# **CURRICULUM VITAE**

LAST NAME AND NAME: Garijo Verdejo, Daniel

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**COUNTRY: Spain** 

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#### **ACADEMIC DEGREES:**

- 1. PhD in Artificial Intelligence (December, 2015), by the Universidad Politécnica de Madrid. Thesis title: "Mining Abstractions in Scientific Workflows" [Garijo 2015] (Supervisors: Oscar Corcho, Yolanda Gil).
- 2. MSc in Artificial Intelligence Research, by the Universidad Politécnica de Madrid (February, 2011). Title: "A provenance enabled service for news and blog aggregation" [Garijo 2011] (Supervisors: Oscar Corcho and Boris Villazón Terrazas).
- 3. BSc in Computer Science by the Universidad Complutense de Madrid (July, 2009).

### **CURRENT POSITION:**

Postdoctoral researcher at the Information Sciences Institute, University of Southern California (USC)

#### **INTERNSHIPS**

- 1. Information Sciences Institute (USC) with Yolanda Gil (Mar 2014 Jun 2014).
- 2. Information Sciences Institute (USC) with Yolanda Gil (Jul 2012 Oct 2012).
- **3. Information Sciences Institute (USC)** with Yolanda Gil (Jul 2011 Oct 2011): Collaboration with UCSD's School of Pharmacy (Phil Bourne's group).

### HONORS AND AWARDS

- 1. ISWC 2017 Best Resource paper award. For "WIDOCO: A wizard for documenting ontologies" [Garijo 2017]
- 2. Premio extraordinario de tesis doctoral (Universidad Politecnica of Madrid's award, 2016). For "Mining abstractions in Scientific Workflows" [Garijo 2015].
- 3. Finalist of the award "Mejor Tesis Ibérica en STI" for the best dissertation in Spain and Portugal, 2016. For "Mining abstractions in Scientific Workflows" [Garijo 2015].
- 4. FPU Scholarship (Training Fellowship for University Personnel) December, 2011-2015.
- 5. First Competition on Open Data organized by Junta de Castilla y León (Special mention). For "Map4RDF-iOS", 2013.
- **6.** Triplification Challenge (Application track, 2011). For "A provenance Aware Linked Data Application for Trip Management and Organization" [Garijo et al 2011].
- 7. OTT Scholarship (Technology Transfer Office) from 2009 to 2011.

### RESEARCH PROJECTS

- 1. Model INTegration (MINT) (2018-): Project designed to develop a modeling environment which will significantly reduce the time needed to develop new integrated models, while ensuring their utility and accuracy. My role consists on contributing to a workflow composition component that will plan and integrate different models together (e.g., from hydrology, agronomy and geology) to analyze qualitative graphs.
- 1. Accelerating Scientific workflowS using EarthCube Technologies ASSET (2018-): Project that aims to facilitate crating scientific workflows by allowing scientists to sketch activities and access the services offered by the EarthCube program. An interesting feature of this project is that the sketched workflows don't have to be necessarily computational. My role in the project is contributing to the sketching prototype, facilitating an interoperable description of those services and applications developed in EarthCube.
- 2. Data Scientist in a Box (DS-Box) (2017-): Project designed to assist scientists when building machine learning solutions for heterogeneous problems. The goal of our group is to build a

- system that, given a library of primitives and a classification or regression problem, automatically proposes and evaluates machine learning pipelines to address it.
- 3. Linked Earth (2016-2017): NSF EarthCube-funded project aiming to better organize and share Earth Science data, especially paleoclimate data. My role consists on helping domain scientists to define models for integrating their data in the paleoclimate sciences. The Linked Earth wiki (http://linked.earth/wiki) is the resulting environment for collaboratively describing datasets and refining paleoclimate models. The main results of the project are described in [Gil et al 2017b].
- 4. Automated Discovery of Scientific Knowledge (DISK): Project that aims to automate the hypothesize-test-evaluate discovery cycle with an intelligent system that a scientist can task with lines of inquiry to test hypotheses of interest. My role in this projects consists on helping designing a model for representing hypothesis and their evolution, as well as presenting the results of workflow executions to users. The main results obtained in the project are described in [Gil et al 2017a], [Gil et al 2016a] and [Garijo et al 2017]
- 5. OntoSoft (2016-2017): NSF EarthCube-funded project designed to create a metadata registry for software. My role focused on designing the ontologies that would represent software metadata in a familiar way for scientists. The OntoSoft software registry and its ontologies are described in [Gil et al 2015] and [Gil et al 2016b].
- 6. Otalex (2015-2016), Project aimed to convert the data from the Otalex atlas to a more structured format, publishing them according to the Linked Data principles. My role consisted in doing the modeling of the data, along with the visualization and linking to other Linked Data sources (e.g., DBpedia and Geolinkeddata).
- 7. Wf4Ever (2010- 2014), where UPM lead a work package on workflow evolution, sharing and collaboration. The main objective was to provide adequate means to maximize share and reuse of the preserved Research Objects, while supporting their evolution and versioning and facilitating collaboration among scientists. My main role consisted on participating on the modeling discussions for experiment representation, which lead to the Research Object Model specification [Belhajjame et al 2015], and creating a corpus of workflows from Taverna and Wings [Belhajjame et al 2013].
- 8. Web N+1 project (2009-2011), where my main role focused on modeling the provenance of the information in a news and blogs scenario in order to calculate a trust value for the published information. As a result, a provenance repository was published online, and the application exploiting its information won the first prize in the Triplification Challenge [Garijo et al 2011].

# **PUBLICATIONS**

### JOURNAL PUBLICATIONS

- [Garijo et al 2017] Daniel Garijo, Yolanda Gil, Oscar Corcho. Abstract, Link, Publish, Exploit: An End to End Framework for Workflow Sharing. Future Generation Computer Systems. V 75, 2017, pp 271-283. 2017.
- 2. [Garijo 2017]: Daniel Garijo. Artificial Intelligence Buzzword Explained: Scientific workflows. AI Matters, 3(1): 4-8. 2017.
- **3.** [Parkkila et al 2016]. Janne Parkkila, Filip Radulovic; Daniel Garijo, María Poveda-Villalón, Jouni Ikonen, Jari Porras, Asunción Gómez-Pérez. **An ontology for videogame interoperability**. *Multimedia Tools and Applications*, 2016.
- 4. [Belhajjame et al 2015]: Khalid Belhajjame, Jun Zhao, Daniel Garijo, Kristina Hettne, Raúl Palma, Oscar Corcho, Jose Manuel Gómez-Pérez, Sean Bechhofer, Graham Klyne and Carole Goble. Using a suite of ontologies for preserving workflow-centric Research Objects. Journal of Web Semantics: Science, Services and Agents on the World Wide Web. Volume 32, pages 16-42. 2015.
- **5.** [Garijo et al 2013(a)]: Daniel Garijo, Pinar Alper, Khalid Belhajjame, Oscar Corcho, Yolanda Gil, Carole Goble. **Common motifs in scientific workflows: An empirical analysis** (extended version). Future Generation Computer Systems. Volume 36, pages 338-351. 2013.
- 6. [Garijo et al 2013(b)]: Daniel Garijo, Sarah Kinnings, Li Xie, Lei Xie, Yinliang Zhang, Philip E. Bourne, Yolanda Gil. Quantifying reproducibility in computational biology: The case of the tuberculosis drugome. PLoS ONE 8(11): e80278. 2013.
- 7. [Atemezing et al 2012]: Ghislain Atemezing, Oscar Corcho, Daniel Garijo, José Mora, María Poveda-Villalón, Pablo Rozas, Daniel Vila-Suero, Boris Villazón-Terrazas. **Transforming meteorological data into Linked Data**. Semantic Web Journal 4(3) 285-290. 2012.

#### CONFERENCE PUBLICATIONS

- [Gil et al 2017a] Yolanda Gil, Daniel Garijo, Varun Ratnakar, Rajiv Mayani, Ravali Adusumilli, Hunter Boyce, Arunima Srivastava, Parag Mallick. Towards Continuous Scientific Data Analysis and Hypothesis Evolution. In Proceedings of the Thirty-First AAAI Conference on Artificial Intelligence (AAAI-17), 2017.
- [Gil et al 2017b] Yolanda Gil, Daniel Garijo, Varun Ratnakar, Deborah Khider, Julien Emile-Geay, Nick Mckay. A Controlled Crowdsourcing Approach for Practical Ontology Extensions and Metadata Annotations. Proceedings of the 16th International Semantic Web Conference, 2017.
- **3.** [Garijo 2017] Daniel Garijo. **WIDOCO: A Wizard for Documenting Ontologies**. Proceedings of the 16th International Semantic Web Conference. 2017.
- **4.** [Garijo and. Gil 2017] Daniel Garijo, Yolanda Gil. **Towards Automating Data Narratives**. In Proceedings of the Twenty-Second ACM International Conference on Intelligent User Interfaces (IUI-17), 2017. ACM
- 5. [Gil et al 2016a] Yolanda Gil, Daniel Garijo, Varun Ratnakar, Rajiv Mayani, Ravali Adusumilli, Hunter Boyce, Parag Mallick Automated Hypothesis Testing with Large Scientific Data Repositories. In Proceedings of the Fourth Annual Conference on Advances in Cognitive Systems (ACS), pages 1-6, 2016.
- 6. [Gil et al 2016b] Yolanda Gil, Daniel Garijo, Saurabh Mishra and Varun Ratnakar. OntoSoft: A Distributed Semantic Registry for Scientific Software. In Proceedings of the Twelfth IEEE Conference on eScience, 2016.
- 7. [Gil et al 2015]: Yolanda Gil, Varun Ratnakar and Daniel Garijo. OntoSoft: Capturing Scientific Software Metadata. 8th International Conference on Knowledge Capture (K-CAP 2015), art no 32. Palisades, NY, USA. 2015.
- 8. [Alobaid et al 2015] Ahmad Alobaid; Daniel Garijo, Maria Poveda-Villalón,; Idafen Santana-Pérez and Oscar Corcho. On Toology, a tool for collaborative development of ontologies. In *ICBO*, 2015.
- [Garijo et al 2014(a)]: Daniel Garijo, Oscar Corcho, Yolanda Gil, Boris Gutman, Ivo D. Dinov, Paul Thompson and Arthur W. Toga. FragFlow: Automated fragment detection in scientific workflows. 10th IEEE International Conference on e-Science, pp 281-289, Guaruja, Brasil. 2014.
- 10. [Garijo et al 2014(b)]: Daniel Garijo, Oscar Corcho, Yolanda Gil, Meredith N. Braskie, Dereck Hibar, Xie Hua, Neda Jahanshad, Paul Thompson and Arthur W. Toga. Workflow reuse in practice: A study of neuroimaging pipeline users. 10th IEEE Conference on e-Science, pp239-246, Guaruja, Brasil. 2014.
- 11. [Garijo et al 2013(c)]: Daniel Garijo, Oscar Corcho and Yolanda Gil. **Detecting common scientific workflow fragments using templates and execution provenance.** Proceedings of the seventh international conference on Knowledge capture, pp 33-40. Banff, Canada. 2013.
- 12. [Garijo et al 2012]: Daniel Garijo, Pinar Alper, Khalid Belhajjame, Oscar Corcho, Yolanda Gil, Carole Goble. Common motifs in scientific workflows: An empirical analysis. 8th IEEE International Conference on e-Science (eScience 2012), pp1-8. Chicago, USA 2012.
- 13. [Garijo et al 2011]: Daniel Garijo, Boris Villazón-Terrazas and Oscar Corcho. A provenance aware Linked Data application for trip management and organization. I-Semantics 2011. pp 224-226, The Hague, 2011 (winner of the Trplification challenge).
- **14.** [Eckert et al 2011]: Kai Eckert, Daniel Garijo and Michael Panzer. **Extending DCAM for metadata provenance**. International Conference on Dublin Core and Metadata Applications, (DC-2011). The Hague.

### PEER REVIEWED WORKSHOPS

- [Garijo et al 2017] Daniel Garijo, Yolanda Gil and Varun Ratnakar. The DISK Hypothesis
  Ontology: Capturing Hypothesis Evolution for Automated Discovery. In Proceedings of the
  Workshop on Capturing Scientific Knowledge (SciKnow), held in conjunction with the ACM
  International Conference on Knowledge Capture (K-CAP), Austin, Texas, 2017.
- 2. [Carvalho et al 2017a] Lucas Augusto Carvalho, Regina Wang, Yolanda Gil and Daniel Garijo. NiW: Converting Notebooks into Workflows to Capture Dataflow and Provenance. In Proceedings of the Workshop on Capturing Scientific Knowledge (SciKnow), held in conjunction with the ACM International Conference on Knowledge Capture (K-CAP), Austin, Texas, 2017.
- 3. [Carvalho et al 2017b]: Lucas Augusto Carvalho, Bakinam Essawy, Daniel Garijo, Claudia Medeiros, and Yolanda Gil. Requirements for Supporting the Iterative Exploration of Scientific Workflow Variants. In Proceedings of the Workshop on Capturing Scientific

- Knowledge (SciKnow), held in conjunction with the ACM International Conference on Knowledge Capture (K-CAP), Austin, Texas, 2017.
- 4. [Gil et al 2017c] Yolanda Gil, Daniel Garijo, Margaret Knoblock, Alyssa Deng, Ravali Adusumilli, Varun Ratnakar and Parag Mallick. Improving Publication and Reproducibility of Computational Experiments through Workflow Abstractions. In Proceedings of the Workshop on Capturing Scientific Knowledge (SciKnow), held in conjunction with the ACM International Conference on Knowledge Capture (K-CAP), Austin, Texas, 2017.
- 5. [Jang et al 2016] MiHyun Jang, Tejal Patted, Yolanda Gil, Daniel Garijo, Varun Ratnakar, Jie Ji, Prince Wang, Aggie McMahon, Paul Thompson and Neda Jahanshad. Towards Automatic Generation of Portions of Scientific Papers for Large Multi-Institutional Collaborations Based on Semantic Metadata. In Proceedings of the Workshop on Enabling Open Semantic Science, co-located with the Sixteenth International Semantic Web Conference (ISWC), Vienna, Austria, 2017.
- 6. [Allen et al 2016]. Alice Allen, Cecilia Aragon, Christoph Becker, Jeffrey Carver, Andrei Chis, Benoit Combemale, Mike Croucher, Kevin Crowston, Daniel Garijo, Ashish Gehani, et al. Lightning talk: "I solemnly pledge" A manifesto for personal responsibility in the engineering of academic software. In CEUR Workshop Proceedings, volume 1686, 2016.
- 7. [Garijo et al 2015]: Daniel Garijo, Nandana Mihindukulasooriya, Oscar Corcho. LDP4ROs: Managing research objects with the W3C Linked Data platform. In SAVE-SD, co-located with the International Conference on World Wide Web 2015, pp 1057-1058. Florence, Italy.
- 8. [Garijo et al 2014c]: Daniel Garijo, Yolanda Gil, Oscar Corcho. Towards workflow ecosystems through standard representations. In 9th Workshop on Workflows in Support of Large-Scale Science (WORKS14), held in conjunction with the International Conference for High Performance Computing, Networking, Storage and Analysis (SC14), pp94-104. New Orleans, US, 2014.
- **9.** [Garijo et al 2014d]: Daniel Garijo, Andreas Harth, Yolanda Gil. User requirements for geospatial provenance. In Provenance Analytics, co-located with the Fifth International Provenance and Annotation Workshop (IPAW), Cologne, Germany, 2014.
- 10. [Holl et al 2013]: Sonja Holl, Daniel Garijo, Khalid Belhajjame, Olav Zimmermann O, Renato De Giovanni, Mattias Obst, Carole Goble. On specifying and sharing scientific workflow optimization results using research objects. Proceedings of the 8th Workshop on Workflows in Support of Large-Scale Science (WORKS13), held in conjunction with the International Conference for High Performance Computing, Networking, Storage and Analysis (SC13) pp 28-37. Denver, US, 2013.
- 11. [Belhajjame et al 2013] Khalid Belhajjame, Jun Zhao, Daniel Garijo, Aleix Garrido, Stian Soiland-Reyes, Pinar Alper, Oscar Corcho. A workflow PROV-corpus based on Taverna and Wings. Proceedings of the Joint 16th International Conference on Extending Database Technology/ 16th International Conference on Database Theory Workshops (EDBT/ICDT 2013), pp 331-332 (ACM).
- 12. [Garijo and Gil 2012]: Daniel Garijo, Yolanda Gil. Augmenting PROV with plans in P-PLAN: Scientific processes as Linked Data. In Second International Workshop on Linked Science: Tackling Big Data (LISC), held in conjunction with the International Semantic Web Conference (ISWC), Boston, MA, 2012.
- 13. [Belhajjame et al 2012]: Khalid Belhajjame, Oscar Corcho, Daniel Garijo, Jun Zhao, Paolo Missier, David Newman, Raul Palma, Sean Bechhofer, Esteban García Cuesta, Jose Manuel Gomez-Perez, Graham Klyne, Kevin Page, Marco Roos, Jose Enrique Ruiz, Stian Soiland-Reyes, Lourdes Verdes-Montenegro, David De Roure, Carole A. Goble. Workflow-centric research objects: First class citizens in scholarly discourse. Workshop on the Semantic Publishing, (SePublica 2012), held in conjunction with the 9th Extended Semantic Web Conference Hersonissos, Crete, Greece, May 28, 2012.
- 14. [Garijo and Gil 2011]: Daniel Garijo and Yolanda Gil. A new approach for publishing workflows: Abstractions, standards, and Linked Data. In Proceedings of the Sixth Workshop on Workflows in Support of Large-Scale Science (WORKS'11), held in conjunction with the International Conference for High Performance Computing, Networking, Storage and Analysis (SC11), Seattle, Washington.
- **15.** [Garijo et al 2011]: Daniel Garijo, Boris Villazón-Terrazas and Oscar Corcho. **A provenance enabled service for news and blog aggregation**. Poster in "Red Temática de Linked Data". 2011.

#### **THESES**

- 1. [Garijo 2015]: Daniel Garijo. Mining abstractions in scientific workflows. PhD thesis. Supervisors: Oscar Corcho and Yolanda Gil.
  - URL: http://oa.upm.es/39062/
- [Garijo 2011]: Daniel Garijo. A Provenance-Enabled Service for News and Blog Aggregation.
  MSc thesis. Supervisors: Oscar Corcho and Boris Villazón-Terrazas.
  URL: http://oa.upm.es/6567/

# DELIVERABLES AND PROJECT REPORTS

- 1. [Garijo and Villazon 2010(a)]: Daniel Garijo and Boris Villazón. "Deliverable E 1.1, PT1, Project Web N+1: State of the art". 2010.
- 2. [Garijo and Villazon 2010(b)]: Daniel Garijo and Boris Villazón. "Deliverable E 2.2, PT2, Project Web N+1: Definition of the modules of the system". 2010

# STANDARDIZATION REPORTS

- 1. [Gil et al 2012]: Yolanda Gil., Simon Miles., Khalid Belhajjame, Helena Deus, Daniel Garijo, Graham Klyne, Paolo Missier, Stian Soiland-Reyes and Stephan Zednik. A primer for the PROV provenance model. 2012. World Wide Web Consortium (W3C).
- [Sahoo et al 2012]: Satya Sahoo, Timothy Lebo and Deborah McGuinness (eds.) Khalid Belhajjame, James Cheney, Daniel Garijo, Stian Soiland-Reyes, and Stephan Zednik. PROV-O: The PROV ontology. 2012. World Wide Web Consortium (W3C).
- **3.** [Garijo and Eckert 2013] Daniel Garijo and Kai Eckert. **Dublin Core to PROV Mapping**. Technical Report W3C, April 2013. World Wide Web Consortium (W3C).
- 4. [Gil et al 2010]: Yolanda Gil, James Cheney, Paul Groth, Olaf Hartig, Simon Miles, Luc Moreau, Paulo Pinheiro da Silva, Sam Coppens, Daniel Garijo, Jose Manuel Gomez, Paolo Missier, Jim Myers, Satya Sahoo, Jun Zhao. **Provenance XG final report.** W3C Incubator Group Report 08 December 2010. World Wide Web Consortium (W3C).

# **TEACHING**

- 1. Tutorial: Yolanda Gil, Daniel Garijo and Gail Peretsman-Clement. Learn to Write a Scientific Paper of the Future: Reproducible Research, Open Science, and Digital Scholarship. http://www.aaai.org/Conferences/AAAI/2017/aaai17tutorials.php#SA1
- 2. Tutorial: Geoscience Papers of the Future (digital tools training), Hawaii: https://crescyntblog.org/category/meetings/
- 3. Tutorial: Daniel Garijo. PROV-O: The W3C Provenance Ontology. International Conference on Dublin Core and Metadata Applications (DC-2013), Lisbon, 2013. http://dcevents.dublincore.org/IntConf/dc-2013/paper/view/197
- 4. Tutorial: Rudolf Mayer, Stefan Pröll, Andreas Rauber, Raul Palma, Daniel Garijo. From Preserving Data to Preserving Context. In International Conference on Theory and Practice of Digital Libraries (TPDL), Malta, 2013. https://link.springer.com/chapter/10.1007/978-3-642-40501-3 71

### **SERVICE**

- 1. K-CAP 2017: Treasurer and sponsor chair. http://k-cap2017.org/organising-committee/
- 2. Workshop organizer: Second International Workshop on Capturing Scientific Knowledge (SciKnow 2017). Co-located with KCAP 2017. https://sciknow.github.io/sciknow2017/
- 3. Workshop organizer: First workshop on Open Semantic Science (SemSci 2017), co-located with ISWC2017. https://semsci.github.io/semSci2017/
- 4. ISWC 2016: Student coordinator: http://iswc2016.semanticweb.org/pages/organization.html
- 5. Invited participant of the **Dagstuhl Seminar: Engineering academic software.** Link to final report: http://drops.dagstuhl.de/opus/volltexte/2016/6755/
- 6. Invited participant of the **Dagstuhl Seminar: Reproducibility of Data oriented experiments** on eScience. Link to final report: http://drops.dagstuhl.de/opus/volltexte/2016/5817/
- 7. Invited participant of the **Dagstuhl Seminar: Principles of Provenance**. Link to final report: http://drops.dagstuhl.de/opus/volltexte/2012/3507/
- **8.** Member of the **W3C Provenance Working Group** (2011-12), which is building a family of specifications for representing and exchanging provenance in the Web.

- **9.** Member of the **W3C Provenance Incubator Group** (2010), which provided a state-of-the art understanding and a roadmap in the area of provenance for Semantic Web technologies, development, and possible standardization (link to final report.
- **10.** Member of the **Dublin Core Metadata Provenance Task Group** (2010-12), which aims to define a Dublin Core application profile for representing metadata provenance.
- 11. Reviewer in peer-reviewed journals: Future Generation Computer Systems, Journal of Web Semantics, Semantic Web Journal, International Journal of Web Information Systems, Software: Practice and Experience, Computers & Geosciences, Concurrency and Computation: Practice and Experience, PeerJ.
- 12. Reviewer in Conferences (part of the PC): International Conference on Knowledge capture (K-CAP), Extended Semantic Web Conference (ESWC), International Semantic Web Conference (ISWC), the Web Conference (WWW), International Conference on Semantic Systems (Semantics), Global Conference on Artificial Intelligence (GCAI),
- 13. Reviewer in Workshops (part of the PC): International Workshop on Managing and Querying Provenance Data at Scale (BigProv), Workshop on Semantic Web Enterprise Adoption and Best Practice (WASABI), International Workshop on Methods for Establishing Trust of (Open) Data (Method), International Workshop on Linked Science (LISC), International Provenance and Annotation Workshop (IPAW), International Workshop of Scientific Gateways (ISWG), Semantics, Analytics, Visualisation: Enhancing Scholarly Data (Save-SD), Workflows in Support of Large-Scale Science (WORKS), International Workshop on Methods for Establishing Trust of (Open) Data (METHOD).
- **14. Reviewer in Workshops** (not part of the PC): EXperience reuse: Provenance, Process-ORientation and Traces (EXPPORT).

# **PRESENTATIONS**

- 1. Automatic Generation of Portions of Scientific Papers for Large, Multi-Institutional Collaborations Based on Semantic Metadata. Presented at SemSci 2017, ISWC2017, Vienna. [Jang et al 2016]. Slides: https://semsci.github.io/semSci2017/presentations/enigma.pdf
- 2. WIDOCO: A wizard for documenting ontologies. Presented at ISWC 2017, Vienna. [Garijo 2017]. Slides: https://www.slideshare.net/dgarijo/widoco-a-wizard-for-documenting-ontologies
- **3.** A Controlled Crowdsourcing Approach for Practical Ontology Extensions and Metadata Annotations. Presented at ISWC 2017, Vienna. [Gil et al 2017b]. Slides: https://www.slideshare.net/dgarijo/a-controlled-crowdsourcing-approach-for-practical-ontology-extensions-and-metadata-annotations
- **4.** Towards Automating Data Narratives. Presented in Intelligent User Interfaces, IUI2017, Cyprus. [Garijo and. Gil 2017]. Slides: https://www.slideshare.net/dgarijo/towards-automating-data-narratives
- **5.** The scientific paper of the future Presented in AAAI 2017. Slides http://www.isi.edu/~gil/slides/ScientificPaperOfTheFuture-AAAI2017-Tutorial.pdf
- 6. OntoSoft: A distributed semantic registry for scientific software. Presented in eScience 2016. [Gil et al 2016b] Slides: http://www.slideshare.net/dgarijo/ontosoft-a-distributed-semantic-registry-for-scientific-software
- 7. Automated Hypothesis Testing with Large Scale Scientific Workflows. Presented in Advances in Cognitive Systems, ACS 16, Evanston, Illinois, USA. [Gil et al 2016a]. Slides: http://www.slideshare.net/dgarijo/automated-hypothesis-testing-with-large-scale-scientific-workflows
- **8.** Mining abstractions in Scientific Workflows: PhD Thesis. Presented at Facultad de Informatica, Boadilla del Monte, Madrid. [Garijo 2015]. Slides: http://www.slideshare.net/dgarijo/phd-thesis-mining-abstractions-in-scientific-workflows
- 9. Publicación de datos y métodos científicos en investigación. Presented in the W3C Day in Spain: the future of digital edition. 2015. Slides: http://www.slideshare.net/dgarijo/publicacin-de-datos-y-mtodos-científicos-en-investigacin
- 10. Is preserving data enough? Towards the preservation of scientific methods. Presented in the open research data day 2015. Warsaw, 2015. Slides: http://www.slideshare.net/dgarijo/open-research-data-day-is-pre
- 11. LDP4ROs: Managing Research Objects with the Linked Data Platform. Presented in SAVE-SD, WWW2015, Florence, Italy. [Garijo et al 2015]. Slides: http://www.slideshare.net/dgarijo/ldp4ros

- 12. FragFlow: automated fragment detection in scientific workflows. Presented in eScience 2014 [Garijo et al 2014(a)]. Slides: http://www.slideshare.net/dgarijo/frag-flow-automatedfragmentdetectioninscientificworkflows
- 13. Workflow reuse in practice: A study of neuroimaging pipeline users. Presented in eScience 2014 [Garijo et al 2014(b)]. Slides: http://www.slideshare.net/dgarijo/workflow-reuseinloni
- 14. Using requirements for geospatial provenance. Presented in IPAW14. [Garijo et al 2014(d)] Slides: http://www.slideshare.net/dgarijo/user-requirements-for-geospacial-provenance
- 15. Research objects in scientific publications. Presented in the Universidad Politécnica of Madrid, 2013. Slides: https://www.slideshare.net/dgarijo/research-objects-in-scientific-publi
- **16.** Research Objects Tutorial. Presented in Theory and Practice of Digital Libraries, TPDL, Malta. Slides: https://www.slideshare.net/dgarijo/research-objects-tutorial-tpdl
- 17. PROV-O Tutorial. Presented at DC-2013, Lisbon, Portugal. Slides: https://www.slideshare.net/dgarijo/provo-tutorial-dc2013-conference
- 18. Detecting common scientific workflow fragments using templates and execution provenance. Scheduled to be presented at K-CAP2013 [Garijo et al 2013(c)]. Slides: https://www.slideshare.net/dgarijo/kca-24834329
- 19. PhD Status report. Presented in the Universidad Politécnica de Madrid, 2012. Slides: http://www.slideshare.net/dgarijo/presentacion-oeg29-112012
- 20. Common Motifs in Scientific Workflows: An Empirical Analysis. Presented in e-Science 2012 [Garijo et al 2012]. Slides: http://www.slideshare.net/dgarijo/common-motifs-in-scientific-workflows-an-empirical-analysis
- 21. A new approach for publishing workflows: Abstractions, Standards and Linked Data. Presented in the WORKS11 workshop [Garijo and Gil 2011]. Slides: http://www.slideshare.net/dgarijo/works-11-presentation
- 22. A Provenance-Aware Linked Data Application for Trip Management and Organization. Presented in the Triplification Challenge 2011, The Hague. [Garjo et al 2011]. Slides: http://www.slideshare.net/boricles/a-provenanceaware-linked-data-application-for-tripmanagement-and-organization
- 23. Extending DCAM for Metadata Provenance. Presented in Dublin Core Conference, DC-11, The Hague. [Eckert et al 2011]. Slides: http://www.slideshare.net/kaiec/extending-dcam-formetadata-provenance