

Curriculum Vitae

Felipe Ortega



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SUMMARY

Researcher with more than 8 years of experience in **big data analytics and engineering**, with special emphasis on using **open source software** and **reproducible research** methods.

Design, implementation and management of more than **20 projects** related with big data analytics and engineering over the past 8 years in different areas like software engineering, large-scale on-line communities, energy efficiency, content classification or opinion mining.

Lecturer and speaker on big data analytics methods and tools, innovation management and community building.

Professional and technical skills

Organizational skills Excellent **leadership skills** acquired through more than 7 years of experience in project management (team size 5-10).

Very good **organization and planning** competencies, as well as good capacity for multitasking at different levels of detail (management and development).

Good skills for working in **multidisciplinary and multicultural environments**, through participation in international projects (EU FP6, EU FP7, USA NSF) and research abroad (Telecom Bretagne, Brest, France).

Good competencies for **planning and economic management** of research and innovation projects.

Excellent skills for **organization of international dissemination events** and conferences (Program Chair WikiSym 2010, General Chair WikiSym 2011).

Technical skills More than 10 years of experience in **cross-platform software development** with **Python** and **Java** (JDK 7), Linux/Unix shell scripting, C and C++.

More than 7 years of experience in **statistical programming with R** (RStudio, Shiny), applying **multiple techniques**: linear models, multivariate data analysis,

time series, survival analysis, classification systems, clustering, analysis of inequalities, quality metrics, social network analysis.

More than 7 years of experience in **management and optimization of RDBMS** (MariaDB/MySQL , PostgreSQL , SQLite) and database connectors and APIs (SQLAlchemy).

More than 2 years of experience with the **Apache Hadoop** ecosystem (Cloudera) and **NoSQL** technologies (Redis , MongoDB , Neo4J).

Deep knowledge in **data retrieval and preparation** using multiple formats (CSV, XML, JSON, YAML, HDF5), open data repositories and semantic web technologies (RDF, SPARQL).

Experience with **high-performance messaging systems** like ØMQ and RabbitMQ .

Very good skills in development of **RESTful web services** (Python & Django) for data retrieval, data provisioning and web applications.

Excellent competencies in **distributed software development**: version control (Git, SVN), bug tracking (Bugzilla, Mantis, JIRA), software development platforms (GitHub, Redmine).

Experience in **web development** languages (HTML, CSS, JavaScript, PHP) and frameworks (Twitter Bootstrap).

Experience (power user & system administrator) on **Windows systems** (Windows XP, Windows 7, Windows 8).

Experience (power user & system administrator) on **GNU/Linux systems** (Debian, Ubuntu).

Experience with several **office suites** (MS Office, OpenOffice, LibreOffice): word processors, presentations, spreadsheets, etc.

Good skills in **document edition and layout design** with LaTeX (Kile).

Usage and administration of **wiki platforms** (MediaWiki, DocuWiki).

Other skills Good skills on **photography** and **image manipulation** packages (Gimp, Photoshop Lightroom).

Basic knowledge on **graphical design** with Inkscape.

EDUCATION

Universidad Rey Juan Carlos

2005-2009 **Ph.D. in Computer Science**, *cum laude*, (November 2005 - April 2009).

Advisor: Dr. Jesús M. González-Barahona.

Dissertation: *Wikipedia: A quantitative analysis*. It presents an empirical analysis and side-by-side comparison of the top-10 language editions of Wikipedia, focusing on community and system dynamics, and sustainability conditions.

PDF (CC-BY-SA 3.0): <http://felipeortega.net/sites/default/files/thesis-jfelipe.pdf>

Additional remarks: The dissertation and main conclusions have received wide coverage by mass-media, including [The Wall Street Journal](#), [The Guardian](#), [Newsweek](#), etc.

Universidad Alfonso X El Sabio

1998-2003 **Master in Telecommunications Engineering.** (September 1998 - July 2003).
Final project: *Security systems for wireless networks*.

Awards and Academic Honors

2003 **Best Academic Record Award in Telecommunications Engineering**, July 2003.
Universidad Alfonso X El Sabio.

APPOINTMENTS

2013 (May-July) *Visiting researcher*, Dept. LUSI, Télécom Bretagne (Brest, France).

2012 - currently *Researcher*, Dept. Statistics and Operations Research, URJC.

2007 - currently *Associate Professor (part time)*, Universidad Alfonso X El Sabio.

2010 - 2012 *Lecturer*, Master in Digital Economy and Creative Industries at EOI Business School, Madrid.

2007 - 2012 *Researcher & Project Manager*, GSyC/Libresoft, URJC.

2005 - 2007 *Associate Professor (full time)*, Universidad Alfonso X El Sabio.

2004 - 2005 *Consultant Engineer*, National Institute for Aerospace Technologies.

2004 *Security programmer*, S21Sec.

2004 - 2005 *Associate Professor (part time)*, Universidad Alfonso X El Sabio.

2002 - 2003 *Developer*, Center for Research, Development and Application of Emerging Technologies (Universidad Alfonso X El Sabio).

PUBLICATIONS IN JOURNALS AND REFEREED CONFERENCE PROCEEDINGS

2015 Arazy, O., Ortega, F., Nov, O., Yeo, L. and Balila, A. *Functional Roles and Career Paths in Wikipedia*. Proceedings of the 2015 ACM Conference on Computer-Supported Cooperative Work and Social Computing (**CSCW 2015**). ACM, New York, NY, USA. (In press).

2014 Arazy, O., Nov, O. and Ortega, F. *The [Wikipedia] World is Not Flat: On the Organizational Structure of Online Production Communities*. 22nd European Conference on Information Systems (ECIS 2014).

- 2013 Alfaro, C., Cano-Montero, J., Gómez, J., Moguerza, J. M. and Ortega, F. A multi-stage method for content classification and opinion mining on weblog comments. *Annals of Operational Research*, pp. 1-17, Sept. 2013. ISSN: 1572-9338 [Online]. <http://dx.doi.org/10.1007/s10479-013-1449-6>. (IMPACT FACTOR 1.029).
- González-Barahona, J.M., Robles, G., Herraiz, I. and Ortega, F. Studying the laws of software evolution in a long-lived FLOSS project. *Journal of Software: Evolution and Process*. ISSN: 2047-7481. Oct. 2013. [Online] <http://dx.doi.org/10.1002/smr.1615>. (IMPACT FACTOR 1.273).
- Ortega, F., Moguerza, J. M. and Cano, E. L. *Combining R and Python for scientific computing*. Presentation. The R User Conference (**useR! 2013**), Albacete, Spain. July 2013.
- Cano, E. L., Ayuso, A. A., Moguerza, J. M. and Ortega, F. *A integrated Solver Manager: using R and Python for energy systems optimization*. Presentation. The R User Conference (**useR! 2013**), Albacete, Spain. July 2013.
- Cano, E. L., Ayuso, A. A., Moguerza, J. M. and Ortega, F. *A Solver Manager for energy systems planning within a Stochastic Optimization Framework*. Presentation. Computational Management Science Conference (**CMS 13**), Montreal, Canada. May 2013.
- Crowston, K., Jullien N. and Ortega, F. [Sustainability of Open Collaborative Communities: Analyzing Recruitment Efficiency](#). *Technology Information Management Review*. January 2013, pp. 20-26.
- Crowston, K., Jullien N. and Ortega, F. *Is Wikipedia Inefficient? Modelling Effort and Participation in Wikipedia*. Proceedings of the 46th Hawaii Intl. Conference on System Sciences (**HICSS-46**). IEEE Computer Society 2013.
- 2012 Reinoso, A. J., Muñoz-Mansilla, R., Herráiz, I, Ortega, F. *Characterization of the Wikipedia Traffic*. Proceedings of the 7th International Conference on Internet and Web Applications and Services, **ICIW 2012**, Stuttgart, Germany. IARIA. (In press).
- 2011 Ortega, F. and Forte, A. Proceedings of the 7th International Symposium on Wikis and Open Collaboration, **ACM WikiSym 2011**, Mountain View (CA), USA. ACM Press.
- Stojanovic, L., Ortega F., Cañas, L. and Dueñas, S. *ALERT: Active Support and Real-Time Coordination Based on Event Processing in Open Source Software Development*. Proceedings of the 15th European Conference on Software Maintenance and Reengineering, (**CSMR 2011**). Oldenburg, Germany. pp. 359-362.
- 2010 Reinoso, A. J., Ortega, F., González-Barahona, J.M., Herráiz, I. *A Statistical Approach to the Impact of Featured Articles in Wikipedia*. Proceedings of the International Conference on Knowledge Engineering and Ontology Development (KEOD 2010), Valencia, Spain, October 25-28, 2010. pp. 420-423.
- Ayers, P., Ortega, F. Proceedings of the 6th International Symposium on Wikis and Open Collaboration, **ACM WikiSym 2010**, Gdansk, Poland. ACM Press.

- 2009 de Alfaro, L., Ortega, F. *Measuring Wikipedia: A Hands-on Tutorial*. Tutorial session, in Proceedings of **ACM WikiSym 2009**: International Symposium on Wikis. New York, ACM Press.
- Ortega, F. Wikipedia: Un análisis cuantitativo. Linux Magazine. Jul. 2009. ISSN: 1699-2237.
- Reinoso, A.J., González-Barahona, J.M., Robles, G., Ortega, F. *A Quantitative Approach to the use of the Wikipedia*. Proceedings of the IEEE Symposium on Computers and Communications (**ISCC '09**) . IEEE 2009.
- Ortega, F., Izquierdo-Cortázar, D. *Survival Analysis in open development projects*. Proceedings of the 2009 *ICSE Workshop on Emerging Trends in Free/Libre/Open Source Software Research and Development*. IEEE Computer Society, 2009.
- Ortega, F., Lafuente, I., Gato, J., González-Barahona, J.M. *Libre Software in Spanish Public Administrations*. International Conference on Open Source Systems (**OSS '09**). Proceedings IFIP 299 Springer 2009.
- Izquierdo-Cortázar, D., Ortega, F., González-Barahona, J.M., Robles, G. *Using Software Archeology to Measure Knowledge Loss in Software Projects Due to Developer Turnover*. Proceedings of the 42nd Hawaii Intl. Conference on System Sciences (**HICSS-42**). IEEE Computer Society 2009.
- Ortega, F., Izquierdo-Cortázar, D., González-Barahona, J.M., Robles, G. *On the Analysis of Contributions from Privileged Users in Virtual Open Communities*. Proceedings of the 42nd Hawaii International Conference on System Sciences (**HICSS-42**). IEEE Computer Society 2009.
- 2008 Reinoso, A.J., González-Barahona, J.M., Ortega, F., Robles, G. *Quantitative Analysis and Characterization of Wikipedia Requests*. Poster in Proceedings of **ACM WikiSym 2008**: International Symposium on Wikis. New York, ACM Press.
- Ortega, F., González-Barahona, J.M., Robles, G. *On the Inequality of Contributions to Wikipedia*. Proceedings of the 41st Hawaii International Conference on System Sciences (**HICSS-41**). IEEE Computer Society 2008.
- 2007 Ortega, F., González-Barahona, J.M. *Quantitative Analysis of the Wikipedia Community of Users*. **ACM WikiSym 2007**: International Symposium on Wikis. New York, ACM Press.
- Ortega, F., González-Barahona, J.M., Robles, G. *The Top-Ten Wikipedias: A Quantitative Analysis Using WikiXRay*. Proceedings of the 3rd International Conference on Software and Data Technologies (**ICSOF 2007**). INSTICC Press. **Winner of the ICSOF 2007 Best Student Paper Award**.
- Ortega, F., González-Barahona, J.M., Robles, G. (June 2007). *In-depth Analysis of Wikipedia Community*. Poster in proceedings of the 11th International Conference of the International Society for Scientometrics and Informetrics (**ISSI '07**).

INVITED PRESENTATIONS

- 2014 *Colaboración abierta en Internet*. VII Curso de Verano Ciudad de Logroño. Logroño, La Rioja. July 2014.
- El arte de la ciencia de datos: buenas prácticas y tendencias*. Seminario de Informática “Mirian Andrés”. Dpto. Matemáticas y Estadística, Universidad de La Rioja. Logroño, La Rioja. July 2014.
- 2013 “*Hic sunt dracones*”. *Interdisciplinary approaches to study open collaboration*. Seminar DECIDE, Telecom-Bretagne, Brest, France. July 2013.
- 2012 [Open Collaboration: El movimiento colaborativo como motor para la innovación](#). V Jornadas RBIC. Instituto Cervantes, Madrid, Spain. December 2012.
- [Wikipedia and research: A love-hate relationship](#). Wikimania 2012, Washington D.C., USA. July 2012.
- Methodologies and best practices for the analysis of open online communities*. Workshop: Creation of a Virtual Institute for the Measurement, Evaluation and Management of Open Online Communities. Syracuse University, Syracuse (NY), USA. July 2012.
- 2011 [From libre software to wikipedia: A tour of open collaboration](#). Xerox PARC, Palo Alto, California, USA. June 2011.
- [The Learning Shift](#). Creative Commons salon on Open Educational Resources. San Francisco, California, USA. June 2011.
- 2010 [Flagged revisions study: preliminary results; state of Wikimedia scholarship 2009-2010](#) (with Benjamin Mako Hill and Jodi Schneider); [workshop on mining wikipedia public data](#) and [panel on academic researchers in Wikimedia Communities: ethics, methods and policies](#). Wikimania 2010, Gdansk, Poland.
- 2010 New trends in the evolution of Wikipedia (invited presentation) *CPOV Conference, Institute of Network Cultures, The Netherlands (March)*.
- 2009 The private life of Wikipedia (invited presentation), *WebScience Lecture Series, Georgia Institute of Technology*. Atlanta, GA, USA. (October).

BOOKS AND BOOK CHAPTERS

- 2012 Ortega, F. *Evolution of teams in FLOSS*. In Lydia Pintscher (Ed.) *Open Advice*. Available at <http://open-advice.org/> (CC-BY-SA 3.0) ISBN: 978-1-105-51493-7
- 2011 Ortega, F., Rodríguez, J. *El Potlatch digital: Wikipedia y el triunfo del procomún y el conocimiento compartido*. Ediciones Cátedra, Serie Teorema Mayor. Madrid, September 2011. ISBN 9788437628837

Ortega, F. *Procesos colaborativos a gran escala: Análisis cuantitativo de Wikipedia*. In de Pablos, C. (Ed.) *Oportunidades de Investigación en Innovación Abierta*. Publicaciones Universidad Rey Juan Carlos/Dykinson, Madrid. May 2011. ISBN 978-84-9982-232-7

2008 Ortega, F., González-Barahona, J.M., Robles, G. *Quantitative Analysis of the Top Ten Wikipedias. Software and Data Technologies*. Reprinted in Filipe, J., Shishkov, B., Helfert, M., Maciaszek, L.A. (Eds.). *Second International Conference, ICISOFT/ENASE 2007, Barcelona, Spain, July 2007. Revised Selected Papers*. Springer, 2008, ISBN 978-3-540-88654-9.

González-Barahona, J.M., del Castillo A., Ortega, F., Gato, J. *et al. Open Source Software for the Development of the Spanish Public Administration: A Global View*. National Center of Reference for the Application of Information and Communication Technologies based on Open Source (**CENATIC**). Madrid, Spain. http://observatorio.cenatic.es/index.php?option=com_rubberdoc&view=doc&id=49&format=raw (English version). ISBN 978-84-691-5722-0

2006 Reinoso, A.J., Ortega, F., García-Manso, A. *Fundamentals of UNIX/LINUX Operating Systems Programming* (in Spanish). Ed. **Bellisco**. Madrid, Spain. ISBN 84-85198-95-6.

WORKSHOPS AND CONFERENCES

2013 **Organizer**, ESF Exploratory workshop: *Towards a Virtual Institute for the Measurement, Evaluation and Management of Open Online Communities*. Brest, France. February 6-7.

2011 **General Chair**, WikiSym 2011: *7th International Symposium on Wikis and Open Collaboration*. Mountain View (CA), USA. October 3-5.

2010 **Program Chair**, WikiSym 2010: *6th International Symposium on Wikis and Open Collaboration*. Gdansk, Poland. July 7-9.

2009 - 2011 **Chair**, HICSS Mini-track. *Open Movements: FLOSS, Open Content, Open Access and Open Communities* HICSS 2009 (with Kevin Crowston); 2010 (with Kevin Crowston and Vandana Singh); 2011 (with Wolfgang Bein, Kevin Crowston and Clinton Jeffery).

2008 **Organizer**, (with Joseph Reagle, Ruth Jesus and Antonio J. Reinoso). *First International Workshop on Interdisciplinary Research on Wikipedia and Wiki Communities (WIRW '08)*. 1-day workshop, WikiSym 2008. Porto, Portugal.

RESEARCH PROJECTS

- 2014 Content & Intelligence. Spanish Ministry of Economy and Competitiveness, Program INNACTO (IPT-2012-0912-430000); European Fund for Regional Development. May 2012 – Dec. 2014.
- 2013-2014 EnRiMa: *Energy Efficiency and Risk Management in Public Buildings*. EU FP7 Research Program, STREP Project (9 partners, funding > 2.5M€). FP7 ICT Project 260041. Oct. 2011-Mar. 2014. URL: <http://www.enrima-project.eu/>
- 2013 Corporate Community. Spanish Ministry of Economy and Competitiveness, Program INNACTO (IPT-2011-0871-430000); European Fund for Regional Development. May 2011 – June 2014.
- 2012-2013 Democracy4all. Spanish Ministry of Economy and Competitiveness (IPT-2011-0869-430000); European Fund for Regional Development. May 2012 – June 2014.
- 2010-2012 ALERT: *Active support and real-time coordination based on Event processing in open source software development*. EU FP7 Research Program, STREP Project (10 partners, funding > 2.5M€). FP7-ICT-5-258098. Oct.2010.-Mar. 2013
URL: <http://www.alert-project.eu>
- 2007-2010 QualiPSo: *Quality Platform for Open Source Software*. EU FP6 Research Program. Integrated Project (+15 partners, funding > 10M€). FP6-IST-5-034763. Nov. 2006-Oct. 2010.
URL: <http://www.qualipso.org/>
- 2009-2010 QualOSS: *Quality in Open Source Software* EU FP6 Research Program, STREP (8 partners, funding 2M€) FP6-IST-5-033547. Sep. 2006 – Feb. 2009.
URL: <http://www.qualoss.org/>
- 2009-2010 FLOSSMetrics: *Free/Libre and Open Source Software Metrics*. EU FP6 Research Program. Support Action (led by URJC, 7 partners, funding 585K€) FP6-IST-5-033982. Sep. 2006-Dec. 2009
URLs: <http://flossmetrics.org> and <http://melquiades.flossmetrics.org>)
- 2008 MORFEO: *Libre Software Community for platforms and components development*. Co-founded by Spanish Ministry of Industry, Tourism and Commerce (TSI-020100-2008-224). Jan. 2008- Dec. 2008.
URL: <http://www.morfeo-project.org/>
- 2007-2010 OSOR: *Open Source Observatory and Repository*. European Commission, IDABC Program. Nov. 2006-Dec.2009.
URL: <http://www.osor.eu/>

TEACHING

- **+ 10 years** of experience teaching and coordinating undergraduate and graduate courses at *Universidad Alfonso X El Sabio* and *Universidad Rey Juan Carlos*.
- **Awards:** *Best Professor course 2012-2013*, Master on Libre Software, Universidad Rey Juan Carlos, June 2013.
 - *Telecommunications Engineering (UAX):* Computer Architecture, Communication Networks: Protocols, Infrastructures and Interconnection Devices, Computer Networks and Services: Planning and Design, Computer Networks Administration and Management.
 - *Telecommunications Engineering in Image and Sound (UAX):* Fundamentals and Practice of Programming, Communication Networks and Services (network protocols).
 - *Industrial Engineering (UAX):* Computer Organization and Structure.
 - *Computer Science Engineering (UAX):* Cryptography: Theory and Applications.
 - *Master on Information Systems Security (UAX):* Wireless Networks Security.
 - *Master on Libre Software (URJC)* (Website: <http://master.libresoft.es>; Courses: <http://docencia.etsit.urjc.es/moodle/course/category.php?id=34>).
 - Economic Aspects of FLOSS, Developers and their Motivations, Quality Evaluation of FLOSS projects, Management of FLOSS, On-line Communities, Statistics and Data Analysis.
 - *Master on Decision Systems Engineering:* Decision Engineering.
- Lecturer at *EOI Business School*, targeting intermediate and upper-level managers of private companies (mixed backgrounds on Economics, Politics, Business Administration, Law, Engineering, etc.).
 - *Master in Digital Economy and Creative Industries (EOI)*.
 - Economic aspects and business models in FLOSS.
 - Virtual communities and open content.

REFERENCES

Prof. Kevin Crowston

Professor, School of Information Studies.
Syracuse University, Syracuse (NY), USA.
crowston@syr.edu

Dr. Jesús M. González-Barahona

Associate Professor (Profesor Titular)
Department of Computation and Telematics
Systems,
Universidad Rey Juan Carlos, Madrid.
jgb@gsys.es

Dr. Nicolas Jullien

Associate Professor, Département LUSI.
Telecom Bretagne, Brest, France.
Nicolas.Jullien@telecom-bretagne.eu

Dr. Javier M. Moguerza

Associate Professor (Profesor Titular)
Department of Informatics and Statistics
Universidad Rey Juan Carlos, Madrid.
javier.moguerza@urjc.es