

# Leonardo Salayandía

## *Curriculum Vitae*

### Contact

Department of Computer Science  
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### Research Interests

Software Engineering, Cyberinfrastructure, Scientific Workflows, Ontologies, Semantic Web.

### Education

*Ph.D., Computer Science*, in progress (expected Fall 2009)

University of Texas at El Paso  
El Paso, TX

Adviser: Prof. Ann Q. Gates

Committee: Prof. Paulo Pinheiro da Silva, Prof. Aaron Velasco, and Prof. Yoonsik Cheon

GPA: 3.87/4.0

*M.S., Computer Science*, December 2002

University of Texas at El Paso  
El Paso, TX

Thesis: *A Study of the Validity and Utility of PAPI Performance Counter Data*

Adviser: Prof. Patricia J. Teller

GPA: 3.63/4.0

*B.S., Computer Science*, May 1998

University of Texas at El Paso  
El Paso, TX

GPA: 3.45/4.0

### Employment

6/2003–present

Research Specialist

Computer Science Department, University of Texas at El Paso  
El Paso, TX

6/2002–5/2003

Graduate Research Assistant

Computer Science Department, University of Texas at El Paso  
El Paso, TX

8/2001–5/2002

Teaching Assistant

Computer Science Department, University of Texas at El Paso  
El Paso, TX

5/1998–8/2001      Production General Manager  
Talleres Diversificados de Juárez  
Ciudad Juárez, Chihuahua, México

## Publications

### Journal Papers

Leonardo Salayandia and Ann Q. Gates. Towards a workflow management system for service oriented modules. In Wei-Tek Tsai, editor, *International Journal of Simulation and Process Modelling (IJSPM)*, volume 3 issue 1/2, pages 18–25. Inderscience, Olney, Buckinghamshire, UK, 2007.

### Conference Papers

Leonardo Salayandia, Steven Roach, and Ann Q. Gates. Program synthesis from workflow-driven ontologies. In *Proceedings of the Annual Meeting of the North American Fuzzy Information Processing Society, 2008 (NAFIPS 2008)*, pages 1–6, New York, NY, May 2008. IEEE Computer Society.

Nicholas Del Rio, Paulo Pinheiro da Silva, Ann Q. Gates, and Leonardo Salayandia. Semantic annotation of maps through knowledge provenance. In *Proceedings of the Second International Conference on Geospatial Semantics (GeoS)*, volume 4853/2007 of LNCS, pages 20–35, Berlin/Heidelberg, November 2007. Springer Berlin/Heidelberg.

Ann Q. Gates, G. Randy Keller, Leonardo Salayandia, Paulo Pinheiro da Silva, and Flor Salcedo. The gravity data ontology: Laying the foundation for workflow-driven ontologies. In *Proceedings of the Second International Conference on Geospatial Semantics (GeoS)*, volume 4853/2007 of LNCS, pages 278–287, Berlin/Heidelberg, November 2007. Springer Berlin/Heidelberg.

Leonardo Salayandia, Paulo Pinheiro da Silva, Ann Q. Gates, and Flor Salcedo. Workflow-driven ontologies: An earth sciences case study. In *Proceedings of the 2nd IEEE International Conference on e-Science and Grid Computing*, Amsterdam, Netherlands, December 2006.

Leonardo Salayandia, Paulo Pinheiro da Silva, Ann Q. Gates, and Alvaro Rebellon. A model-based workflow approach for scientific applications. In *Proceedings of the 6th OOPSLA Workshop on Domain-Specific Modeling*, Portland, OR, October 2006.

Leonardo Salayandia, Yuan Huang, Ann Q. Gates, and Steven Roach. Geonet: Use of grid technologies in geoinformatics for the transition zone between the colorado plateau and the basin & range province. In A. K. Sinha, editor, *Geoinformatics: Data to Knowledge*. Geological Society of America, 2006.

Raed Aldouri, G. Randy Keller, Ann Q. Gates, Jorge Rasillo, Leonardo Salayandia, Vladik Kreinovich, John Seeley, Priscilla Taylor, and Steven Holloway. Geon: Geophysical data add the 3rd dimension in geospatial studies. In *Proceedings of the ESRI International User Conference 2004*, page 1898, San Diego, CA, August 2004.

Shirley Moore, Daniel Terpstra, Kevin London, Philip Mucci, Patricia Teller, Leonardo Salayandia, Alonso Bayona, and Manuel Nieto. Papi deployment, evaluation, and extensions. In *DOD UGC '03: Proceedings of the 2003 DoD User Group Conference*, page 349, Washington, DC, USA, 2003. IEEE Computer Society.

### Technical Reports

Paulo Pinheiro da Silva, Leonardo Salayandia, and Ann Q. Gates. Wdo-it! a tool for building scientific workflows from ontologies. Technical Report UTEP-CS-07-50, University of Texas at El Paso, El Paso, TX, September 2007.

Leonardo Salayandia and Aaron Velasco. Building a seismology workflow-driven ontology: A case study. Technical Report UTEP-CS-07-06, University of Texas at El Paso, El Paso, TX, January 2007.

## Posters and Talks

- Leonardo Salayandia and Aida Gandara. Enhancing workflow-driven ontologies: A meta model to create conceptual workflows at multiple abstraction levels. In *Proceedings of the Annual Meeting of the Computing Alliance of Hispanic Serving Institutions, 2009 (CAHSI 2009)*, San Francisco, CA, January 2009.
- Leonardo Salayandia, Paulo Pinheiro da Silva, and Ann Q. Gates. Workflows + ontologies: Harnessing the grid to advance the geosciences, June 2007. Talk at the GEON Cyberinfrastructure Workshop, Moscow, Russia.
- Leonardo Salayandia. Workflow-driven ontologies for the geosciences, July 2006. Talk at the GEON Cyberinfrastructure Workshop, Beijing, China.
- Leonardo Salayandia. Evaluating bdi agents to integrate resources over cyberinfrastructure. In Shailaja R. Brady, A. Krishna Sinha, and Linda C. Gundersen, editors, *Geoinformatics 2006 Abstracts, USGS Scientific Investigations Report 2006-5201*, page 13, Reston, VA, May 2006.
- Julio C. Olaya, Leonardo Salayandia, Ann Q. Gates, and G. Randy Keller. Talwani—a profile modeling tool adaptable to cyberinfrastructure. In Shailaja R. Brady, A. Krishna Sinha, and Linda C. Gundersen, editors, *Geoinformatics 2006 Abstracts, USGS Scientific Investigations Report 2006-5201*, page 49, Reston, VA, May 2006.

## Other Papers

- Leonardo Salayandia. A study of the validity and utility of papi performance counter data. Master's thesis, University of Texas at El Paso, December 2002.

## Professional Service

### Conference Reviewing

- 6th Annual European Semantic Web Conf (ESWC 2009)
- 20th Intl Conf on Software Engineering and Knowledge Engineering (SEKE 2008)
- 5th Intl Symp on Parallel and Distributed Processing and Applications (ISPA 2007)
- 3rd Annual European Semantic Web Conf (ESWC 2006)
- 36th Frontiers in Education Conf (FIE 2006)

## Activities and Honors

*President of the Association for Computing Machinery (ACM) Local Student Chapter*  
Fall 1998

*Emergent Leaders Program*  
Spring 1998

*UPE Computer Science Honor Society*  
Fall 1997

*Golden Key National Honor Society*  
Spring 1997

*Texas College of Mines (TCM)*  
Spring 1997

## **Technical Skills**

### **Proficient**

C#, Java, HTML/RDF/OWL/XML, SQL, Linux, Windows

### **Familiar**

AspectJ, Awk, C, LaTeX, Matlab, Perl, Prolog, PHP, Python, Visual Basic, AIX, MacOS, SunOS, Zope/DTML/TAL

## **Miscellaneous**

*Languages:* Spanish (native), English

*Citizenship:* México

*Marital Status:* Married

February 17, 2009