,IW1], judicial evaluation of criminal evidence [IJ4]. Finally, I have contributed to extending ALIAS/LAILA towards coordination of constraint-based reasoning in agent systems [IC4,IC2].

**Logic and argumentation-based negotiation** Negotiation for resource achievement is one of the most extensively studied areas in multi-agent research. It has been approached from many perspectives, including game theory, auction theory, and more recently argumentation. Many agent architectures and frameworks for negotiation are only theoretical studies or practical implementations.

The main aims of my work on logic- and argumentation-based negotiation have been to provide a well-specified, general purpose agent framework, with a rigorous operational semantics defined to bridge the gap between specification and implementation. Following Kowalski and Sadri's pioneering work,<sup>2</sup> my colleagues and I have identified abduction as the main form of reasoning to reconcile knowledge coming from the outside of agents (through negotiation) with internal goals and needs.

I pursued this work mainly in collaboration with the Agents and Logic Programming groups of Imperial College London and of the University of Cyprus. I started working on the definition of an argumentation-based agent dialogue framework [NC2] during a research visit to Imperial College London in 2000. We understood that most available argumentation-based negotiation proposed abstract frameworks, in which agents were not implemented but only represented by their knowledge bases. Protocols were mostly implemented by data structures based on state automata. Considering abduction as an inference mechanism able to support argumentation processes, we proposed a new approach based on abductive logic agents [IW5], which gained a best paper award at a prestigious event (ATAL). Since 2001, such a framework has been refined and extended in several directions, and presented at the main AI, logics, and agent conferences [IC11,IC3,IC7,IC5] and workshops [IW4,NW3]. Based on the seminal work of 2000 and 2001, I have actively contributed to the preparation and writing of a European project proposal, which has been accepted in Fall 2001. From 2002, my research activity has mainly focussed on the goals of the EU-funded "Societies Of Computees" (SOCS) project, especially for what concerns specification and verification of agent interaction.

**Agent interaction: specification and verification** Agent Communication Languages (ACL) and Interaction Protocols (IP) are generally defined for heterogeneous agents to effectively co-operate with each other. The study of ACL and IP represents nowadays a major research direction in MAS, and they are well known for being a well suited domain for formal approaches. The two

---

<sup>2</sup>R.A. Kowalski and F. Sadri, "From Logic Programming Towards Multi-Agent Systems", *Annals of Mathematics and Artificial Intelligence*, **25(3/4)**, pp. 391-419, Baltzer Science Publishers, 1999.

major schools of thought in this area tend to interpret agent communication either from a motivational and causal perspective, or from a social and open perspective. The former aims to link the semantics of agent interaction to some agent architecture, grounded on the notion of mental states, whereas the latter seeks to keep such semantics independent of the agents' internals, and "open" to its application to societies of heterogeneous autonomous agents. Following this second main stream, the SOCS social model developed within the SOCS project, to which I have actively contributed, has been firstly presented [NW2] in association with deontic categories of social obligation and commitment.

During the course of the SOCS project, I have worked on the definition of the SOCS social model in terms of declarative semantics, initially with a deontic flavour [IC6,IW8], and subsequently with an abductive interpretation [NC3], and in terms of operational semantics [NC5,IW12,EB5,M8]. I have contributed towards the implementation of the SOCS social model, called the "SOCS Social Infrastructure" (SOCS-SI) [S2,IJ6,IC10,M4]. Finally, I have contributed to investigating the application of SOCS-SI to a range of domains. Among them, I have considered protocols for resource sharing [IW9], combinatorial auction protocols [NW5,NJ2], protocols for electronic transactions [IC9] and other protocols including human-to-human e-mail-based IP and security protocols [IW16]. Recently my group and I provided a mapping of the SOCS social model onto deontic and normative frameworks [IJ7], we extended the SOCS-SI framework towards automated verification of agent interaction [IJ3,IC9], and we started the development of a methodology for protocol design whose main driver is property achievement [IW13].

## 6.2 Other Work

Alongside my research on Logic-Based MAS, I have also contributed to the area of generative and reactive planning [IC1,NW1] in collaboration with the constraint programming group of DEIS. Together with colleagues, I have investigated the combination of logics and meta-heuristics for multi-agent resource allocation [IW7]. Finally, I have worked on the implementation of abductive proof-procedures using Constraint Logic Programming [IC8,NW4], and to the definition of new models of agent interaction and information sharing [IW10,IW11].

## 6.3 Current Research Directions

My current research activity focusses on declarative specification and formal verification of MAS, especially in relation to agent interaction. Recent work done within the SOCS project has shown a great potential in declarative technologies and computational logic-based approaches. I am interested in defining a unified and open framework for MAS specification, deployment, verification, based on computational logic, and its application to artificial societies, ambient intelligence, elder care and e-care, cognitive systems, information management, and web services choreographies [IW18,IW19]. Recently, I have started working again on argumentation, with a special focus on agreements and argument over actions [IC14].

## 7 Professional Activities

### 7.1 Events Organization and Management

- Member of the Steering Committee since 2002 and co-organizer of the **International Workshop on Computational Logic in Multi-Agent Systems (CLIMA)** in 2004 and 2005 [EB3,EB5].<sup>3</sup> Articles presented at previous editions of CLIMA have been published in journal special issues (Electronic Notes in Theoretical Computer Science vol. 70(5) in 2002 and Annals of Mathematics and Artificial Intelligence vol. 37(1-2) in 2003 and vol. 42(1-3) in 2004). Since CLIMA IV, the post-proceedings of the workshop are published by Springer. Together with the other co-organizers, I have selected revised papers from CLIMA V (2004) and CLIMA VI (2005) and invited new papers, to edit two volumes in the Springer *Lecture Notes in Artificial Intelligence* series ([EB3] and [EB5], published in the state-of-the-art surveys subline of LNAI). CLIMA VI, a three-day event and the most successful edition to date, attracted more than 30 submissions and around 60 delegates.
- Co-founder and member of the Steering Committee of the **International Workshop on Declarative Agent Languages and Technologies (DALT)**. Co-organizer of DALT in 2003, 2004 and 2005 [EB1,EB2,EB4].<sup>4</sup> DALT is held in conjunction with AAMAS, the International Joint Conference on Autonomous Agents and Multi-Agent Systems, since its start in 2003. DALT attracts around 30 submissions and 40 delegates every year, and it is one of the most stable and successful satellite events of AAMAS. The best articles presented at DALT are published by Springer. Together with the other co-organizers, I have selected, revised, and invited papers from the workshop and edited three volumes in the Springer *Lecture Notes in Artificial Intelligence* series [EB1,EB2,EB4].
- Secretary of the **Italian Association for Logic Programming (GULP)**,<sup>5</sup> and member of its management board since December 2003. GULP gathers around 130 members nationwide.
- Co-organizer of the **International Workshop on Languages and Development Tools for Multi-Agent Systems (LADS)**, together with Mehdi Dastani, João Leite, and Amal El Fallah Seghrouchni, to be held as a part of *Multi-Agent Logics, Languages, and Organisations—Federated Workshops (MALLOW'07)* within Durham Agents '007<sup>6</sup> on September 3-7, 2007 in Durham, UK.
- Promoter of the AgentLink III Technical Forum Group on Programming Multi-Agent Systems (ProMAS TFG) in 2004.

---

<sup>3</sup>CLIMA V: <http://centria.di.fct.unl.pt/~jleite/climaV/index.htm>  
CLIMA VI: <http://clima.deis.unibo.it/>

<sup>4</sup>DALT 2003: <http://centria.di.fct.unl.pt/~jleite/dalt03/index.htm>  
DALT 2004: <http://centria.di.fct.unl.pt/~jleite/dalt04/index.htm>

DALT 2005: <http://www.doc.ic.ac.uk/~ue/DALT-2005/>

<sup>5</sup>GULP: <http://lia.deis.unibo.it/gulp/>

<sup>6</sup>Durham Agents '007: <http://www.dur.ac.uk/r.bordini/DurhamAgents007/>

- Co-chair of the working group on “Logic-based implementation of negotiation in agents” at Dagstuhl Seminar 2481 on “Programming multi-agent systems based on logic,”<sup>7</sup> held on Nov 24-29, 2002.
- Organizer of the panel for CLIMA 2001 and CLIMA 2002 [M2].
- Member of the local organization committee of the First International Joint Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2002) held in Bologna, in July 2002. The conference attracted more than 600 delegates worldwide.

## 7.2 Program Committees

- Member of the Reviewing Committee of the ICLP 2006 Doctoral Consortium (DC). ICLP DC 2006 is part of the 22nd International Conference on Logic Programming;
- Member of the Program Committee of the Ninth and Tenth European Biennial Conference on Logics in Artificial Intelligence (JELIA 2004 and 2006). The 2004 edition was held in co-location with CLIMA V in 2004 and received around 140 submissions;
- Member of the Program Committee of the First International Conference on Computational Models of Argument (COMMA 2006);
- Member of the Program Committee of the Seventeenth European Conference on Artificial Intelligence (ECAI 2006), to be held in Trento in July 2006. ECAI receives around 800 submissions every second year;
- Member of the Program Committee of the International Joint Conference on Autonomous Agents and Multi-Agent Systems, since its second edition (AAMAS 2003, 2004, 2005, and 2006). AAMAS receives yearly around 600 submissions, and is attended by a similar number of delegates;
- Reviewer of the Nineteenth International Joint Conference on Artificial Intelligence (IJCAI 2005), held in Edinburgh in August 2005. IJCAI receives around 800 submissions every second year;
- Member of the Program Committee of the First and Second European Workshop on Multi-Agent Systems (EUMAS 2003 and 2004). EUMAS receives yearly around 150 submissions, and is attended by a similar number of delegates;
- Member of the Program Committee of the following international workshops with formal post-proceedings:
  - International Workshop on Programming Multi-Agent Systems: Languages and Architectures (ProMAS 2003, 2004, 2005, and 2006). Proceedings published by Springer;
  - International Workshop on Argumentation in Multi-Agent Systems (ArgMAS 2004, 2005, and 2006). Proceedings published by Springer;

---

<sup>7</sup>Dagstuhl seminar 2481: <http://www.dagstuhl.de/02481/>

- International Workshop on Computational Logic in Multi-Agent Systems (CLIMA 2002, 2003, 2004, 2005, and 2006). Proceedings published by Springer;
- International Workshop on Agents and Multi-Agent Systems, from Theory to Application (AMTA 2006). Proceedings published by Springer;
- AI\*IA/TABOO Joint Workshop “From Objects to Agents”: Simulation and Formal Analysis of Complex Systems (WOA 2005). Proceedings published by Pitagora. AI\*IA/TABOO Joint Workshop “From Objects to Agents”: Sistemi GRID, Peer-to-peer e Self-\* (WOA 2006);
- Workshop on Conceptual Modelling for Agents (CoMoA 2004). Proceedings published by Springer;
- Ninth IEEE International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises, (WET ICE 2000). Proceedings published by IEEE Press;
- Member of the Program Committee of the following national workshops:
  - Convegno Italiano di Logica Computazionale (CILC 2005 and 2006);
  - Gruppo di lavoro dell’AI\*IA su Rappresentazione della Conoscenza e Ragionamento Automatico (RCRA 2005).

### 7.3 Seminars, Talks and Tutorials

- |          |  |
|----------|--|
| 2005     | <p>“Declarative specification of agent interaction and verification of conformance: The SOCS-SI approach,” seminar, University of Nottingham, UK, November 18, 2005.</p> <p>“Evaluating Systems of Intelligent Agents”, talk, City University of London, UK, July 27, 2005.</p>          |
| 2004     | <p>“The SOCS Social Framework”, seminar, New University of Lisbon, Portugal, October 2004.</p> <p>“An Introduction to Computational Logic-Based Multi-Agent Systems,” 2-hour tutorial, Italian Computational Logics Convention (CILC 2004), Parma, June 16, 2004. In Italian.</p>        |
| 2003     | <p>“An Introduction to Logic-Based Multi-Agent Systems,” 4-hour tutorial, Eighth Italian Congress on Artificial Intelligence, AI*IA 2003, Pisa, September 23, 2003. In English.</p>  |
| 2002     | <p>“Programming multi-agent systems based on logic,” invited talk, Dagstuhl Seminar 2481.</p>  |
| 1999-now | <p>Major achievements in the research and work-in-progress talks given at several academic institutions. Paper presentations at international conferences and workshops, including COMMA 2006 (Liverpool, UK), ALPSWS 2006 (Seattle, WA, US), ESAW 2005 (Izmir, Turkey), WETICE 2004</p> |



(Modena, Italy), DALT 2003 (Melbourne, Australia), JELIA 2002 (Cosenza, Italy), AAMAS 2002 (Bologna, Italy), ATAL 2001 (Seattle, WA, US), UKMAS 2001 (Liverpool, UK), ESAW 2001 (Prague, Czech Republic), ISMIS 2000 (Charlotte, NC, US), CLIMA 2000 (London, UK), MAS-LP 1999 (Las Cruces, NM, US), COCL 1999 (Paris, France). Panel presentations at international events, including ATAL in 2001 (panel on agent negotiation) and AgentLink TFG in June 2004 (panel on agent communication languages).

## 7.4 Refereeing Activities

Reviewer of papers submitted to international journals (Journal of Artificial Intelligence Research, Theory and Practice of Logic Programming, Annals of Mathematics and Artificial Intelligence, Journal of Intelligent Systems, Applied Artificial Intelligence), conferences (IJCAI 2005, ECAI 2004, AAMAS 2002, ICLP<sup>8</sup> 2002 and 2004, SAC<sup>9</sup> 2000 and 2001, AI\*IA<sup>10</sup> 2001, 2003, and 2005, IEA-AIE<sup>11</sup> 2005, MICAI<sup>12</sup> 2006), and national and international workshops related to logics and multi-agent systems.

## 7.5 Research Projects

- 2004-2007 MIUR national project named “Development and verification of multi-agent systems based on logic (MASSiVE)” in 2004-2005 and “Agent interaction protocol specification and verification (MASSiVE-II)” in 2006-2007, both coordinated by Alberto Martelli (duration: 2+2 years, 4 partners in Italy, total funding: 200 K euro).<sup>13</sup>
- 2002-2005 Fifth EU Framework project named “Societies Of Computees: a computational logic model for the description, analysis and verification of global and open societies of heterogeneous *computees* (SOCS)”, coordinated by Francesca Toni.  
<http://lia.deis.unibo.it/research/socs>  
Actively participated in the writing of the project proposal and in the management of project activities for the node of Bologna. Actively pursued research objectives with all other project partners, through research visits and remote collaboration (project duration: 42 months, 6 partners in 3 countries, total funding: 1,9 ML euro).<sup>14</sup>

---

<sup>8</sup>International Conference of Logic Programming.

<sup>9</sup>Symposium on Applied Computing.

<sup>10</sup>Italian Conference on Artificial Intelligence.

<sup>11</sup>International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems.

<sup>12</sup>Mexican International Conference in Artificial Intelligence.

<sup>13</sup>Project results presented during a special track at WOA 2005, the AI\*IA/TABOO workshop “from Objects to Agents”, held in Camerino, Italy, November 14-16, 2005.

<sup>14</sup>Project results presented during several GC meetings; final SOCS dissemination event as a special track at CLIMA VI, the workshop on Computational Logic in Multi-Agent Systems, held in London, UK, June 27-29, 2005 [EB5].

1998-2000 MURST national project named “Intelligent agents: interaction and knowledge acquisition,” coordinated by Franco Turini.

## 7.6 Stays Abroad (more than 2 months)

2003 Department of Information Science, University of Uppsala, Sweden (2 months: academic visitor, with grant).

2002 Department of Computing, Imperial College London, UK (3 months: academic visitor, with grant). Research visit in the scope of the SOCS project.

2000-2001 Department of Computing, Imperial College London, UK (6 months: occasional PhD student, with grant).

1995-1996 Instituto Superior Técnico, Technical University of Lisbon, Portugal (12 months: Erasmus student, with grant).

## 7.7 Memberships

- ECCAI (European Coordinating Committee for Artificial Intelligence) through the membership of AI\*IA (Italian Artificial Intelligence Society);
- GULP (Italian Logic Programming Interest Group);
- ACM and IEEE.

## 8 Selected Bibliography

### 8.1 Edited Books

- [EB5] “Computational Logic in Multi-Agent Systems. Sixth International Workshop, CLIMA VI, London, UK, June 27-29, 2005. Revised selected and invited papers.” Vol. **3900** of *Lecture Notes in Artificial Intelligence, State-of-the-art Surveys*. Francesca Toni and Paolo Torroni, eds., 2006. XVII, 437 p., Coloured Softcover. Heidelberg: Springer-Verlag. ISBN: 3-540-33996-5.
- [EB4] “Declarative Agent Languages and Technologies. Third International Workshop, DALT 2005, Utrecht, The Netherlands, July 25, 2005, Revised selected and invited papers.” Vol. **3904** of *Lecture Notes in Artificial Intelligence*. Matteo Baldoni, Ulle Endriss, Andrea Omicini, and Paolo Torroni, eds., 2006. XII, 245 p., Softcover. Heidelberg: Springer-Verlag. ISBN: 3-540-33106-9.
- [EB3] “Computational Logic in Multi-Agent Systems. Fifth International Workshop, CLIMA V, Lisbon, Portugal, September 29-30, 2004. Revised Selected and Invited Papers.” João Leite and Paolo Torroni, eds. Vol. **3487** of *Lecture Notes in Artificial Intelligence*. João Leite and Paolo Torroni, eds., 2005. XII, 281 p., Softcover. Heidelberg: Springer-Verlag. ISBN: 3-540-28060-X.
- [EB2] “Declarative Agent Languages and Technologies. Second International Workshop, DALT 2004, Columbia University, New York City, July 19, 2004, Revised Selected and Invited Papers.” Vol. **3476** of *Lecture Notes in Artificial Intelligence*. João Leite, Andrea Omicini, Paolo Torroni, and Pinar Yolum, eds., 2005. XII, 289 p. Softcover. Heidelberg: Springer-Verlag. ISBN: 3-540-26172-9.
- [EB1] “Declarative Agent Languages and Technologies. First International Workshop, DALT 2003, Melbourne, Australia, July 15, 2003, Revised Selected and Invited Papers.” Vol. **2990** of *Lecture Notes in Artificial Intelligence, Hot Topics*. João Leite, Andrea Omicini, Leon Sterling, and Paolo Torroni, eds., 2004. XII, 281 p. Colour cover. Heidelberg: Springer-Verlag. ISBN: 3-540-22124-7.

### 8.2 Journals and Magazines

- [IJ8] Michael Fisher, Rafael Bordini, Benjamin Hirsch, and Paolo Torroni. “Computational Logics and Agents.” To appear in *IEEE Computational Intelligence Magazine*, IEEE Computational Intelligence Society, in 2007.
- [IJ7] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, Giovanni Sartor, and Paolo Torroni. “Mapping Deontic Operators to Abductive Expectations.” In *Journal of Computational and Mathematical Organization Theory (CMOT)*, **12(2-3)**, pp. 205-225. Springer Science+Business Media B.V., October 2006. Special issue edited by Guido Boella, Leendert van der Torre and Harko Verhagen: *Normative Multiagent Systems*. Extended version of [NC4].

- [IJ6] Marco Alberti, Federico Chesani, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Compliance Verification of Agent Interaction: a Logic-Based Tool.” In *Applied Artificial Intelligence*, **20(1-2)**, pp. 133-157. Taylor & Francis, February-April 2006. Special issue edited by Paolo Petta and Jörg P. Müller: *Best of AT2AI-4*. Extended version of [IC10].
- [IJ5] Paolo Torroni. “Computational Logic in Multi-Agent Systems: recent advances and future directions.” *Annals of Mathematics and Artificial Intelligence*, **42(1-3)**, pp. 293-305. Kluwer Academic Publishers, September 2004.
- [IJ4] Anna Ciampolini and Paolo Torroni. “Using Abductive Logic Agents for Modeling the Judicial Evaluation of Criminal Evidence.” *Applied Artificial Intelligence*, **18(3-4)**, pp. 251-275. Taylor & Francis, March-April 2004.
- [IJ3] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Specification and Verification of Agent Interactions using Social Integrity Constraints.” *Electronic Notes in Theoretical Computer Science*, **85(2)**, Elsevier Science, October 2003.
- [IJ2] Anna Ciampolini, Evelina Lamma, Paola Mello, Francesca Toni, and Paolo Torroni. “Co-operation and competition in ALIAS: a logic framework for agents that negotiate.” *Annals of Mathematics and Artificial Intelligence*, **37(1-2)**, pp. 65-91. Kluwer Academic Publishers, January 2003.
- [IJ1] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “LAILA: a language for coordinating abductive reasoning among logic agents.” *Computer Languages*, **27(4)**, pp. 137-161. Elsevier Science, December 2001.
- [NJ2] Marco Alberti, Federico Chesani, Marco Gavanelli, Alessio Guerri, Evelina Lamma, Paola Mello and Paolo Torroni. “Applicazione dei vincoli di integrità sociali come strumento dispecifica delle interazioni in aste combinatorie.” *Intelligenza Artificiale*, Anno **II(1)**, pp. 22-29. Marzo 2005.
- [NJ1] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “Expressing collaboration and competition among abductive logic agents.” *AI\*IA Notizie*, Anno **XIII(3)**, pp. 19-24. Settembre 2000.

### 8.3 PhD Thesis

- [PhD] Paolo Torroni. “Reasoning and interaction in logic-based multi-agent systems.” Department of Electronics, Computer Science and Systems, University of Bologna, Italy. DEIS Technical Report LIA-005-02, Università di Bologna, LIA Series No 58, February 2002 (171 pages).

### 8.4 Refereed Conferences

- [IC14] Paolo Torroni. “Multi-agent agreements about actions through argumentation.” In Paul E. Dunne and Trevor J.M. Bench-Capon, eds., *Proceedings of the 1st International Conference on Computational Models of*

*Argument (COMMA 2006)*, The University of Liverpool, UK, September 11-12, 2006. Vol. 144 of *Frontiers in Artificial Intelligence and Applications*, pp. 334-339. IOS Press, August 2006.

- [IC12] Federico Chesani, Marco Gavanelli, Marco Alberti, Evelina Lamma, Paola Mello, and Paolo Torroni. “Specification and Verification of Agent Interaction Using Abductive Reasoning.” In [EB5], pp. 256–277, 2006.
- [IC13] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Abduction with Hypotheses Confirmation.” In Fausto Giunchiglia, ed., *Proceedings of the 19th Biennial International Joint Conference on Artificial Intelligence, IJCAI 2005, Edinburgh, Scotland, July 30-August 5, 2005*, pp. 1545-1546. AAAI Press.
- [IC11] Antonis Kakas, Paolo Torroni, and Neophytos Demetriou. “Agent Planning, Negotiation, and Control of Operation.” In Ramon López de Mántaras and Lorenza Saïtta, eds., *Proceedings of the 16th Biennial European Conference on Artificial Intelligence (ECAI 2004), Valencia, Spain, August 22-27, 2004*, pp. 28-32. IOS Press.
- [IC10] Marco Alberti, Federico Chesani, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Compliance Verification of Agent Interaction: a Logic-Based Tool.” In Robert Trappl, ed., *Proceedings of the 17th European Meeting on Cybernetics and Systems Research (EMCSR 2004), Vienna, Austria, April 13-16, 2004*, Vol. II, pp. 570-575. Austrian Society for Cybernetic Studies.
- [IC9] Marco Alberti, Davide Daolio, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Specification and Verification of Agent Interaction Protocols in a Logic-based System.” In Hisham M. Haddad, Andrea Omicini, Roger L. Wainwright, and Lorie M. Liebrock, eds., *Proceedings of the 19th ACM Symposium on Applied Computing (SAC 2004), Nicosia, Cyprus, March 14-17, 2004*. pp. 72-78. ACM Press.
- [IC8] Marco Gavanelli, Evelina Lamma, Paola Mello, Michela Milano, and Paolo Torroni. “Interpreting abduction in CLP.” In Luigi Palopoli, ed., *APPIA-GULP-PRODE Joint Conference on Declarative Programming (AGP’03), Reggio Calabria, Italy, September 3-5, 2003*. Università Mediterranea di Reggio Calabria.
- [IC7] Fariba Sadri, Francesca Toni, and Paolo Torroni. “Minimally intrusive negotiating agents for resource sharing.” In Georg Gottlob and Toby Walsh, eds., *Proceedings of the 18th Biennial International Joint Conference on Artificial Intelligence (IJCAI 2003), Acapulco, Mexico, August 12-15, 2003*, pp.796-804. AAAI Press.
- [IC6] Marco Alberti, Anna Ciampolini, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “A Social ACL Semantics by Deontic Constraints.” In Vladimír Marík, Jörg Müller, and Michal Pechoucek, eds., *Multi-Agent Systems and Applications III. Proceedings of the 3rd International Central and Eastern European Conference on Multi-Agent Systems, CEEMAS 2003, Prague, Czech Republic, June 16-18 2003*. LNAI 2691, pp. 204-213. Springer-Verlag.

- [IC5] Fariba Sadri, Francesca Toni, and Paolo Torroni. “An abductive logic programming architecture for negotiating agents.” In Sergio Flesca, Sergio Greco, Giovambattista Ianni, and Nicola Leone, eds., *Proceedings of the 8th European Conference on Logics in Artificial Intelligence (JELIA’02), Cosenza, Italy, September, 23-26, 2002*. LNAI **2424**, pp. 419-431. Springer-Verlag.
- [IC4] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “A Proof-system for the Safe Execution of Tasks in Multi-Agent Systems.” In Sergio Flesca, Sergio Greco, Giovambattista Ianni, and Nicola Leone, eds., *Proceedings of the 8th European Conference on Logics in Artificial Intelligence (JELIA’02), Cosenza, Italy, September, 23-26, 2002*. LNAI **2424**, pp. 14-26. Springer-Verlag.
- [IC3] Paolo Torroni. “A study on the termination of negotiation dialogues.” In Cristiano Castelfranchi and W. Lewis Johnson, eds., *Proceedings of the 1st International Joint Conference on Autonomous Agents and Multi-agent Systems (AAMAS 2002), Bologna, Italy, July 2002*, pp. 1223-1230. ACM Press.
- [IC2] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “Coordinating the safe execution of tasks in a constrained multi-agent system.” In Cristiano Castelfranchi and W. Lewis Johnson, eds., *Proceedings of the 1st International Joint Conference on Autonomous Agents and Multi-agent Systems (AAMAS 2002), Bologna, Italy, July 2002*, pp. 940-941. ACM Press. Extended version of [IW6].
- [IC1] Rosy Barruffi, Michela Milano, Paolo Torroni. “Planning while executing: a constraint-based approach.” In Sasha Ohsuga and Zbigniew W. Ras, eds., *Foundations of Intelligent Systems, Proceedings of ISMIS’00*, LNAI **1932**, pp. 228-236. Springer-Verlag, 2000.
- [NC5] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “The SCIFF abductive proof-procedure.” In Stefania Bandini and Sara Manzoni, eds., *AI\*IA 2005: Advances in Artificial Intelligence: 9th Congress of the Italian Association for Artificial Intelligence, Milan, Italy, September 21-32, 2005. Proceedings*, LNAI **3673**, pp. 135-147. Springer-Verlag, 2005.
- [NC4] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, Giovanni Sartor, and Paolo Torroni. “Mapping Deontic Operators to Abductive Expectations.” In *Proceedings of the 1st International Symposium on Normative Multiagent Systems (NorMAS 2005), AISB 2005, Hertfordshire, Hatfield, UK, April 2005*.
- [NC3] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “An Abductive Computational Model for Open Societies.” In Angelo Cappelli and Franco Turini, eds., *Proceedings of the 8th National Congress on Artificial Intelligence, AI\*IA 2003, Pisa, Italy, September 23-26, 2003*. LNAI **2829**, pp. 287-299. Springer-Verlag.
- [NC2] Fariba Sadri, Francesca Toni, and Paolo Torroni. “Logic agents, dialogues and negotiation: an abductive approach.” In Kosthas Stathis and Michael

Schroeder, eds., *Proceedings of the Symposium on Information Agents for E-Commerce, AISB'01, York, UK, March 2001*.

- [NC1] Anna Ciampolini, Evelina Lamma, Paola Mello, Cesare Stefanelli and Paolo Torroni. “An implementation for Abductive LogIc AgentS.” In Paola Mello and Evelina Lamma, eds., *AI\*IA 99: Advances in Artificial Intelligence: 6th Congress of the Italian Association for Artificial Intelligence, Bologna, Italy, September 1999. Selected Papers*, LNAI **1792**, pp. 61-71. Springer-Verlag, 2000.

## 8.5 Refereed Workshops

- [IW19] Marco Alberti, Federico Chesani, Evelina Lamma, Marco Gavanelli, Paola Mello, Marco Montali, Sergio Storari, and Paolo Torroni. “Computational logic for run-time verification of web services choreographies: exploiting the SOCS-SI tool.” In Mario Bravetti and Gianluigi Zavattaro, eds., *Proceedings of the 3rd International Workshop on Web Services and Formal Methods (WS-FM'06), Vienna, Austria, September 8-9, 2006*. To appear in the Springer-Verlang LNCS series.
- [IW18] Marco Alberti, Federico Chesani, Evelina Lamma, Marco Gavanelli, Paola Mello, Marco Montali, and Paolo Torroni. “Policy-based reasoning for smart web service interaction.” In Axel Polleres, Stefan Decker, Gopal Gupta, and Jos de Bruijn, eds., *Proceedings of the 1st International Workshop on Applications of Logic Programming in the Semantic Web and Semantic Web Services (ALPSWS 2006), Seattle, WA, USA, August 16, 2006*.
- [IW17] Marco Alberti, Anna Ciampolini, Federico Chesani, Paola Mello, Marco Montali, Sergio Storari and Paolo Torroni. “Protocol specification and verification by using computational logic.” In Flavio Corradini, Flavio De Paoli, Emanuela Merelli, and Andrea Omicini, eds., *Proceedings of WOA 2005: Dagli oggetti agli agenti, simulazione e analisi formale di sistemi complessi, Camerino, Italy, November 14-16, 2005*, ISBN 88-371-1590-3, pp. 184-192. Pitagora Editrice Bologna.
- [IW16] Marco Alberti, Federico Chesani, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Security protocols verification in Abductive Logic Programming: A case study.” In Oğuz Dikenelli, Marie-Pierre Gleizes, and Andrea Ricci, *Proceedings of ESAW'05, October 26-28, 2005, Revised papers..* LNAI **3963**, pp. 106-124. Springer-Verlag, 2006. Revised version of [IW15].
- [IW15] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Abduction with Hypotheses Confirmation.” In Alberto Pettorossi, Maurizio Proietti, and Valerio Senni, eds., *CILC 2005 - Convegno Italiano di Logica Computazionale. Università degli Studi di Roma Tor Vergata, June 21-22 2005*.
- [IW14] Marco Alberti, Federico Chesani, Marco Gavanelli, Alessio Guerri, Evelina Lamma, Paola Mello, Michela Milano, and Paolo Torroni. “Expressing Interaction in Combinatorial Auctions Through Social Integrity Con-

- straints.” In Armin Wolf, ed., *Proceedings of the 19th Workshop on (Constraint) Logic Programming, (W(C)LP), University of Ulm, Germany, February 21-23, 2005*, pp. 53-64.
- [IW13] Marco Alberti, Federico Chesani, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “A logic-based approach to interaction design in open multi-agent systems.” In Giacomo Cabri and Sumittra Mitra Reddy, eds., *Proceedings of the 13th IEEE International workshops on Enabling technologies: Infrastructures for collaborative enterprises (WET ICE 2004), Modena, Italy, June 14, 2004*. pp. 387-392. IEEE Press, 2004.
- [IW12] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “The SOCS Computational Logic Approach to the Specification and Verification of Agent Societies.” In Corrado Priami and Paola Quaglia, eds., *Post-Proceedings of the Global Computing 2004 Workshop (GC 2004), Rovereto, Italy, March 9-12, 2004*. LNAI **3267**, pp. 314-339. Springer-Verlag, 2004.
- [IW11] Andrea Bracciali and Paolo Torroni. “A new framework for knowledge revision of abductive agents through their interaction (preliminary report).” In Jürgen Dix and João Leite, eds., *4th International Workshop on Computational Logic in Multi-Agent Systems (CLIMA-IV), Fort Lauderdale, FL, January 6-7, 2004*. LNAI **3259**, pp. 159-177. Springer-Verlag, 2004.
- [IW10] Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “An Abductive Framework for Information Sharing in Multi-Agent systems.” In Jürgen Dix and João Leite, eds., *4th International Workshop on Computational Logic in Multi-Agent Systems (CLIMA-IV), Fort Lauderdale, FL, January 6-7, 2004*. LNAI **3259**, pp. 34-52. Springer-Verlag, 2004.
- [IW9] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Modeling interactions using social integrity constraints: a resource sharing case study.” In [EB1], LNAI **2990**, pp. 243-262. Springer-Verlag, 2004.
- [IW8] Marco Alberti, Anna Ciampolini, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Logic based semantics for an agent communication language.” In Barbara Dunin-Keplicz and Rineke Verbrugge, eds., *Proceedings of the 1st international Workshop on Formal Approaches to Multi-Agent Systems (FAMAS), Warsaw, Poland, April 12, 2003*, pp. 21-36.
- [IW7] Andrea Roli and Paolo Torroni. “Logics, local search, and resource allocation.” Short paper. In Thierry Vidal and Paolo Liberatore, eds., *Proceedings of the STarting Artificial Intelligence Researchers Symposium (STAIRS’02), Lyon, France, July 22-23, 2002* (2 pages). IOS Press.
- [IW6] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “Coordinating the safe execution of tasks in a constrained multi-agent system.” In Makoto Yokoo, Marius-Calin Silaghi, Boi Faltings, Christian Bessière, and Weixiong Zhang, eds., *Proceedings of the 3rd International Workshop on Distributed Constraint Reasoning (DCR), Bologna, July 16, 2002*.



- [IW5] Fariba Sadri, Francesca Toni, and Paolo Torroni. “Dialogues for negotiation: agent varieties and dialogue sequences.” In John-Jules Meyer and Milind Tambe, eds., *Intelligent Agent VIII, revised papers from the 8th International Workshop on Agent Theories, Applications, and Languages (ATAL’01), Seattle, WA, USA, August 1-3, 2001*. **Best paper award**. LNAI **2333**, pp. 405-421. Springer-Verlag, 2002.
- [IW4] Paolo Torroni and Francesca Toni. “Extending a logic based one-to-one negotiation framework to one-to-many negotiation.” In Andrea Omicini, Paolo Petta and Robert Tolksdorf, eds., *Engineering Societies in the Agents World II : Second International Workshop, ESAW 2001, Prague, Czech Republic, July 7, 2001. Revised Papers*, LNAI **2203**, pp. 105-118. Springer-Verlag.
- [IW3] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “Expressing collaborative and competitive coordination among abductive logic agents.” In Ken Satoh and Fariba Sadri, eds., *Proceedings of the 1st International Workshop on Computational Logic in Multi-Agent Systems (CLIMA’00), Imperial College, London, July 24-25, 2000*.
- [IW2] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “The dynamic composition of abductive agents in ALIAS.” In Antonio Brogi and Patricia Hill, eds., *Proceedings of the Workshop on Component-based software development in Computational Logic (COCL’99), Paris, September 27, 1999*.
- [IW1] Anna Ciampolini, Evelina Lamma, Paola Mello and Paolo Torroni. “Rambling abductive agents in ALIAS.” In Fariba Sadri, Francesca Toni, and Stephen Rochefort, *Proceedings of the ICLP Workshop on Multi-Agent Systems in Logic Programming (MAS-LP’99), Las Cruces, New Mexico, November 30, 1999*.
- [NW5] Marco Alberti, Federico Chesani, Marco Gavanelli, Alessio Guerri, Evelina Lamma, Paola Mello, and Paolo Torroni. “Expressing Interaction in Combinatorial Auction through Social Integrity Constraints.” In Alfredo Milani, ed., *Atti della Conferenza Italiana sui Sistemi Intelligenti CISI-04, 9th AI\*IA Convention. Perugia, Italy, September 15, 2004*. ISBN 88-89422-09-2. Morlacchi Editore, Perugia.
- [NW4] Marco Alberti, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Abduction with Hypotheses Confirmation.” In Elio Panegai and Gianfranco Rossi, eds., *Atti del Diciannovesimo incontro annuale della Associazione Italiana Gruppo Ricercatori e Utenti di Logic Programming (GULP), Convegno Italiano di Logica Computazionale (CILC) Parma, Italy, June 16-17, 2004*. Dipartimento di Matematica, Università di Parma.
- [NW3] Fariba Sadri, Francesca Toni, and Paolo Torroni. “A multi-stage negotiation architecture for sharing resources amongst logic-based agents (extended abstract).” Short paper. In Peter Mc Burney and Michael Wooldridge, eds., *Proceedings of the Special Interest Group on Multi-Agent Systems, (UKMAS’02), Liverpool, UK, December 18-19, 2002* (2 pages).

- [NW2] Paolo Torroni, Paola Mello, Nicolas Maudet, Marco Alberti, Anna Ciampolini, Evelina Lamma, Fariba Sadri, and Francesca Toni. “A logic-based approach to modeling interaction among computees (preliminary report).” In Peter Mc Burney and Michael Wooldridge, eds., *Proceedings of the Special Interest Group on Multi-Agent Systems, (UKMAS’02), Liverpool, UK, December 18-19, 2002* (14 pages).
- [NW1] Rosy Barruffi, Michela Milano, Paolo Torroni. “Interactive constraints for plan construction and execution.” In Gary J. Petley, Alex M. Coddington, Ruth Aylett, eds., *Proceedings of the Eighteenth Workshop of the UK Planning and Scheduling Special Interest Group, University of Salford, UK, December 15-16, 1999*.

## 8.6 Miscellanea

- [M9] Francesca Toni and Paolo Torroni. “Preface” of [EB5], LNAI **3900**, pp. V-XII. Springer-Verlag, 2006.
- [M8] Marco Alberti, Federico Chesani, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Verifiable Agent Interaction in Abductive Logic Programming: the SCIFF proof-procedure”. Department of Electronics, Computer Science, and Systems, University of Bologna, Italy. DEIS Technical Report LIA-001-06, Università di Bologna, LIA Series No 74, March 2006 (58 pages). Submitted to journal.
- [M7] Matteo Baldoni, Ulle Endriss, Andrea Omicini, and Paolo Torroni. “Preface” of [EB4], LNAI **3904**, pp. V-VII. Springer-Verlag, 2006.
- [M6] João Leite and Paolo Torroni. “Preface” of [EB3], LNAI **3487**, pp. V-VII. Springer-Verlag, 2005.
- [M5] João Leite, Andrea Omicini, Paolo Torroni, and Pinar Yolum. “Preface” of [EB2], LNAI **3476**, pp. V-VIII. Springer-Verlag, 2005.
- [M4] Marco Alberti, Federico Chesani, Marco Gavanelli, Evelina Lamma, Paola Mello, and Paolo Torroni. “Storyboard” of the DEMO presented at AAMAS 2004, Columbia University, New York City, NY, USA, July 22, 2004. URI: <http://lia.deis.unibo.it/research/socs/aamas2004demo/>
- [M3] João Leite, Andrea Omicini, Leon Sterling, and Paolo Torroni. “Preface” of [EB1], LNAI **2990**, pp. V-VII. Springer-Verlag, 2004.
- [M2] Paolo Torroni. “Logic and Multi-Agents: towards a new symbolic model of cognition.” *Electronic Notes in Theoretical Computer Science*, **70(7)**, Elsevier Science, 2002.
- [M1] Aurelio Boari, Carlo Polacchini, Francesco Panciroli, and Paolo Torroni. “Modello di un sistema per la programmazione didattica dell’Ateneo di Bologna.” Dicembre 1999 (in Italian, 28 pages). Technoprint, Bologna. Available on request.

## 8.7 Software

- [S1] Abductive Logic Agent System, ALIAS  
Implemented using Java + Amzi! Prolog & Logic Server (v.1 & v.2), and  
Java + Jinni (v.3).  
<http://lia.deis.unibo.it/Research/ALIAS/>
- [S2] SOCS Social Infrastructure SOCS-SI + SCIFF  
Implemented in Java + SICStus Prolog using CLP(FD) and CHR.  
<http://lia.deis.unibo.it/Research/sciff/>

## 9 Other skills

Computer	C/C++, Java, SQL, Sictus Prolog, CHR, HTML, Unix, $\text{\LaTeX}$ .
Languages	Italian (native), English and Portuguese (fluent), German, French, Spanish and Turkish (advanced).
Other	Clean driving licence (motorbike and car), advanced skills in piano and music composition.

## 10 Referees

- Prof. Paola Mello  
Department of Electronics, Computer Science and Systems  
University of Bologna  
40136 Bologna  
Italy  
E-mail: [pmello@deis.unibo.it](mailto:pmello@deis.unibo.it)  
Phone: +39 051 209 3818  
Fax: +39 051 209 3073
- Dr. Francesca Toni  
Department of Computing  
Imperial College London  
South Kensington Campus  
180 Queen's Gate  
SW7 2AZ London  
United Kingdom  
E-mail: [ft@doc.ic.ac.uk](mailto:ft@doc.ic.ac.uk)  
Phone: +44 20 7594 8228  
Fax: +44 20 7581 8024
- Dr. Fariba Sadri  
Department of Computing  
Imperial College London  
South Kensington Campus  
180 Queen's Gate  
SW7 2AZ London  
United Kingdom  
E-mail: [fs@doc.ic.ac.uk](mailto:fs@doc.ic.ac.uk)  
Phone: +44 20 7594 8224  
Fax: +44 20 7581 8024
- Prof. Jürgen Dix  
Technische Universität Clausthal  
Institut für Informatik  
Julius-Albert-Str. 4  
38678 Clausthal-Zellerfeld  
Germany  
E-mail: [dix@tu-clausthal.de](mailto:dix@tu-clausthal.de)  
Phone: +49 5323 72 7181  
Fax: +49 5323 72 7139
- Prof. Antonis Kakas  
Department of Computer Science  
University of Cyprus  
75 Kallipoleos Str., P.O. Box 537  
1678 Nicosia  
Cyprus  
E-mail: [antonis@ucy.ac.cy](mailto:antonis@ucy.ac.cy)  
Phone: +357 22 892 706  
Fax: +357 22 892 701
- Prof. Ken Satoh  
Foundations of Information Research Division  
National Institute of Informatics  
Chiyoda-ku, 2-1-2, Hitotsubashi  
101-8430 Tokyo  
Japan  
E-mail: [ksatoh@nii.ac.jp](mailto:ksatoh@nii.ac.jp)  
Phone: +81 3 4212 2554  
Fax: +81 3 3556 1916