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Maciej Gawinecki

Ph.D. Candidate
at the ICT Doctorate School

Personal Information

Born on September 29, 1981, Kielce, Poland.

- Nationality: Polish;

Research Interests

Software engineering * Web service discovery * Semantic annotation of semi-structured and structured data * Semantic annotation of Web services, .

Education

- since 2008 **Ph.D. Candidate in Computer Engineering and Science**, *University of Modena and Reggio Emilia*, Italy.
- Expected in Spring 2011.
- Concentration: *User-oriented Web service discovery*
- Advisor: prof. Giacomo Cabri; Co-Advisor: Maria Ganzha, Ph.D.
- 2004–2005 **M.Sc. in Computer Science**, *Adam Mickiewicz University*, Poznań, Poland.
- Dissertation Topic: *Modelling a User on the Basis of Interactions with a WWW-based system*
- Advisor: prof. Zygmunt Vetulani; Co-Advisor: prof. Marcin Paprzycki
- 2003–2004 **Visiting Student (National Mobility Programme “MOST”)**, *Adam Mickiewicz University*, Poznań, Poland.
- 2000–2003 **Undergraduate in Computer Science**, *Nicolaus Copernicus University*, Toruń, Poland.
- 1996–2000 **Certificate of Secondary School**, *VI Secondary School of General Education of Jan and Jędrzej Śniadeccy*, Bydgoszcz, Poland.
- Received with honors

Scholarships and Awards

- 2009 **1st place in the Cross-Evaluation Track of the 3rd International Semantic Service Selection (S3) Contest**, Washington D.C., USA, October 25, 2009,
<http://www-ags.dfki.uni-sb.de/~klusch/s3/html/2009.html>.
- 2008 **3-years PhD scholarship for research achievements**, *from the International Doctorate School in Information and Communication Technologies, University of Modena and Reggio-Emilia*, Italy.
- 2005 **1-year scholarship for study results**, *Adam Mickiewicz University*, Poznań, Poland.

Publications

Book Chapters

Grzegorz Frąckowiak, Maria Ganzha, Maciej Gawinecki, Marcin Paprzycki, Michał Szymczak, Myon-Woong Park, and Yo-Sub Han, *Considering Resource Management in Agent-Based Virtual Organization*, Intelligent Agents in the Evolution of Web and Applications (Ngoc Thanh Nguyen and Lakhmi C. Jain, eds.), vol. 167, Springer, 2009, pp. 161–190.

Maria Ganzha, Maciej Gawinecki, Marcin Paprzycki, Rafał Gąsiorowski, Szymon Pisarek, and Wawrzyniec Hyska, *Utilizing Semantic Web and Software Agents in a Travel Support System*, Semantic Web Technologies and eBusiness: Virtual Organization and Business Process Automation (A. F. Salam and Jason Stevens, eds.), Idea Publishing Group, 2006.

Maciej Gawinecki, Minor Gordon, Ngoc Thanh Nguyen, Marcin Paprzycki, and Michał Szymczak, *RDF Demarcated Resources in an Agent Based Travel Support System*, Informatics and Effectiveness of Systems (M. Golinski et al., ed.), PTI Press, Katowice, Poland, 2005, pp. 303–310.

Maciej Gawinecki, Minor Gordon, Ngoc Thanh Nguyen, Marcin Paprzycki, and Zygmunt Vetulani, *Ontologically Demarcated Resources in an Agent Based Travel Support System*, Ontologies and Soft Methods in Knowledge Management (R. K. Katarzyniak, ed.), Advanced Knowledge International, Adelaide, Australia, 2005, pp. 219–240.

Marcin Paprzycki, Paweł Kaczmarek, Maciej Gawinecki, and Zygmunt Vetulani, *Interakcja Użytkownik - Agentowy System Wspomagania Podróży*, Informatics and Modern Management (J. Kisienicki et al., ed.), PTI Press, 2005, in Polish, pp. 189–198.

Referred Journal Articles

Krzysztof Chmiel, Maciej Gawinecki, Paweł Kaczmarek, Michał Szymczak, and Marcin Paprzycki, *Efficiency of JADE Agent Platform*, Scientific Programming **13** (2005), no. 2, 159–172.

Mateusz Dominiak, Maria Ganzha, Maciej Gawinecki, Wojtek Kuranowski, Marcin Paprzycki, Svetozar Margenov, and Ivan Lirkov, *Utilizing Agent Teams in Grid Resource Brokering*, International Transactions on Systems Science and Applications **3** (2008), no. 4, 296–306.

Grzegorz Frąckowiak, Maria Ganzha, Maciej Gawinecki, Marcin Paprzycki, Michał Szymczak, Costin Badica, Yo-Sub Han, and Myon-Woong Park, *Adaptability in an Agent-Based Virtual Organization*, International Journal of Agent Based Software Engineering **3** (2009), no. 2/3, 188–211.

Maciej Gawinecki, *Importing Bank Statements to Financial Programs*, Software Developer's Journal **1** (2008), no. 157, in Polish.

Maciej Gawinecki and Grzegorz Frąckowiak, *Multi-Agent Systems with JADE: A Guide with Extensive Study*, IEEE Distributed Systems Online **9** (2008), no. 3, 4–4.

Maciej Gawinecki, Minor Gordon, Paweł Kaczmarek, and Marcin Paprzycki, *The Problem of Agent-Client Communication on the Internet*, Scalable Computing: Practice and Experience **6** (2005), 111–123.

Wojciech Kuranowski, Maria Ganzha, Maciej Gawinecki, Marcin Paprzycki, Ivan Lirkov, and Svetozar Margenov, *Forming and Managing Agent Teams Acting as Resource Brokers in the Grid—Preliminary Considerations*, International Journal of Computational Intelligence Research **4** (2008), no. 1, 9–16.

Katarzyna Wasilewska, Maciej Gawinecki, Marcin Paprzycki, Maria Ganzha, and Paweł Kobzdej, *Optimizing Blackboard Implementation of Agent-Conducted Auctions*, IADIS International Journal on WWW/INTERNET **6** (2008), no. 1, 50–60.

Referred Conference Proceedings

Andrzej Borowczyk, Maciej Gawinecki, and Marcin Paprzycki, *BDI Agents in a Patient Monitoring Scenario*, Proceedings Second International Conference on Pervasive Computing Technologies for Healthcare PervasiveHealth 2008, 2008, pp. 82–85.

Grzegorz Frąckowiak, Maria Ganzha, Maciej Gawinecki, Marcin Paprzycki, Michał Szymczak, Myon-Woong Park, and Yo-Sub Han, *On Resource Profiling and Matching in an Agent-Based Virtual Organization*, ICAISC '08: Proceedings of the 9th International Conference on Artificial Intelligence and Soft Computing (Berlin, Heidelberg), Springer-Verlag, 2008, pp. 1210–1221.

Maciej Gawinecki, *Abbreviation Expansion In Lexical Annotation of Schema*, 1st International Workshop on Interoperability through Semantic Data and Service Integration, 2009, (21), pp. 61–72.

Maciej Gawinecki, Paweł Kobzdej, Maria Ganzha, and Marcin Paprzycki, *Introducing Interaction-Based Auctions into a Model Agent-Based E-commerce System: Preliminary Considerations*, EATIS '07: Proceedings of the 2007 Euro American Conference on Telematics and Information Systems (New York, NY, USA), ACM, 2007, pp. 1–8.

Maciej Gawinecki, Mateusz Kruszyk, Marcin Paprzycki, and Maria Ganzha, *Pitfalls of Agent System Development on the Basis of a Travel Support System*, Business Information Systems, 10th International Conference, BIS 2007, Poznań, Poland, April 2007, 2007, pp. 494–505.

Maciej Gawinecki, Zygmunt Vetulani, Minor Gordon, and Marcin Paprzycki, *Representing Users in a Travel Support System*, ISDA '05: Proceedings of the 5th International Conference on Intelligent Systems Design and Applications (Washington, DC, USA), IEEE Computer Society, 2005, pp. 393–399.

Mateusz Kruszyk, Maria Ganzha, Maciej Gawinecki, and Marcin Paprzycki, *Introducing Collaborative Filtering into an Agent-Based Travel Support System*, WI-IATW '07: Proceedings of the 2007 IEEE/WIC/ACM International Conferences on Web Intelligence and Intelligent Agent Technology - Workshops (Washington, DC, USA), IEEE Computer Society, 2007, pp. 439–443.

Wojciech Kuranowski, Marcin Paprzycki, Maria Ganzha, Maciej Gawinecki, Ivan Lirkov, and Svetozar Margenov, *Agents as Resource Brokers in Grids – Forming Agent Teams*, Proceedings of the LSSC Meeting (Berlin, Heidelberg), Springer-Verlag, 2007, pp. 472–480.

Tomasz Serzysko, Maria Ganzha, Maciej Gawinecki, Paweł Kobzdej, and Marcin Paprzycki, *Introducing Commodity Flow to an Agent-Based Model E-commerce System*, IAT '07: Proceedings of the 2007 IEEE/WIC/ACM International Conference on Intelligent Agent Technology (Washington, DC, USA), IEEE Computer Society, 2007, pp. 294–298.

Serena Sorrentino, Sonia Bergamaschi, Maciej Gawinecki, and Laura Po, *Schema Normalization for Improving Schema Matching*, 28th International Conference on Conceptual Modeling (ER 2009), Springer Berlin / Heidelberg, 2009, pp. 280–293.

Michał Szymczak, Grzegorz Frąckowiak, Maria Ganzha, Maciej Gawinecki, Marcin Paprzycki, and Myon-Woong Park, *Resource Management in an Agent-based Virtual Organization – Introducing a Task Into the System*, Proceedings of the MaSeB Workshop (Los Alamitos, CA), IEEE CS Press, 2007, pp. 458–462.

Mladenka Vukmirovic, Maciej Gawinecki, Paweł Kobzdej, Maria Ganzha, and Marcin Paprzycki, *Implementing Message Exchange between Airlines' GDSs and Travel Systems with Ontologically Demarcated Data*, Proceedings 29th International Conference on Information Technology Interfaces ITI 2007, 2007, pp. 463–468.

Technical Reports

Maciej Gawinecki, *How Schema Mapping Can Help in Data Integration ? – Integrating the Relational Databases with Ontologies*, Tech. report, University of Modena and Reggio-Emilia, 2008.

Maciej Gawinecki, *On Evaluation of Semantic-based Search over XML Document Streams*, Tech. report, University of Modena and Reggio-Emilia, 2008.

Maciej Gawinecki, *On Selecting Online Abbreviation Dictionary*, Tech. report, University of Modena and Reggio-Emilia, 2009.

Papers Presented

Invited presentations

- 2006 **Agent Not So Dangerous—Software Agents as Methodology for Software Development**, *Modern Information Technologies*, Wrocław, Poland, September 2006.

Contributed Presentations

- 2009 **Abbreviation Expansion In Lexical Annotation of Schema**, *1st International Workshop on Interoperability through Semantic Data and Service Integration*, Camogli (Genova), Italy, June 25, 2009.
- 2007 **Pitfalls of Agent System Development on the Basis of a Travel Support System**, *BIS 2007 Conference*, Poznań, Poland, May 2007.
- 2007 **Towards Trust Management in Agent-based E-commerce System – Initial Considerations**, *5th International Conference on Multimedia & Network Information Systems*, Wrocław, Poland, September 2006.
- 2006 **Ontological Reusability in State-of-the-Art Semantic Language**, *18th Mountain Summer School of Polish Information Processing Society*, Szczyrk, Poland, June 2006.

Summer Schools and Workshops

- 2009 **ESSIR 2009: European Summer School in Information Retrieval**, Padova, Italy, August 31-September 4, 2009, <http://essir2009.dei.unipd.it/>.
- 2009 **9th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Web Services**, Bertinoro, Italy, June 1-6, 2009, <http://www.sti.uniurb.it/events/sfm09ws/>.
- 2008 **Reasoning Web 2008 Summer School**, Venice, Italy, September 7-11, 2008, <http://reasoningweb.org/>.
- 2006 **EASSS 2006: 8th European Agent Systems Summer School**, Annecy, France, July 17-21, 2006, <http://www.esia.univ-savoie.fr/index.php?id=243>.
- 2006 **18th Mountain Summer School of Polish Information Processing Society**, Szczyrk, Poland, June 17-21, 2006.

Paper Reviewing

1st KES Symposium on Agent and Multi-Agent Systems—Technologies and Applications, (*one paper*), .

International Journal of Intelligent Control and Systems, (*one paper*), .

1st KES Symposium on Agent and Multi-Agent Systems—Technologies and Applications, (*one paper*), .

Workshop WOA: From Objects to Agents, (*one paper*), .

Experience

Research in Software Engineering

2007–2008 **Software Engineer**, *Agent-based Personal Information Provisioning*, Systems Research Institute, Polish Academy of Sciences (SRI PAS), <http://www.ibspan.waw.pl/~paprzyck/mp/cvr/research/agentsKIST.html>.

It was collaboration grant between Korea Institute of Science and Technology and System Research Institute, Polish Academy of Sciences (SRI PAS); and was led by: prof. Myon Woong Park and prof. Marcin Paprzycki. My role was to: (a) design interface between agent-based system and the client-application together, and (b) introduce ontological description of exchangeable agent behaviours. The work was done with Michał Szymczak and Grzegorz Frąckowiak.

2006–2008 **Senior Researcher**, *E-commerce Agent Platform project*, Systems Research Institute, Polish Academy of Sciences (SRI PAS), <http://e-cap.sourceforge.net/>.

The project was led by prof. Marcin Paprzycki. It was devoted to development of a software agents-based e-commerce system employing agent negotiation model proposed by Byde, Jennings and Priest. My responsibility was to go through all the steps involved in development of a complex software system in collaboration with the rest of the research group. I started from analysis of requirements, through UML-based formalization and into coding of thus formalized system in JADE agent platform. In the latter step I found particularly challenging the problem of synchronization of many pro-active software agents registering for the negotiation. I solved it by analysis of 1-1 interaction protocols and combining them into a single, unified complex protocol.

2005–2006 **Agent-Oriented Programmer and Ontology Engineer**, *Agent-based Travel Support System project*, Adam Mickiewicz University, Poznań , Poland, <http://e-travel.sourceforge.net/>.

Led by prof. Marcin Paprzycki. The project was closely aligned with my Master Thesis topic. Together with my colleague Paweł Kaczmarek, we have built a system for recommending restaurants to a user. The system was based on agent-oriented architecture and Paweł Kaczmarek was responsible for providing basic components of this architecture (receiving user request and visualization of data model). My goal was to design a user-modeling facility (based on Montaner's taxonomy of recommender agents) and implement it over this basic infrastructure. I have cleaned-up RDF-demarcated data about restaurants from DMoz repository and proposed overlay-model over restaurant ontology to describe a user profile. The main observation of the project was that identification and spatial distribution of software agents need to be carefully done if resource-consuming processes such as profile-learning are to be realized by those agents.

Teaching

- 2007 **Instructor at Laboratories, *Agent-based Computing***, Warsaw University of Technology, summer term 2007, <http://www.ibspan.waw.pl/~gawinec/abc/2007/index.html>.
30 hours, given in English. I was responsible for conducting laboratories aimed at preparing students to complete semester-long projects. The project related to: agent-oriented engineering, application of agent paradigm and JADE agent platform. Significant part of my laboratory material has been later used by prof. Marcin Paprzycki and Maria Ganzha, Ph.D. at the Agent-based Computing course given at the University of Modena and Reggio-Emilia, Italy.

Non-academic Professional Experience

- 2004 **Web page designing and scripting, *Italcomma***, for Studio 641 (reference contact: Marcin Śpiewak), <http://www.italcomma.pl>.
- Technologies: PHP 4, MySQL (for storing products catalog) and designing graphics; team work with Paweł Kaczmarek.
- 2003 **Web page designing and scripting, *Jedavid***, for Intelink (reference contact: Beata Sobolewska), <http://www.jedavid.pl>.
- Technologies: PHP 4, MySQL (for storing products catalog), JavaScript (ordering products via web page and simple game) and designing graphics; team work with Paweł Nieścioruk.
- 1999 **Web page designing and scripting, *administrator panel for Bydnet portal***, reference contact: Mariusz Orkisz, <http://www.bydnet.pl>.
- Technologies: ASP, JavaScript, ODBC and designing graphics and logo.

Skills

Computer Skills

Programming Languages	Java, behavioural programming for software agents , basic Perl, Unix bash scripts.
Software Engineering	UML, FIPA Interaction Protocols, multi-agent systems , .
Data Languages	XML, RDF (both XML and N3 notations), SQL (MySQL dialect) , basic XPath, OWL, SPARQL.
Applications	LaTeX, common database, spreadsheet, and presentation software, JUDE (UML tool), JADE (agent platform), Jena (ontology processing) , basic Protégé (ontology design).
Web Design	HTML, PHP, CSS , basic JavaScript, ASP, knowledge of graphic programs GIMP, Adobe Photoshop.
Scientific Software	, some experience with Octave, Weka.

Other Skills

Languages	English (proficient, FCE certificate) , Italian, Russian. , Driving license.
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References

- SRI PAS **Prof. Marcin Paprzycki**, *Multi-Agent Systems, Parallel, Distributed and Grid Computing*, .
- Systems Research Institute, Polish Academy of Sciences, Newelska 6, 01-447 Warsaw, Poland, marcin.paprzycki@ibspan.waw.pl
- SRI PAS **Maria Ganzha, Ph.D.**, *Software Engineering, Multi-Agent Systems, Computer Ethics*, .
- Systems Research Institute, Polish Academy of Sciences, Newelska 6, 01-447 Warsaw, Poland, maria.ganzha@ibspan.waw.pl
- UNIMORE **Prof. Sonia Bergamaschi**, *Intelligent Integration of Information, Semantic Web*, .
- Department of Information Engineering, University of Modena and Reggio-Emilia, via Vignolese 905, 41125 Modena, Italy, bergamaschi.sonia@unimore.it
- Dean of the International Doctorate School in Communication Technologies (ICT)
- UNIMORE **Prof. Giacomo Cabri**, *Software Agents, Distributed Systems, Object Oriented Languages*, .
- Department of Information Engineering, University of Modena and Reggio-Emilia, via Vignolese 905, 41125 Modena, Italy, giacomo.cabri@unimore.it
- Poznań **Prof. Zygmunt Vetulani**, *Computer Linguistics and Language Engineering, Artificial Intelligence*, .
- Faculty of Mathematics and Computer Science, Adam Mickiewicz University, ul. Umultowska 87, Poznań, Poland, vetulani@amu.edu.pl

Hobby

Photography

- 2009 **Nasza codzienność i niecodzienność we Włoszech—photo exhibition with Malgorzata Wiater**, *Galeria OBOK*, Poznań, Poland, <http://galeriaobok.art.pl/wystawy>.
- 2008 **Mniej znane przystanki—photo exhibition**, *Galeria OBOK*, Poznań, Poland, <http://galeriaobok.art.pl/wystawy>.
- 2007 **Rozważna i Romantyczna—photo exhibition**, *Galeria OBOK*, Poznań, Poland, <http://galeriaobok.art.pl/wystawy>.
- 2007 **Photographing and documenting**, *13th Autumn Meeting of Polish Information Processing Society*, Wisła, Poland, <http://www.wiki.konferencja2006.pti.katowice.pl>.