

Curriculum vitae of Fabrizio Morbini

Basic Personal Information:

Name: Fabrizio Morbini
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Research Interest:

Artificial Intelligence (Planning, Knowledge Based Systems, Natural Language, Knowledge Representation), Operating Systems (Network Security).

Education:

- **2003:** Ph.D. student at Department of Computer Science, University of Rochester (NY, USA)
- **2002:** Graduated as Electronics Engineer (Minor in Computer Science) from the University of Brescia (Italy) (Dissertation: *Algoritmi di Preprocessing per il Supporto alla Pianificazione Automatica (Preprocessing Algorithms to Support Automatic Planning)*). Supervisor: Prof. Alfonso Gerevini).

Major Research Projects:

- Currently I'm working on the reimplementing of EPILOG, the inference engine for Episodic Logic toward an inference system able to support autoepistemic inference. Episodic Logic is an expressive knowledge representation language for natural language developed by Schubert et al.
- Various extensions to DISCOPLAN, a system invented by Prof. Alfonso Gerevini and Prof. Lenhart K. Schubert which is under development at the universities of Brescia and Rochester (NY, USA). The major extensions include:
 - **2002** *Iterative method* which computes constraints using hypothesis of invariants to extend the domain operators;
 - **2002** *General Disjunctive invariants*;
 - **Spring 2001** *Strict Single-Valuedness and n-Valuedness invariants*;
 - **Spring 2000** *On-line system* which allows the use of DISCOPLAN through the web.

Other Projects:

- **Jan-Aug 2007** Work on a dialog system for in-car and call center applications.

- **Summer 2002** Implemented a Virtual Honeynet as part of the security system of a major Italian financial institution. The system was composed by several Virtual Honeypots using RSBAC as underlying protection and signaling mechanism.
- **Fall 2001** Implemented a system to automatically classify music contents. The key techniques used were: Mel-Frequency Cepstral Coefficients, K-clustering and Earth mover's distance.
- **Summer 2000** Developed an embedded web server using the micro-controller Motorola HC6811. Both the hardware and software components were designed and implemented during this project.

Teaching Experiences:

- Teaching assistant at the Department of Computer Science, University of Rochester (NY, USA) for the courses:
 - Data Structures (Spring 2006);
 - Computation and Formal Systems (Fall 2005);
 - Computer Models and Limitations (Spring 2005).
- At the Department of Electronics for Automation, University of Brescia (Italy):
 - Lectured Lisp classes as a part of the Artificial Intelligence Introduction course (Spring 2003);
 - Assisted an Artificial Intelligence seminar on the topic of Theorem Provers using Otter as practical example (Spring 2003).
- At an information technology company in Milano (Italy):
 - Taught half of an intensive course on Network Security. The selected topics were: client and server side security, cryptography, e-commerce, secure programming, program verification and a live demonstration on how to secure an Apache web server using RSBAC (Spring 2003).

Work Experiences:

- **Jan-Aug 2007:** Internship at Robert Bosch LLC Research Center in Palo Alto, CA (USA).
- **Summer 2003:** Researcher at the Department of Computing and Mathematics, University of Teesside (UK) on the *Alterne* project.
- **2001-2003:** Linux System Administrator for an information technology company in Brescia (Italy).

Publications:

- Junling Hu, Fabrizio Morbini, Fuliang Weng and Xue Liu, *Dynamic N-best Selection and Its Application in Dialog Act Detection*, Proceedings of the 8th SIGDial workshop on Discourse and Dialogue, pp. 59-62, September 2007
- F. Morbini and L.K. Schubert, *Towards realistic autocognitive inference*, COMMONSENSE'07, Tech. Rep. SS-07-05, AAAI Press, Menlo Park, CA, March 26-28, Stanford, pp. 114-118, 2007.
- F. Morbini, L. K. Schubert, *Conscious Agents*, TR879, Computer Science Dept., U. Rochester, September 2005.
- A. Gerevini, L. Schubert, and F. Morbini, *Computing domain invariants for planning in DISCOPLAN*, System Demos, 7th Conf. of the Italian Assoc. for Artificial Intelligence (AI*IA 2001), Sept. 25-8, Bari, Italy, 2001.
- F. Morbini *Inferenza Automatica di Invarianti per la Pianificazione (Automatic Inference of Invariants for Planning)*, 2001, AI*IA Notizie, volume IV, pag. 67.

Technical Knowledge:

- *Languages*: Lisp, C, Java, Shell scripting, Latex, Perl, SQL, HTML, PHP.
- *Operating Systems*: Linux, Irix, Solaris.

Languages:

Italian, English.

January 30th 2008

Fabrizio Morbini