
Yolanda Gil

Curriculum Vitae, last updated November 2011

Contact Information

USC/Information Sciences Institute
4676 Admiralty Way
Marina del Rey, CA 90292

(310) 448-8794
gil@isi.edu
www.isi.edu/~gil

Current Positions

- **Director of Knowledge Technologies** at USC/ISI (since September 2010). The project is supported by diverse funding sources for a total of more than \$1.5M per year.
- **Associate Division Director for Research** of the Intelligent Systems Division at USC/ISI (since September 2002). The division includes more than one hundred researchers and students in a wide range of areas in Artificial Intelligence.
- **Principal Investigator and Project Leader** of the Interactive Knowledge Capture research group (since 1996). Senior Research Scientist from 1992 to 1996.
- **Research Professor** in the Department of Computer Science at USC (since 2009).

Education

- Carnegie Mellon University (1986-1992). Ph.D. in Computer Science.

Dissertation title: "Acquiring Domain Knowledge for Planning by Experimentation."

Thesis committee: Jaime Carbonell (chair), Tom Mitchell, Herbert A. Simon, Nils J. Nilsson (external member).

- Carnegie Mellon University (1986-1989). M.Sc. in Computer Science.
- Politechnic University of Madrid (1980-1985). B.S. in Computer Science ("Licenciatura").

Undergraduate thesis: "Concurrent Simulation of Logic Circuits."

Previous Positions

- **Senior Research Scientist** in the Intelligent Systems Division at USC/ISI (1992-1996).
- **Research Associate Professor** in the Department of Computer Science at USC (2002-2009).
- **Research Assistant Professor** in the Department of Computer Science at USC (1994-2002).

Research Interests

- **Scientific workflows:** intelligent assistance and automation to support the creation of large-scale scientific applications, scientific workbenches for high performance computing environments.
- **Proactive knowledge capture:** knowledge authoring, knowledge acquisition, learning from demonstration and from examples.
- **Interactive intelligent systems:** knowledge-rich problem solving, user-centered decision aids, mixed-initiative systems.
- **Trust and provenance:** trust on web resource content, trust judgments based on information quality and provenance, workflow provenance.

- **Knowledge management and the Semantic Web:** knowledge and information management, knowledge modeling and reuse, collection and organization of semantic markup for the Web.
- **Agents:** agents to support human organizations, agent communication, human-agent collaboration.
- **Applications of Artificial Intelligence to practical problems:** bioinformatics, geosciences, logistics planning, air campaign planning, course of action development, special operations, intelligence analysis, configuration design.

Professional Activities

Service in Professional Organizations and Other Advisory Bodies

- **Elected Chair of the Special Interest Group on Artificial Intelligence of the Association for Computing Machinery (ACM SIGART), 2010-2013.** ACM SIGART has more than one thousand members. It sponsors major conferences such as Autonomous Agents and Multiagent Systems, Intelligent User Interfaces, and Human-Robot Interaction. Recent activities include the creation of two new journals on Interactive Intelligent Systems and on Intelligent Systems and Technology, and the joint sponsorship with the SIG on Computer Science Education of a new Symposium on Educational Advances in Artificial Intelligence. ACM and SIGART give the prestigious ACM/SIGART Autonomous Agents Research Award and the Allen Newell Award annually to outstanding AI researchers.
- **Chair of the Incubator Group on Provenance at the World Wide Web Consortium (W3C), 2009-2010.** The W3C is an international standards body for Web Architecture and promotes the establishment of community-driven activities that may lead to standardization efforts (<http://www.w3.org>). This Incubator Group on Provenance produced numerous documents including requirements, use cases, a state-of-the-art report, and mappings across well-known provenance vocabularies. More importantly, it proposed a charter for a new Provenance Interchange Working Group with 17 core provenance concepts as a starting point for a standard on provenance for the web. This Working Group started in April 2011 and will release a first draft of the standard in Fall 2011.
- **Chair of the Conference Committee of the Association for the Advancement of Artificial Intelligence (AAAI), Chair 2006-2009 and Associate Chair 2004-2006.** This committee oversees the AAAI and IAAI conferences as well as the AIIDE conference and the new International Conference on Weblogs and Social Media. Added several ongoing events to the conference, including special tracks of technical papers, a Nectar Track for accessible overviews of AI research published in other venues, and a Senior Member submission track. All these

innovations continue in the conference. The latest innovation is the Educational Advances in Artificial Intelligence (EAAI) and will be started in 2010, and is a new Teaching Forum where accomplishments in AI education will be highlighted at the annual conference.

- **Member of the Advisory Council of the National Science Foundation Directorate for Computing and Information Science and Engineering (CISE), 2006-2008.** Major CISE activities during this period include separating the cyberinfrastructure division within CISE into a separate Office of Cyberinfrastructure (OCI), conducting several major revisions of the Global Environment for Network Innovations (GENI) to revamp networking research as a flagship major CISE initiative, and providing feedback to the National Science Board regarding cost sharing and PI limitations on NSF proposals.
- **Councilor of the American Association of Artificial Intelligence (AAAI), 2003-2009.** When I joined the council, AAAI was facing a tremendous fragmentation of the field as new conferences were being constituted (Agents, IUI, ISWC, UAI) and older ones were cementing and growing their attendance (CogSci, ACL). I led an activity in the AAAI Executive Council to strengthen the relations between AAAI and other conferences. I volunteered to report to the council with factual data and perceived causes of this decline. In 2005, I submitted a lengthy document containing statistics about ten relevant conferences, and included information about their organization as well as feedback regarding the conference constituency vis-à-vis AAAI. The report highlighted important missed opportunities, and caused a major revamping of the AAAI Outreach Committee and the AAAI Conference Committee. I was asked to co-chair the latter, and became chair a year after which made me remain in the council well beyond the standard three-year term for elected councilors.

Editorial Boards

- ACM Transactions on Intelligent Systems and Technology (Sept'09 - present). Founding Editorial Board Member.
- Applied Ontology (Dec'04 - present). Founding editorial board member.
- Journal of Web Semantics (Dec'02 - present). Founding editorial board member.
- The Semantic Web (Jun'00 - present). Founding area editor.
- IEEE Intelligent Systems (Jul'98 - present). Editorial board member.
- The Knowledge Engineering Review (Jul'98 - present). Editorial board member.
- Cognitive Science (Jan'06 – Dec'08). Associate Editor.

Conference Organizing Committees

- Co-chair and conference founder, The First Symposium on Educational Advances in Artificial Intelligence (EAAI), 2010.
- Co-Chair for World Wide Web Conference (WWW) Semantic Web Track, 2010.
- Conference Committee Chair, American Association for Artificial Intelligence (AAAI), 2006-2009.
- Program Co-Chair, National Conference for Artificial Intelligence (AAAI), 2006.
- Program Co-Chair, Fourth International Semantic Web Conference (ISWC), 2005.
- Tutorial Co-Chair, National Conference for Artificial Intelligence (AAAI), 2005.
- Program Chair, Intelligent User Interfaces (IUI), 2002.
- General chair, Second International Conference on Knowledge Capture (K-CAP), 2009, 2003.
- Co-chair and conference founder (with Mark Musen and Jude Shavlik), First International Conference on Knowledge Capture (K-CAP), 2001.
- Co-chair (with Karen Myers), AAAI Workshop on "Representational Issues for Real-world Planning Systems," 2000.
- Chair, AAAI Symposium on "Acquisition, Learning, and Demonstration: Automating Tasks for Users," 1996.
- Co-chair (with Manuela Veloso), AAAI Symposium on "Planning and Learning: On to Real Applications," 1994.

Conference Program Committees

- American Association for Artificial Intelligence (AAAI). Program committee, 1996, 1997, 1998, 2004, 2008. Nectar track: 2007, 2008.
- International Conference on Artificial Intelligence (IJCAI). Senior program committee, 2009, 2011. Reviewing committee, 2001, 2003.

- International Conference on Intelligent User Interfaces (IUI). Program committee co-chair, 2002. Meta-reviewer: 2005, 2006, 2007, 2008, 2009, 2011. Program committee: 2000, 2001, 2003, 2004, 2010, 2012.
- World Wide Web (WWW) Conference. Area Chair, 2010. Program committee, 2005.
- International Semantic Web Conference (ISWC). Program committee co-chair, 2005. Meta-reviewer: 2008. Program committee, 2003, 2004, 2009, 2010, 2011.
- Innovative Applications of Artificial Intelligence (IAAI): Program committee, 2004, 2005, 2008, 2012.
- International Conference on Machine Learning (ICML). Program committee and area chair, 2002.
- International Conference on Ontologies, Databases, and Applications of Semantics (ODBASE). Program committee, 2003.
- Artificial Intelligence Planning Systems (AIPS). Program committee 1996, 1998, 2000.
- Principles of Knowledge Representation and Reasoning (KR). Program committee, 2000.
- IEEE Symposium on Multi Agent Security and Survivability (MAS&S). Program committee, 2004, 2005.

Other Reviewing and Service

- Advisory Board, Semantic Web Science Association (SWSA), which oversees the International Semantic Web Conference, 2010-current.
- National Science Foundation, served as proposal reviewer in many panels.
- National Institutes of Health, served as proposal reviewer in many panels.
- Air Force Office of Scientific Research, proposal reviewer.
- Kyoto Prize, Inamori Foundation, Kyoto, Japan.
- MIT Press, book reviewer.
- AAAI Awards Committee 2005-2009.

- IJCAI Advisory Committee, 2007.
- IJCAI Awards Review Committee, 2007.
- AAI Grants Committee, 2004-2006.

Awards and Honors

- **Finalist for Best In-Use Paper Award** at the International Semantic Web Conference, held October 23-27 2011 in Bonn, Germany for:

“Mind Your Metadata: Exploiting Semantics for Configuration, Adaptation, and Provenance in Scientific Workflows.” Gil, Y.; Szekely, P.; Villamizar, S.; Harmon, T.; Ratnakar, V.; Gupta, S.; Muslea, M.; Silva, F.; and Knoblock, C.

- **Finalist for Best Paper Award** at the International Conference on Intelligent User Interfaces, held February 13-16 2011 in Palo Alto, California (USA) for:

“A Formal Framework for Combining Natural Instruction and Demonstration for End-User Programming.” Christian Fritz and Yolanda Gil.

- **Third Prize in the 2010 Semantic Web Challenge**, a major competition that recognizes accomplishments in developing significant applications in the Semantic Web, for

“Shortipedia: Aggregating and Curating Semantic Web Data” by Denny Vrandecic, Varun Ratnakar, Markus Krotzsch, and Yolanda Gil

- **Elected Chair of the Special Interest Group on Artificial Intelligence of the Association for Computing Machinery (ACM SIGART)** for the term 2010-2013.
- **Invited to serve in the Advisory Council of the National Science Foundation Directorate for Computing and Information Science and Engineering (CISE)** for the term 2006-2008.
- **Elected to the Council of the American Association of Artificial Intelligence (AAAI)** in 2003. Four councilors are elected annually to three-year terms with a total of twelve councilors. Continued in the Council as Chair of the Conference Committee until 2009.

- **Best Paper Award** at the International Conference on Intelligent User Interfaces, held January 14-17 2001 in Santa Fe, New Mexico (USA) for:

"An Integrated Environment for Knowledge Acquisition" by Jim Blythe, Jihie Kim, Surya Ramachandran, and Yolanda Gil.

- **Award from the Defense Advanced Research Projects Agency** and Rome Laboratory Planning Initiative, presented by Tom Garvey (DARPA ISO Assistant Director for C2/Planning) on June 12, 1996:

"In recognition of and sincere appreciation for efforts above and beyond the call of duty to ensure the successful demonstration of Automated Air Campaign Planning for the US Air Force Combat Command."

- **Meritorious Service Award from USC/ISI**, presented by Herb Schorr (USC/ISI Director) and Robert Balzer (USC/ISI Division Director) on March 16, 1998:

"For significantly improving ISI's access to quality graduate research students."

- **ISI Teaching Fellowship**, Fall 1996.

Teaching, Advising, and Academic Service at USC

- CS Chair Advisory Council (2007-2008). Consultation by the chair on decisions and plans for the Computer Science Department.
- CS Committee for PhD programs (2007-2008). Participate on PhD admissions, recruiting, and fellowships. Nominations to various awards for recognition of RAs and TAs in the department.
- Appointed to the USC Advisory Committee on National and International Graduate Fellowships in 2003/2004 and 2004/2005. Served as ad-hoc reviewer 2005-present.
- CS Hiring Committee, autonomy area, Spring 2004.
- CS Performance Evaluation committee for research faculty, 2003.
- Head of the Computer Science PhD Graduate Student Assistance Committee at USC (1998-2005). Nomination of fellowships, assignment of Teaching Assistantships, mediation of Research Assistantship awards, and recruiting. Member of committee 1995-1998.

- Artificial Intelligence Planning graduate course at USC (CS 541). Taught every other year in the Fall semester. Last held on Fall 2003. Initially taught as an advanced seminar course in Fall 1996 and Fall 2000, instituted as a required course for the CS PhD degree at USC in 1998.
- Graduate student advising:
 - "A Script-Based Approach to Modifying Knowledge-Based Systems." Marcelo Tallis, PhD thesis, Department of Computer Science of the University of Southern California, 1999. Chair.
 - "Semantic Indexing: Efficient Retrieval of Semantically Similar Concepts." Eric Melz, MSc thesis, Department of Computer Science of the University of Southern California, 1997.
- Recent PhD committees: Hyunjin Yoon (2008), Emma Bowring (2007), Martin Michalowski (2007), Ratapoom Tuchinda (2007), Gurmeet Singh (2006).

Other Teaching, Advising, and Academic Service

- Tutorial on "Computational Workflows for Large-Scale Artificial Intelligence Research" at the Twenty-Third AAAI Conference on Artificial Intelligence (AAAI-08) held in Chicago, Illinois, July 13, 2008.
- Judge, Intel International Science and Engineering Fair (ISEF) for high school students grades 9-12, Association of the Advancement of Artificial Intelligence Awards, 2007.
- Invited to present at the Sally Ride Science Festival for attracting young girls to science, "On-Line Collaboratories and the Southern California Earthquake Center", held in November 2003.
- Faculty advisor, SIGART/AAAI Doctoral Consortium, held during the National Conference on Artificial Intelligence (AAAI), 1997, 1998.
- Recent external PhD committees:
 - University of Texas at Austin: James Fan (2006).
 - University of Aberdeen: Edoardo Pignotti (2007).
 - University of Illinois Urbana-Champaign: Jeff Pasternack (2011).

Awards and Grants

- **An Analytical Framework for Provenance-Rich Social Knowledge Collection.**
Funder: National Science Foundation (NSF)
Award number: IIS-1117281.
Period of performance: September 2011 - August 2014.
Principal Investigator: Yolanda Gil.
- **CI Fellows Award.**
Funder: National Science Foundation (NSF) through the Computing Research Association
Award number: CNS-1019343.
Period of performance: October 2011 - October 2012.
Principal Investigators: Yolanda Gil and Ricky Sethi.
- **Workshop on Discovery Informatics.**
Funder: National Science Foundation (NSF)
Award number: IIS-1151951.
Period of performance: September 2011 - August 2012.
Principal Investigator: Yolanda Gil.
- **Cybersecurity through Nimble Task Allocation: Workflow Reasoning for Mission-Centered Network Models.**
Funder: Air Force Office of Scientific Research (AFOSR).
Award number: FA9550-11-1-0104.
Period of performance: June 2011 – March 2015.
Principal Investigators: Yolanda Gil (PI).
- **Workflows Across Organizations: Design Issues.**
Funder: National Science Foundation (NSF)
Award number: CCF-0725332.
Period of performance: June 2011 – March 2015.
Principal Investigator: Yolanda Gil.
- **Semantic Workflows for the Cancer Bioinformatics Grid (caBIG)**
Funder: National Cancer Institute (NIH/NCI)
Period of performance: July 2009 - January 2010.
Principal Investigator: Yolanda Gil (PI).

- **W-SHARING: Towards Shared Repositories of Computational Workflows**
Funder: National Science Foundation (NSF)
Award number: IIS-0948429.
Period of performance: September 2009 - August 2011.
Principal Investigators: Yolanda Gil (PI).
- **PedWorkflow: Workflows for Assessing Student Learning**
Funder: National Science Foundation (NSF)
Award number: IIS-0917328.
Period of performance: September 2009 - August 2011.
Principal Investigators: Jihie Kim (PI), Gisele Ragusa (co-PI), Erin Shaw (co-PI), and Yolanda Gil (co-PI).
- **Designing Scientific Software One Workflow at a Time.**
Funder: National Science Foundation (NSF)
Award number: CCF-0725332.
Period of performance: October 2007 - September 2011.
Principal Investigators: Yolanda Gil and Ewa Deelman.
- **Plato: Phased-Learning through Analyzing Teaching and Observation.**
Funder: DARPA Bootstrapped Learning (BL) program
Award number: HR0011-07-C-0060.
Period of performance: August 2007-July 2011.
Principal Investigators: Subcontract to SRI International. ISI PI: Yolanda Gil.
- **NSF Workshop on Scientific Workflows Challenges (WSW-06).**
Funder: NSF IIS.
Award number: IIS-0629361.
Period of performance: May 2006-May 2009.
Principal Investigators: Yolanda Gil (PI) and Ewa Deelman (co-PI).
- **Intelligent Optimization of Parallel and Distributed Applications.**
Funder: NSF Computer Science Research (CSR) program.
Award number: CSR-0615412.
Period of performance: August 2006 – September 2009.
Principal Investigators: Mary Hall (PI), Kristina Lerman (co-PI), Ewa Deelman (co-PI), Aichiro Nakano (co-PI), Joel Saltz (co-PI).

- **MathTrust : Mathematical Analysis of Trust and Deception.**
Funder: Air Force Office of Scientific Research (AFOSR).
Award number: FA9550-06-1-0031.
Period of performance: December 2005 - May 2009.
Principal Investigators: Yolanda Gil (PI).
- **CALO-KA: Advice Taking for a Personalized Cognitive Assistant.**
Funder: DARPA Personalized Assistants that Learn (PAL) program
Award number: NBCHD030010.
Period of performance: May 2003 - March 2009.
Principal Investigator: Subcontract to SRI International. ISI co-PIs: Craig Knoblock, Jerry Hobbs, and Yolanda Gil.
- **Scalable Knowledge Discovery Through Grid Workflows.**
Funder: Air Force Research Laboratory
Award number: FA8750-06-C-0210.
Period of performance: September 2006 – December 2008.
Principal Investigator: Yolanda Gil. ISI co-PIs: Paul Cohen and Ewa Deelman.
- **C4ML: Metareasoning for Integrated Learning.**
Funder: DARPA Integrated Learning (IL) program
Award number: FA8650-06-C-7606.
Period of performance: May 2006-December 2008.
Principal Investigators: Subcontract to BBN Technologies. ISI co-PIs: Paul Cohen and Yolanda Gil.
- **Intelligent Design and Optimization of Parallel and Distributed Applications.**
Funder: NSF Computer Science Research (CSR) program.
Award number: CNS-0509517.
Period of performance: July 2005 – December 2006.
Principal Investigators: Mary Hall (PI), Kristina Lerman (co-PI), Ewa Deelman (co-PI), Aichiro Nakano (co-PI), Joel Saltz (co-PI).
- **Towards Cognitive Grids: Knowledge-Rich Grid Services for Autonomous Workflow Refinement and Robust Execution.**
Funder: NSF Shared Cyberinfrastructure (SCI) program.
Award number: SCI-0455361.
Period of performance: December 2004-November 2006.

Principal Investigators: Ewa Deelman (PI) and Yolanda Gil (co-PI).

- **Just-In-caSe just-in-Time Information Analysis.**

Funder: Department of Defense.

Award number: N66001-03-C-8006.

Period of performance: December 2002 - December 2007.

Principal Investigator: Yolanda Gil (PI).

- **The SCEC Community Modeling Environment--An Information Infrastructure for System-Level Earthquake Research.**

Funder: National Science Foundation Information Technology Research program (NSF/ITR).

Award number: EAR-0122464.

Principal Investigators: Grant PIs: Thomas H. Jordan (USC/SCEC), J. Bernard Minster (UCSD), Carl Kesselman (USC/ISI), Reagan Moore (SDSC). ISI co-PIs: Hans Chalupsky, Yolanda Gil, Carl Kesselman.

Period of performance: October 2001-September 2006.

- **TRELLIS: Capturing and Exploiting Semantic Relationships for Information and Knowledge Management.**

Funder: Air Force Office for Scientific Research (AFOSR).

Award number: F49690-00-1-0337.

Principal Investigator: Yolanda Gil (PI).

Period of performance: August 2000 - December 2003.

- **TEMPLE: Template Enhancement through Knowledge Acquisition.**

Funder: DARPA Active Templates (AcT) program.

Award number: F30602-00-2-0513.

Principal Investigator: Yolanda Gil (PI).

Period of performance: April 2000 - April 2003.

- **Phosphorus: A Knowledge and Experience-Based Agent Capabilities Matcher.**

Funder: DARPA Control of Agent-Based Systems (CoABS) program.

Award number: F30602-97-C-0068.

Principal Investigators: Yolanda Gil (co-PI) and Robert MacGregor (co-PI).

Period of performance: June 1999 - December 2001.

- **KASPER: Knowledge Acquisition for Solving Problems.**

Funder: DARPA Rapid Knowledge Formation (RKF) program.

Award number: N66001-00-C-8018.

Principal Investigator: Yolanda Gil (ISI PI).

Period of performance: April 2000 - February 2004.

- **KAMM: Knowledge Acquisition for Objective Grammars in MasterMind Editor.**

Funder: Air Force Research Laboratory's Joint Defense Planner (JDP) program.

Award number: F30602-97-C-0118.

Principal Investigators: Yolanda Gil (co-PI) and Pedro Szekely (co-PI).

Period of performance: April 2000 - September 2000.

- **SHERPA: Knowledge Acquisition for Large Knowledge Bases -- Integrating Problem-Solving Methods and Ontologies into Applications.**

Funder: DARPA High Performance Knowledge Bases (HPKB) program.

Award number: F30602-97-1-0195.

Principal Investigators: Bill Swartout (co-PI) and Yolanda Gil (co-PI).

Period of performance: April 1997 - April 2000.

- **INSPECT-II: An Air Campaign Planning Evaluation Aid.**

Funder: DARPA Joint Forces Air Component Commander (JFACC) program.

Award number: F30602-97-C-0118.

Principal Investigators: Bill Swartout (co-PI) and Yolanda Gil (co-PI).

Period of performance: April 1997 - September 2000.

- **Rosetta: Ontology-Based Agent Communication.**

Funder: DARPA Information Systems Office (ISO) Technology Integration Experiment program.

Award number: F30602-97-1-0195.

Principal Investigators: Yolanda Gil (co-PI) and Robert MacGregor (co-PI).

Period of performance: July 1999 - July 2000.

- **EXPECT-II: A User-Centered Environment for the Development and Adaptation of Knowledge-Based Planning Aids.**

Funder: DARPA/Rome Planning Initiative (ARPI) program.

Award number: DABT 63-95-C-0059.

Principal Investigators: Yolanda Gil (co-PI) and Bill Swartout (co-PI).

Period of performance: May 1995 - May 1999.

Publications

Edited Volumes

1. Proceedings of the First International Conference on Knowledge Capture (K-CAP 2001), Yolanda Gil, Mark Musen, and Jude Shavlik (Eds), October 21-23, 2001, Victoria, British Columbia. ACM 2001.
2. Proceedings of the 2002 International Conference on Intelligent User Interfaces (IUI 2002), Yolanda Gil and David Leake (Eds), January 13-15, 2002, San Francisco, CA, ACM, 2002.
3. Proceedings of the Second International Conference on Knowledge Capture (K-CAP 2003), John H. Gennari, Bruce W. Porter, Yolanda Gil (Eds), October 23-25, 2003, Sanibel Island, FL. ACM 2003.
4. Special Issue on e-Science, David DeRoure, Yolanda Gil, and Jim Hendler (Eds). IEEE Intelligent Systems, January 2004.
5. Proceedings of the Fourth International Semantic Web Conference (ISWC 2005), Yolanda Gil, Enrico Motta, V. Richard Benjamins, Mark A. Musen (Eds), November 6-10, 2005, Galway, Ireland. Springer 2005.
6. Proceedings of the Twenty-First National Conference on Artificial Intelligence (AAAI 2006), Yolanda Gil and Raymond Mooney (Eds), July 16-20, 2006, Boston, MA. AAAI Press, 2006.
7. Special issue with selected papers from the Fourth International Semantic Web Conference (ISWC 2005). Yolanda Gil and Enrico Motta (Eds). Journal of Web Semantics, 5(1), 2007.
8. Proceedings of the Fifth International Conference on Knowledge Capture (K-CAP 2009), Natasha Noy and Yolanda Gil (Eds), ACM Press, 2009.
9. Special Issue on "Using Provenance in the Semantic Web", Yolanda Gil and Paul Groth (Eds), Journal of Web Semantics, Vol. 9, No. 2, 2011.

Journal Articles

1. "Explanation-Based Learning: A Problem-Solving Perspective." Steven Minton, Jaime Carbonell, Craig Knoblock, Dan Kuokka, Oren Etzioni, and Yolanda Gil. Artificial Intelligence, Volume 40, Number 1/3, September 1989.
2. "Towards Method-Independent Knowledge Acquisition." Yolanda Gil and Cecile Paris. Knowledge Acquisition, Volume 6, Number 2, June 1994.

3. "User Studies of Knowledge Acquisition Tools: Methodology and Lessons Learned". Marcelo Tallis and Jihie Kim and Yolanda Gil. *Journal of Experimental and Theoretical AI*, Vol 13, pp 359-378, 2001.
4. "Mapping Abstract Workflows onto Grid Environments", Ewa Deelman, Jim Blythe, Yolanda Gil, Carl Kesselman, Gaurang Mehta, Karan Vahi, Kent Blackburn, Albert Lazzarini, Adam Arbree, Richard Cavanaugh, and Scott Koranda. *Journal of Grid Computing*, Vol. 1, No. 1, 2003.
5. "A Short Study on the Success of the Gene Ontology", Michael Bada, Robert Stevens, Carole Goble, Yolanda Gil, Michael Ashburner, Judith A. Blake, J. Michael Cherry, Midori Harris, and Suzanna Lewis. *Journal of Web Semantics*, Vol 1 (2), 2004.
6. "Pegasus: A framework for mapping complex scientific workflows onto distributed systems", Ewa Deelman, Gurmeet Singh, Mei-Hui Su, James Blythe, Yolanda Gil, Carl Kesselman, Gaurang Mehta, Karan Vahi, G. Bruce Berriman, John Good, Anastasia Laity, Joseph C. Jacob, Daniel S. Katz. *Scientific Programming*, Vol. 13, No. 3, 2005.
7. "Simplifying Construction of Complex Workflows for Non-Expert Users of the Southern California Earthquake Center Community Modelling Environment", P. Maechling, H. Chalupsky, M. Dougherty, E. Deelman, Y. Gil, S. Gullapalli, V. Gupta, C. Kesselman, J. Kim, G. Mehta, B. Mendenhall, T. Russ, G. Singh, M. Spraragen, G. Staples, and K. Vahi. *ACM SIGMOD Record*, special issue on Scientific Workflows, Vol 34 (3), September 2005.
8. "On Agents and Grids: Creating the Fabric of a New Generation of Distributed Intelligent Systems", Yolanda Gil. *Journal of Web Semantics*, Volume 4, Issue 2, June 2006.
9. "A Survey of Trust in Computer Science and the Semantic Web", Donovan Artz and Yolanda Gil. *Journal of Web Semantics*, Volume 5, Issue 2, 2007.
10. "Incorporating Tutoring Principles into Interactive Knowledge Acquisition", Jihie Kim and Yolanda Gil. *International Journal of Human-Computer Studies*, (65)10, October 2007.
11. "Towards Content Trust of Web Resources", Yolanda Gil and Donovan Artz. *Journal of Web Semantics*, Volume 5, Issue 4, December 2007.
12. "Self-Configuring Applications for Heterogeneous Systems: Program Composition and Optimization Using Cognitive Techniques". Mary Hall, Yolanda Gil, and Robert Lucas. *Proceedings of the IEEE*, Special Issue on Edge Computing, February 2008.
13. "Provenance Trails in the Wings/Pegasus Workflow System", Jihie Kim, Ewa Deelman, Yolanda Gil, Gaurang Mehta, Varun Ratnakar. *Concurrency and Computation: Practice and Experience*, Special Issue on the First Provenance Challenge, Vol 20, Issue 5, April 2008.

14. "From Data to Knowledge to Discoveries: Scientific Workflows and Artificial Intelligence." Yolanda Gil. *Scientific Programming*, Vol 17, No 3, 2009.
15. "High Performance Computing and Grid Computing for Integrative Biomedical Research." Tahsin Kurc, Shannon Hastings, Vijay Kumar, Stephen Langella, Ashish Sharma, Tony Pan, Scott Oster, David Ervin, Justin Permar, Sivaramakrishnan Narayanan, Yolanda Gil, Ewa Deelman, Mary Hall, Joel Saltz. *Journal of High Performance Computing Applications*, Vol 23, No 3, 2009.
16. "Principles for Interactive Acquisition and Validation of Workflows." Yolanda Gil, Jihie Kim, and Marc Spraragen. *Journal of Experimental and Theoretical Artificial Intelligence*, Vol 22, No 2, 2010.
17. "Parameterized Specification, Configuration, and Execution of Data-Intensive Scientific Workflows." Vijay Kumar, Tahsin Kurc, Varun Ratnakar, Jihie Kim, Gaurang Mehta, Karan Vahi, Yoonju Lee Nelson, P. Sadayappan, Ewa Deelman, Yolanda Gil, Mary Hall, Joel Saltz. *Cluster Computing Journal*, Vol 13, No 3, 2010.
18. "A Semantic Framework for Automatic Generation of Computational Workflows Using Distributed Data and Component Catalogs." Yolanda Gil, Pedro Antonio Gonzalez-Calero, Jihie Kim, Joshua Moody, and Varun Ratnakar. To appear in the *Journal of Experimental and Theoretical Artificial Intelligence*, 2011.
19. "Interactive Knowledge Capture in the New Millennium: How the Semantic Web Changed Everything." Yolanda Gil. *Knowledge Engineering Review*, Vol 26, No 1, 2011.
20. "The Open Provenance Model Core Specification (v1.1)." Luc Moreau, Ben Clifford, Juliana Freire, Joe Futrelle, Yolanda Gil, Paul Groth, Natalia Kwasnikowska, Simon Miles, Paolo Missier, Jim Myers, Beth Plale, Yogesh Simmhan, Eric Stephan, and Jan Van den Bussche. To appear in *Future Generation Computer Systems*, Vol 27, No. 6, 2011.
21. "Shortipedia: Aggregating and Curating Semantic Web Data." Denny Vrandečić, Varun Ratnakar, Markus Krotzsch, and Yolanda Gil. *Journal of Web Semantics*, Vol. 9, No. 3, 2011.
22. "The Cognitive Atlas: Towards a knowledge foundation for cognitive neuroscience." Poldrack, R. A.; Kittur, A.; Kalar, D.; Miller, E.; Seppa, C.; Gil, Y.; Parker, D. S.; Sabb, F. W.; and Bilder, R. M. *Frontiers in Neuroinformatics*, 5(17), 2011.
23. "A Semantic Framework for Automatic Generation of Computational Workflows Using Distributed Data and Component Catalogs." Gil, Y.; Gonzalez-Calero, P. A.; Kim, J.; Moody, J.; and Ratnakar, V. To appear in the *Journal of Experimental and Theoretical Artificial Intelligence*.
24. "Capturing Common Knowledge about Tasks: Intelligent Assistance for To Do Lists", Yolanda Gil, Varun Ratnakar, Timothy Chklovski, Paul Groth, Denny Vrandečić. To appear in *ACM Transactions on Interactive Intelligent Systems*, 2012.

Book Chapters

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2. "Artificial Intelligence and Grids: Workflow Planning and Beyond", Yolanda Gil, Ewa Deelman, Jim Blythe, Carl Kesselman, and Hongsuda Tangmurarunkit. *IEEE Intelligent Systems*, January 2004.
3. "Automatically Composed Workflows for Grid Environments", Jim Blythe, Ewa Deelman, and Yolanda Gil. *IEEE Intelligent Systems*, July/August, 2004.
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21. "IKRAFT: Interactive Knowledge Representation and Acquisition from Text", Yolanda Gil and Varun Ratnakar. Proceedings of the 13th International Conference on Knowledge Engineering and Knowledge Management (EKAW), Sigüenza, Spain, October 1-4, 2002.
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51. "Retrieval of Semantic Workflows with Knowledge Intensive Similarity Metrics." Ralph Bergmann and Yolanda Gil. Proceedings of the Nineteenth International Conference on Case Based Reasoning (ICCBR), Greenwich, London, September 12-15, 2011.

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3. "On Analyzing Planning Applications." Yolanda Gil and Marc Linster. AAAI Fall Symposium on Planning and Learning: On to Real Applications, New Orleans, LA, November 1994.
4. "Applying a General-Purpose Planning and Learning Architecture to Process Planning." Yolanda Gil and Alicia Perez. AAAI Fall Symposium on Planning and Learning: On to Real Applications, New Orleans, LA, November 1994.
5. "Domain-Specific Criteria to Direct and Evaluate Planning Systems." Yolanda Gil, Mark Hoffman, and Austin Tate. Proceedings of the 1994 Workshop of the Arpa/Rome Laboratories Planning Initiative, Tucson, AZ, February 21-25, 1994.
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8. "Transaction-Based Knowledge Acquisition: Complex Modifications Made Easier." Yolanda Gil and Marcelo Tallis. In Proceedings of the Ninth Knowledge Acquisition for Knowledge-Based Systems Workshop, Banff, Alberta, Canada, February 26-March 3, 1995.
9. "EXPECT: Explicit Representations for Flexible Acquisition." Bill Swartout and Yolanda Gil. In Proceedings of the Ninth Knowledge Acquisition for Knowledge-Based Systems Workshop, Banff, Alberta, Canada, February 26-March 3, 1995.

10. "Acquiring Criteria for Plan Quality Control." Brian Drabble, Yolanda Gil, and Austin Tate. AAAI Spring Symposium on Planning Applications, Stanford, CA, March 1995.
11. "Flexible Knowledge Acquisition Through Explicit Representation of Knowledge Roles." Bill Swartout and Yolanda Gil. AAAI Spring Symposium on Acquisition, Learning, and Demonstration: Automating Tasks for Users, Stanford, CA, March 1996.
12. "Subsumption-Based Matching: Bringing Semantics to Goals." Yolanda Gil and Pedro Gonzalez. Proceedings of the International Workshop on Description Logics (DL-96), Cambridge, MA, pp 116-118, November 2-4 1996.
13. "Representing Capabilities of Problem-Solving Methods." William Swartout, Yolanda Gil, and Andre Valente. Proceedings of 1999 IJCAI Workshop on Ontologies and Problem-Solving Methods.
14. "Knowledge Acquisition for Configuration Tasks: The EXPECT Approach." Surya Ramachandran and Yolanda Gil. Proceedings of the AAAI Workshop on Configuration, 1999.
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22. "Electric Elves: Immersing an Agent Organization in a Human Organization," David Pynadath, Milind Tambe, Yigal Arens, Hans Chalupsky, Yolanda Gil,

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 24. "Planning and Metadata on the Computational Grid," James Blythe, Ewa Deelman and Yolanda Gil. AAAI Spring Symposium on Semantic Web Services, Stanford, CA, March 2004.
 25. "Towards Interactive Composition of Semantic Web Services", Jihie Kim and Yolanda Gil. AAAI Spring Symposium on Semantic Web Services, Stanford, CA, March 2004.
 26. "A Knowledge-Based Approach to Interactive Workflow Composition," Jihie Kim, Yolanda Gil, and Marc Spraragen. Proceedings of the ICAPS Workshop on Planning and Scheduling for Grid and Web Services, Whistler, Canada, 2004.
 27. "Towards Managing Knowledge Collection from Volunteer Contributors", Tim Chklovski and Yolanda Gil. Proceedings of the 2005 AAAI Spring Symposium on Knowledge Collection from Volunteer Contributors (KCVC), Stanford, CA, March 2005.
 28. "Organizing Argumentation Statements to Support Intelligence Analysis," Tim Chklovski, Jihie Kim, and Yolanda Gil. Proceedings of the Workshop on Intelligent User Interfaces for Intelligence Analysis, 2006 International Conference on Intelligent User Interfaces (IUI), Sydney, Australia, January 30, 2006.
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 31. "Managing Large-Scale Scientific Workflows in Distributed Environments: Experiences and Challenges", Ewa Deelman and Yolanda Gil. Proceedings of the Workshop on Scientific Workflows and Business Workflow Standards in e-Science, The Second IEEE International Conference on e-Science and Grid Computing, Amsterdam, The Netherlands, December 4-6, 2006.
 32. "Enhancing Interaction with To-Do Lists Using Artificial Assistants", Yolanda Gil and Timothy Chklovski. AAAI Spring Symposium on Interaction Challenges for Artificial Assistants, Stanford, CA, March 26-28 2007.

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34. "Towards Privacy Aware Data Analysis Workflows for e-Science", William Cheung and Yolanda Gil. 2007 Workshop on Semantic e-Science (SeS2007), held in conjunction with the Twenty-Second Conference of the Association for the Advancement of Artificial Intelligence (AAAI), Vancouver, British Columbia, Canada, July 22-26, 2007.
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36. "Scaffolding Instructions to Learn Procedures from Users." Paul Groth and Yolanda Gil. AAAI Spring Symposium on Agents that Learn from Human Teachers, Stanford, CA, March 23-25, 2009.
37. "Analyzing the Gap Between Workflows and their Natural Language Descriptions." Paul Groth and Yolanda Gil. IEEE Third International Workshop on Scientific Workflows (SWF), Los Angeles, CA, July 10, 2009.
38. "Leveraging Social Networking Sites to Acquire Rich Task Structure." Yolanda Gil, Paul Groth and Varun Ratnakar. 2009 Workshop on User-Contributed Knowledge and Artificial Intelligence: An Evolving Synergy (WikiAI09), held in conjunction with the Twenty-First International Joint Conference on Artificial Intelligence (IJCAI-09), Pasadena, CA, July 13, 2009.
39. "Determining the Trustworthiness of New Electronic Contracts". Paul Groth, Simon Miles, Sanjay Modgil, Nir Oren, Michael Luck, and Yolanda Gil. Proceedings of the Tenth Annual Workshop on Engineering Societies in the Agents' World, (ESAW-09), Utrecht, The Netherlands, November 18-20, 2009.
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25. "Provenance Requirements for the Next Version of RDF." Jun Zhao, Christian Bizer, Yolanda Gil, Paolo Missier, and Satya Sahoo. W3C Workshop on RDF Next Steps, Stanford, CA, June 2010.
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27. "Social Task Networks: Personal and Collaborative Task Formulation and Management in Social Networking Sites." Yolanda Gil, Paul Groth, and Varun

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28. "Assisting Scientists with Complex Data Analysis Tasks through Semantic Workflows. Yolanda Gil, Varun Ratnakar, and Christian Fritz." AAAI Fall Symposium Series on Proactive Assistant Agents, Arlington, VA, November 2010.
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