

Maribel Acosta Deibe, M.Sc.

Curriculum Vitae

PERSONAL INFORMATION

Born: March 21st 1987, Caracas, Venezuela.
Citizenship: Spanish and Venezuelan.
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Google Scholar: <https://scholar.google.de/citations?user=druU9nsAAAAJ>
Scopus: <http://www.scopus.com/authid/detail.uri?authorId=36699349400>

EDUCATION

Ph.D. Candidate.

November 2011 - Current.
Dissertation: *Efficient and Effective Query Execution Against Web Data*.
Karlsruhe Institute of Technology, Karlsruhe, Germany.
Advisor: Prof. Dr. Rudi Studer.
Estimated Date of Defense: June 2016.

M.Sc. in Computer Science.

September 2009 - October 2011.
Thesis: *Adaptive Query Execution Against the Linked Data Cloud*.
Universidad Simón Bolívar, Caracas, Venezuela.
Advisor: Prof. Dr. María-Esther Vidal.
Graduated with Honors.

Eng. in Computer Engineering.

September 2004 - June 2009.
Thesis: *Energy-efficient Routing Algorithms for Wireless Sensor Networks*.
Universidad Simón Bolívar, Caracas, Venezuela.
Advisor: Dr. Ricardo González.
Cum laude.

CURRENT POSITION

Research Associate. Institute of Applied Informatics and Formal Description Methods (AIFB). Karlsruhe Institute of Technology. Karlsruhe, Germany.

AREAS OF INTEREST

Very Large Databases, Semantic Web, Human Computation, Data Quality.

HONORS AND AWARDS

- Best Student Paper Award. International Conference in Knowledge Capture. 2015.
- Best Research Reviewer Award. International Semantic Web Conference. 2015.
- Winner of the MediaEval Challenge for Crowdsourcing for Social Multimedia. 2013.
- Best Demo Paper Award. Extended Semantic Web Conference, 2012.
- Honor recognition in Master Thesis. Universidad Simón Bolívar, 2012.
- Doctoral scholarship. German Research Foundation (DFG), 2011-2014.
- Scholarship to attend the Oracle Database 10g: Administration Workshop I. Oracle University, 2010.

- Best B.Sc. Thesis in Computer Science, IEEE-INELECTRA Contest, 2009.
- B.Sc. Thesis Special Award, EUREKA-Universia Contest, 2009.
- Outstanding B.Sc. Thesis Work. Universidad Simón Bolívar, 2009.

RESEARCH PROJECTS

EUCLID - Educational Curriculum for the Usage of Linked Data.
 FP7 Research Project. Participation: 2012 - 2014. <http://euclid-project.eu>

PlanetData - A European Network of Excellence on Large-Scale Data Management.
 FP7 Research Project. Participation: 2012 - 2013. <http://www.planet-data.eu>

Study on Emissions and the Impact of Polluting Agents from Oil Refineries.
 Funded by Metanol de Oriente (METOR S.A.). Participation: 2009 - 2011.

Application of Wireless Sensor Network Technologies to the Business of Oil and Gas.
 Funded by Petróleos de Venezuela (PDVSA). Participation: 2007 - 2008.

INVITED TALKS

- *Crowdsourcing-based techniques to enhance query answering of SPARQL engines.* Database Group at the University of Maryland, 2015.
<https://talks.cs.umd.edu/talks/1163>
- *Challenges to be addressed during Benchmarking SPARQL Federated Engines.* 5th Technical User Community at the Linked Data Benchmarking Council, 2014.
<http://wiki.ldbcouncil.org/display/TUC/Fifth+TUC+Meeting%2C+Athens%2C+Greece%2C+November+14>
- *Challenges of SPARQL query processing over client-server architectures.* Institute of Computer Science at the Foundation for Research & Technology - Hellas (FORTH), 2014.
https://www.ics.forth.gr/dcs/index_main.php?l=e&n=4&id=436
- *Crowdsourcing Linked Data Management.* Part of the Dagstuhl Seminar “Crowdsourcing and the Semantic Web”, 2014.
<http://www.dagstuhl.de/14282>

TUTORIALS ORGANIZED

- Introduction to Big Data. HECTOR School, the Technology Business School at the Karlsruhe Institute of Technology, 2015.
- Semantic data management in graph databases (Full day). At the Extended Semantic Web Conference (ESWC), 2014.
- Microtask crowdsourcing to solve Semantic Web problems (Full day). At the International Web Conference (ISWC), 2013.
- Tutor at the Extended Semantic Web Conference (ESWC) Summer School. 2013 and 2014.
- Crowdsourcing for the Semantic Web (Full day). At the Extended Semantic Web Conference (ESWC), 2013.
- Semantic data management in graph databases (Half day). At the Extended Semantic Web Conference (ESWC), 2013.
- Adaptive semantic data management techniques for federations of endpoints (Half day). At the Extended Semantic Web Conference (ESWC), 2012.
- Adaptive semantic data management techniques for Linked Data (Half day). At the Extended Semantic Web Conference (ESWC), 2011.

TEACHING EXPERIENCE

2012 - 2013. Tutor, Karlsruhe Institute of Technology.
2009 - 2011. Teaching Assistant, Computer Science and Information Technology Department, Universidad Simón Bolívar.

2005 - 2009. Tech Support, Computer Coordination, Universidad Simón Bolívar.
2005. Undergraduate T.A., Computer Science and Information Technology Department, Universidad Simón Bolívar.

COURSES

- Attended the 1st ESWC Summer School, 2011.
- Oracle DBMS: Workshop Administration I, Oracle University, 2010.

TECHNICAL SKILLS

Languages: Spanish (native), English (fluent), German (B1).
Programming: Python, Java, C, C++, Perl, Prolog, Haskell, NesC, JSP, JSF, shellscripts (bash, awk).
RDBMS: Administration in Oracle, PostgreSQL MySQL.
NoSQL: Cassandra, Neo4j, Sparksee, MongoDB.
Semantic Web: OpenLink Virtuoso, RDF3X, GraphDB (OWLIM).
Web Servers: Apache, Tomcat, Glassfish.
Operating Systems: GNU/Linux, MacOS X and Windows {2000, XP, 7}.
Cloud Computing: Amazon Web Services (EC2, S3, EMR).
Crowdsourcing: Amazon Mechanical Turk, CrowdFlower.

PUBLICATIONS

PEER REVIEWED CONFERENCE ARTICLES

- **Networks of Linked Data Eddies: An Adaptive Web Query Processing Engine for RDF Data.** M. Acosta, M-E. Vidal. International Semantic Web Conference (ISWC). 2015.
- **HARE: A Hybrid SPARQL Engine to Enhance Query Answers via Crowdsourcing.** M. Acosta, E. Simperl, F. Flöck, M-E. Vidal. International Conference on Knowledge Capture (K-CAP). 2015.
- **WikiWho: Precise and Efficient Attribution of Authorship of Revisioned Content.** F. Flöck, M. Acosta. International World Wide Web Conference (WWW). 2014.
- **Crowdsourcing Linked Data Quality Assessment.** M. Acosta, A. Zaveri, E. Simperl, D. Kontokostas, S. Auer, J. Lehmann. International Semantic Web Conference (ISWC). 2013.
- **ANAPSID: An Adaptive Query Processing Engine for SPARQL Endpoints.** M. Acosta, M-E. Vidal, T. Lampo, J. Castillo, E. Ruckhaus. International Semantic Web Conference (ISWC). 2011.
- **Evaluating the Impact of Acknowledgment Strategies on Message Delivery Rate in Wireless Sensor Networks.** R. González, M. Acosta. IEEE Latin American Conference on Communications (IEEE LATINCOM). 2010.

PEER REVIEWED JOURNAL PAPERS

- **Detecting Linked Data Quality Issues via Crowdsourcing: A DBpedia Study.** M. Acosta, A. Zaveri, D. Kontokostas, F. Flöck, J. Lehmann. To appear in the special issue on “Human Computation and Crowdsourcing”, Semantic Web Journal. 2016.
- **On the Selection of SPARQL Endpoints to Efficiently Execute Federated SPARQL Queries.** M-E. Vidal, S. Castillo, M. Acosta, G. Montoya, G. Palma. Journal of Transactions on Large-Scale Data- and Knowledge-Centered Systems, Volume 25. 2016.

PEER REVIEWED INDEXED BOOK CHAPTERS

- **Knowledge Engineering via Human Computation.** E. Simperl, M. Acosta, F. Flöck. Handbook of Human Computation. Springer, 2013.
- **Mining Electoral Data for Effective Campaigns and E-Participation: A Case Study in Venezuela.** M. Goncalves, F. Castro, L. A. Vidal, M. Acosta,

M-E. Vidal. E-Government Implementation and Practice in Developing Countries. IGI Global, 2013.

BOOKS

- **Using Linked Data Effectively.** E. Simperl, B. Norton, M. Acosta, M. Maleshkova, J. Domingue, A. Mikroyannidis, P. Mulholland. R. Power. Milton Keynes: The Open University.

PEER REVIEWED WORKSHOP ARTICLES

- **Towards Better Visual Tools for Exploring Wikipedia Article Development – The Use Case of “Gamergate Controversy”.** F. Flöck, D. Laniado, F. Stadthaus, M. Acosta. Workshop on Wikipedia, a Social Pedia: Research Challenges and Opportunities. 2015.
- **Conference Live: Accessible and Sociable Conference Semantic Data.** A. L. Gentile, M. Acosta, L. Costabello, A. Giovanni Nuzzolese, V. Presutti, D. Reforgiato Recupero. SAVE-SD Workshop at the International World Wide Web Conference (WWW). 2015.
- **An Investigation of Techniques that Aim to Improve the Quality of Labels Provided by the Crowd.** J. S. Hare, M. Acosta, A. Weston, E. Simperl, S. Samangoeei, D. Dupplaw, P. H. Lewis. MediaEval Workshop. 2013.
- **A Heuristic-Based Approach for Planning Federated SPARQL Queries.** G. Montoya, M-E. Vidal, M. Acosta. COLD Workshop at the International Semantic Web Conference (ISWC). 2012.
- **Ranking and Clustering Techniques to Support an Efficient E-Democracy.** M. Goncalves, M-E. Vidal, F. Castro, L. Vidal, M. Acosta. SWWS Workshop at International Conference on Ontologies, Databases, and Applications of Semantics (OTM Conferences). 2012.
- **A Semantically Enabled Architecture for Crowdsourced Linked Data Management.** E. Simperl, M. Acosta, B. Norton. International Workshop on Crowdsourcing Web Search. 2012.
- **CAREY: ClimAtological ContRol of EmergencY Regions.** M. Acosta, M. Goncalves, M-E. Vidal. SWWS Workshop at International Conference on Ontologies, Databases, and Applications of Semantics (OTM Conferences). 2011

PEER REVIEWED POSTERS AND DEMOS

- **whoVIS: Visualizing Editor Interactions and Dynamics in Collaborative Writing Over Time.** F. Flöck, M. Acosta. Demo at the International World Wide Web Conference (WWW). 2015.
- **PLANET: Query Plan Visualizer for Shipping Policies against Single SPARQL Endpoints.** M. Acosta, M-E. Vidal, F. Flöck, S. Castillo, A. Harth. Demo at the International Semantic Web Conference. 2014.
- **SHEPHERD: A Shipping-Based Query Processor to Enhance SPARQL Endpoint Performance.** M. Acosta, M-E. Vidal, F. Flöck, S. Castillo, C. Buil Aranda, A. Harth. Poster at the International Semantic Web Conference. 2014.
- **DEFENDER: A Decomposer for Queries against Federations of Endpoints.** G. Montoya, M-E. Vidal, M. Acosta. Demo at the Extended Semantic Web Conference (ESWC). 2012.
- **Looking at CAREY: Controlling Climatological Regions in State of Emergency.** M. Acosta, M. Goncalves, M-E. Vidal. Demo at the International Semantic Web Conference (ISWC). 2011.
- **Evaluating Adaptive Query Processing Techniques for Federations of SPARQL Endpoints.** M. Acosta, M-E. Vidal. Demo at the International Semantic Web Conference (ISWC). 2011.
- **ANAPSID: An Adaptive Query Processing Engine for SPARQL End-**

points. M. Acosta, M-E. Vidal, T. Lampo, J. Castillo, E. Ruckhaus. Poster at the Extended Semantic Web Conference (ESWC). 2011.

PROFESSIONAL
SERVICE

2016

- Program Committee of the AI & the Web Track. 25th International Joint Conference on Artificial Intelligence (IJCAI-16).
- Program Committee of the Semantics and Big Data Track. 25th International World Wide Web Conference (WWW2016).
- Program Committee of the Research Track. 15th International Semantic Web Conference (ISWC2016).
- Program Committee of the Resource Track. 15th International Semantic Web Conference (ISWC2016).
- Program Committee of the Research Track. 13th Extended Semantic Web Conference (ESWC16).
- Reviewer for the Special Issue on “Quality Management of Semantic Web Assets”. Semantic Web Journal.
- Program Committee of the 3rd Workshop on Linked Data Quality (LDQ2016).

2015

- Program Committee of the AI and the Web Track. 29th Conference on Artificial Intelligence (AAAI2015).
- Invited Reviewer for the ACM Journal of Data and Information Quality.
- Program Committee of the Empirical Studies and Experiments Track. 14th International Semantic Web Conference (ISWC2015).
- Program Committee of the Research Track. 12th Extended Semantic Web Conference (ESWC15).
- Reviewer for the Special Issue on “Human Computation and Crowdsourcing”. Semantic Web Journal.
- Program Committee of the 2nd Workshop on Linked Data Quality (LDQ2015).

2014

- Organizing Committee of the 11th Extended Semantic Web Conference (ESWC2014), Semantic Technologies Coordinator.
- Program Committee of the Empirical Workshop.
- Invited Reviewer for the Journal of Web Semantics.
- Program Committee of the 3rd Workshop on Semantic Web Collaborative Spaces (SWCS2014).
- Program Committee of the post proceedings of the 1st, 2nd, and 3rd Workshops on Semantic Web Collaborative Spaces (SWCS-LNCS-2014).

2013

- Co-organizer of the “Crowdsourcing for the Semantic Web” (CrowdSem) Workshop, co-located with the International Semantic Web Conference.
- Invited Reviewer for the ACM Journal of Data and Information Quality.
- Invited Reviewer for the Journal of Web Semantics.
- PC Member of the Resource Discovery (RED) Workshop co-located with the Extended Semantic Web Conference.

2012

- PC Member of the Resource Discovery (RED) Workshop co-located with the Extended Semantic Web Conference.

EXTERNAL
RESOURCES

Publicly Available Software and Demos:

- ANAPSID (ISWC 2011 and COLD 2012): An adaptive SPARQL 1.0 and 1.1 query engine for federations of SPARQL endpoints.
<https://github.com/anapsid/anapsid>

- WikiWho (WWW 2014): An algorithm to identify authorship and editor interactions in Wiki revisioned content.
<https://github.com/maribelacosta/wikiwho>
- PLANET (ISWC 2014): Visualization of performance and behavior of existing federated SPARQL engines when single endpoints are accessed.
<http://km.aifb.kit.edu/sites/planet>
- WhoVis (WWW 2015): Visualizing editor interactions and dynamics in Wikipedia article writing over time.
<http://km.aifb.kit.edu/sites/whovis>
<https://github.com/wikiwho/whovis>

Recordings of Talks:

- *Networks of Linked Data Eddies: An Adaptive Web Query Processing Engine for RDF Data*. At the International Semantic Web Conference (ISWC), 2015.
http://videlectures.net/iswc2015_acosta_linked_data
- *Providing Linked Data*. Tutorial at the Extended Semantic Web Conference (ESWC) Summer School, 2014.
http://videlectures.net/eswc2014_acosta_linked_data
- *Amazon Mechanical Turk (Hands On Session)*. Tutorial at the Extended Semantic Web Conference (ESWC) Summer School, 2014.
http://videlectures.net/eswc2014_acosta_mechanical_turk
- *Crowdsourcing Linked Data Quality Assessment*. At the International Semantic Web Conference (ISWC), 2013.
http://videlectures.net/iswc2013_acosta_quality_assessment