

Maciej Gawinecki, Ph.D.

Personal information

Address	Dipartimento di Ingegneria Dell'Informazione, Via Vignolese 905, 41125 Modena, Italy
Mobile	+39 3276 774 482
E-mail	mgawinecki@gmail.com
Research site	http://www.ibspan.waw.pl/~gawinec
Date of birth	29/09/81
Nationality	Polish



Work experience

Position and employer	Software Engineer, Systems Research Institute, Polish Academy of Sciences
Dates and place	March 2006 to December 2007, Warsaw, Poland
Main activities and achievements	E-commerce Agent Platform (EU project, 4 persons, e-cap.sourceforge.net): * Implemented in Java a mechanism for synchronizing parallel behaviours of agents, which has been integrated into official JADE agent platform release (jade.tilab.com). * Developed ontology-based client/shop matchmaking server in Java and JADE; used Jena, OWL, and SPARQL. * Developed in Java and JADE a subsystem for hosting mobile buyer/seller agents applying for auctions in distributed environment.
Position and employer	Laboratory Instructor, Warsaw University of Technology
Dates and place	March to September 2007, Warsaw, Poland
Main activities and achievements	* Wrote teaching materials (goo.gl/RKyr7); later reused by 2 other teachers in similar courses. * Taught agent-oriented software engineering (methodologies, JADE/BDI Jadex) and supervised 9 students' projects; 2 of them resulted in workshop publications.
Position/employer	Web developer
Dates and place	September 1998 to April 2005, Bydgoszcz / Toruń / Poznań, Poland
Main activities and achievements	Having developed a home page for my colleague at the mid school, my skills were recognized by the local internet provider, for which I developed CMS (with ASP/ODBC). I freelanced with him and other Web developers in a number of Web sites (defining functional requirements with clients; designing layout; developing in PHP+MySQL).

Education and training

Degree and university	Ph.D. in Computer Eng. & Science, University of Modena & Reggio-Emilia
Dates and place	2008-2011, Modena, Italy
Principal subjects and achievements	Focus on affordability and user aspects in public Web service reuse. * Developed service description/retrieval approach based on structured tagging (Java/PHP); placed first in the Cross-Evaluation Track of the 3rd International Semantic Service Selection contest for low service broker costs and high retrieval effectiveness [1]; * Developed an abbreviation expansion algorithm for MOMIS data integration system (in Java, using WordNet and reusing a public RESTful Web service); along with other Ph.D. student, who implemented compound noun interpretation, delivered a tool that increased the number of correct relationships, between data schemata to integrate, by 22% [2]. * Through simulated search scenarios with 16 programmers, identified difficulties in problem formulation and results understanding people can have with WSDL-based Web service retrieval engines (e.g. SeekDa.com).
Funding	From 3-years scholarship for research achievements from Italian government.

Degree and university	Part of the research realized during my stay at Friedrich Schiller University in Jena, Germany. Master of Computer Science, Adam Mickiewicz University
Dates and place	2000-2005, Poznań, Poland
Principal subjects and achievements	Mixed emphasis in software agents engineering, Semantic Web, and user modelling. * Wrote in Java/JADE a back-end that recommends restaurants based on interaction with a user (e-travel.sourceforge.net); along with other student who wrote the WWW interaction layer. * Identified methodological pitfalls in applying software agents in recommendation systems [3].
Funding	Studies partially funded by 1-year scholarship from the university for study results.

Skills

Mother tongue	Polish																																												
Other languages*	<table border="1"> <thead> <tr> <th></th> <th colspan="4">Understanding</th> <th colspan="4">Speaking</th> <th colspan="2">Writing</th> </tr> <tr> <th></th> <th colspan="2">Listening</th> <th colspan="2">Reading</th> <th colspan="2">Spoken interaction</th> <th colspan="2">Spoken production</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>English</td> <td>B2</td> <td>Independent user</td> <td>C1</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> </tr> <tr> <td>Italian</td> <td>A2</td> <td>Basic User</td> <td>B1</td> <td>Independent user</td> <td>B1</td> <td>Independent user</td> <td>B1</td> <td>Independent user</td> <td>A2</td> <td>Basic user</td> </tr> </tbody> </table> <p>(*) self-assessment with respect to Common European Framework of Reference (CEF) level</p>		Understanding				Speaking				Writing			Listening		Reading		Spoken interaction		Spoken production				English	B2	Independent user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user	Italian	A2	Basic User	B1	Independent user	B1	Independent user	B1	Independent user	A2	Basic user
	Understanding				Speaking				Writing																																				
	Listening		Reading		Spoken interaction		Spoken production																																						
English	B2	Independent user	C1	Proficient user	C1	Proficient user	C1	Proficient user	C1	Proficient user																																			
Italian	A2	Basic User	B1	Independent user	B1	Independent user	B1	Independent user	A2	Basic user																																			
Software engineering skills	<ul style="list-style-type: none"> * Java programming (5 years, on daily basis) * Software agents engineering (3 years) * Ontology engineering (2 years) * Web development (7 years, freelance) 																																												
Expertise	<ul style="list-style-type: none"> * Agent methodologies * Design patterns * Web service discovery * Collaborative tagging systems 																																												
Tools	<ul style="list-style-type: none"> * Java * PHP/ASP * Eclipse (Java / PHP) * CVS/SVN * UML * MySQL/Sphinx (full text search engine) * XML/XSD/XPATH * OWL/RDF/SPARQL * Jena * JADE/BDI Jadex * WSDL / REST * WordNet 																																												
Research skills	<ul style="list-style-type: none"> * Evaluating retrieval effectiveness of information systems * Evaluating task-oriented usability 																																												
Communication skills	Presented work at conferences: BIS 2007, ISWC 2010 Workshops, WEBIST 2010																																												
Hobby	I like photography: shooting b&w photos with an old bellows camera of my grandfather. I organized photo workshops and a darkroom with my friends at my department.																																												

Publications (selected)

- [1] M. Gawinecki, G. Cabri, M. Paprzycki and M. Ganzha: Evaluation of structured collaborative tagging for Web service matchmaking. *Semantic Services: Advancement through Evaluation* (to appear, available on request).
 - [2] S. Sorrentino, S. Bergamaschi, M. Gawinecki, L. Po: Schema label normalization for improving schema matching. *Data & Knowledge Engineering* 69 (2010), Elsevier: 1254-1273.
 - [3] M. Gawinecki, M. Kruszyk, M. Paprzycki, M. Ganzha: Pitfalls of Agent System Development on the Basis of a Travel Support System. *Business Information Systems*, Springer 2007: 488-499.
- ...More publications can be found at: <http://www.ibspan.waw.pl/~gawinec>

Software Development Projects

Project name	E-CAP: E-Commerce Agent-based Platform
URL	http://e-cap.sourceforge.net
Position	Software Engineer, Systems Research Institute at the Polish Academy of Science, Warsaw
Goal	Software agents are often proposed as a solution to negotiate automatically with one another on behalf of their user clients. To this aim they must share a negotiation mechanism, specifying what possible actions each party can take at any given time, when negotiation terminates, and what is the structure of the resulting agreements. The goal of the project was to design and implement a framework that allows agents to effectively participate in negotiations .
My achievements	<ul style="list-style-type: none"> * Developed ontology-based client/shop matchmaking server in Java and JADE; used Jena, OWL, and SPARQL. * Developed in Java and JADE a subsystem for hosting mobile buyer/seller agents applying for auctions in distributed environment. * Implemented in Java a mechanism for synchronizing parallel behaviours of agents, which has been integrated into official JADE agent platform release (jade.tilab.com).
Funding and organizational issues	Funded by Marie Curie International Re-Integration EU Grant. The team included 4 persons
Leader	Prof. Marcin Paprzycki (marcin.paprzycki@ibspan.waw.pl)
Name	TSS: Agent-based Travel Support System
URL	http://e-travel.sourceforge.net
Position	Master Thesis Project, Adam Mickiewicz University, Poznań, Poland
Goal	<p>Online travel support systems have often been cited as an ideal proving ground for agent-based architectures, yet no working systems have materialized. The goal of the project was to learn from practice whether and where in this domain software agents are really feasible.</p> <p>My responsibility was to write in Java/JADE a back-end that recommends restaurants based on interaction with a user (e-travel.sourceforge.net). Along with other student who wrote the WWW interaction layer, we delivered a complete online travel support system.</p>
My achievements	* Identified methodological pitfalls in applying software agents in recommendation systems [3].
Supervisors	Ph.D. Minor Gordon (http://www.minorgordon.net/), Prof. Marcin Paprzycki (http://www.ibspan.waw.pl/~paprzyck/)
Project name	WScolab: Structured Collaborative Tagging for Web Service Discovery
URL	http://www.ibspan.waw.pl/~gawiniec/wss/wscolab.html
Position	Project for PhD dissertation, University Of Modena and Reggio-Emilia, Italy
Goal	One of the key requirements for the success of Service Oriented Architecture is discoverability of Web services. However, public services suffer from the lack of metadata. The goal of the project was to define a method for building a Web service registry where finding a required service is not only effective, but also easy for a user and keeps service broker costs of adding metadata low.
My achievements	<ul style="list-style-type: none"> * Developed structured collaborative tagging portal for annotating Web services by the community (PHP, MySQL) and Web service matchmaker using collected tags (Java); placed first in the Cross-Evaluation Track of the 3rd International Semantic Service Selection contest for low service broker costs and high retrieval effectiveness * Investigated threats to reliability of Web service retrieval based on community tags [1]
Funding and	From 3-years scholarship for research achievements from Italian government.

organizational issues	
Supervisor	Prof. Giacomo Cabri (http://www.agentgroup.unimore.it/wiki/index.php/User:Giacomo_Cabri)
Project name	NORMS: Schema Label Normalizing to Improve Schema Matching
Position	Project for PhD dissertation, University Of Modena and Reggio-Emilia, Italy
Goal	Schema matching is the problem of finding relationships among concepts across heterogeneous data sources that are heterogeneous in format and in structure. The goal of the project was to limit the impact of non-dictionary words such as compound nouns, abbreviations, and acronyms in real-world schemata on the effectiveness of annotations-based schema matching systems. My role was to design and develop an abbreviation expansion algorithm for MOMIS data integration system (in Java, using WordNet and reusing a public RESTful Web service) and evaluate its effectiveness on schemata of data.
My achievements	*
Funding and organizational issues	The project was realized in cooperation with DBGroup, University of Modena and Reggio-Emilia, Italy.
Leader	Prof. Sonia Bergamaschi (http://www.dbgroup.unimo.it/Bergamaschi.html)

Evaluations

Project name	WSInteract: User Study of Retrieval with WSDL Web service repository
URL	http://www.ibspan.waw.pl/-gawiniec/wsinteract/index.html
Position	Project for PhD dissertation, University Of Modena and Reggio-Emilia, Italy
Goal	Since discontinuation of public UDDI business registries, the recent model to build Web service registry is to identify and index WSDL descriptions on the Web using Web crawler. Complementary research reports relatively high effectiveness of retrieval based on WSDL (in terms of precision/recall), but still users complain they cannot find Web services they found. The goal of the project was to understand why with particular focus on difficulties people can in formulating application problem in the language of the repository and assessing relevance of candidate services to the application problem.
My achievements	* Through simulated search scenarios with 16 programmers, identified difficulties in problem formulation and results understanding searchers can have with WSDL-based Web service retrieval engines (e.g. SeekDa.com). * Investigated what implications those difficulties can have to the WSDL-based discovery model and proposed how those difficulties can be addressed
Funding and organizational issues	A project realized in cooperation with SeekDa GmBh, Austria (running the largest WSDL-based Web service repository), during my research period at FUSION group, Friedrich Schiller University of Jena, Germany. From 3-years scholarship for research achievements from Italian government.
Supervisors	Prof. Giacomo Cabri (http://www.agentgroup.unimore.it/wiki/index.php/User:Giacomo_Cabri) Prof. Dr. Birgitta König-Ries (http://fusion.cs.uni-jena.de/professur/about-us/team/birgitta-koenig-ries)