CURRICULUM VITAE

**Roxana María Danger Mercaderes**

Date and place of birth: April 2, 1975, Santiago de Cuba, Cuba

Nationality: Spanish

Address: Office 209. William Penney Building. Department of Computing. Imperial College London.

e-mail: rdanger@imperial.ac.uk

## Academic background

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| Febrary 2007 | PhD (Excelente cum Laude) in Advanced Informatics systems, Jaume I University, Castellón, Spain.<br>PhD thesis: Extraction and Analysis of Information from the Semantic Web point of view, director: prof. Rafael Berlanga Llavorì. |
| July 2000 | MSc in Artificial Intelligence, Universidad de Oriente, Santiago de Cuba.<br>MSc thesis: A geographic Information System for marine applications, director: prof. Jorge Díaz Silvera. |
| March 1997 | Graduation degree in Computer Science, marks 4.75/5.00, Universidad de Oriente, Santiago de Cuba. Graduation thesis: A generalisation study on neural corner detection (Detección de puntos dominantes en contornos), director: prof. Aurora Pons Porrata. |

## Professional Experiences

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| 2011- | Research Associate at Imperial College, London. Principal Investigator: John Darlington. |
| 2008-2011 | Post-doctoral researcher at the Department of Information Systems and Computation, Universidad Politécnica de Valencia. Granted by the Spanish Ministry of Science and Innovation, under Program "Juan de la Cierva". |
| 2008-2009 | Teaching at Universidad Politécnica de Valencia, Spain. Subjects: Informatics, Practicum of Informatics Engineering. |
| 2007-2008 | Part-Time contract for natural language processing and text mining research. Financial entity: Maat –gknowledge;<br>Principal investigator: Alfonso Rios Alonso. |
| Sept 2001 - June 2004 | Titular Professor at University of Oriente, Santiago de Cuba. |
| Sept. 1999 - Agost 2001 | Employed by GEOCUBA. System Development Department, as Analyst Supervisor. |
| 1994-1997 | Part-time job, teaching Practicum of Computer Science at Universidad de Oriente, Santiago de Cuba. |

<u>Languages</u>

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|---|---|
| English | Good |
| Italian | Good |
| Spanish | Native |

<u>International Publications</u>

Journals

- Danger R.; Segura-Bedmar, I.; Martinez, P.; Rosso P. **A comparison of Machine Learning techniques for detection of drug target articles**. Journal of Biomedical Informatics. Dec;43(6):902-13. 2010.
- Danger, R.; Berlanga, R. **Generating complex ontology instances from documents.** Journal of Algorithms. Vol. 64. Issue 1. 2009. ISSN 0196-6774.
- Danger, R.; Pons A.; Gil, R. **Un algoritmo para la Detección de Puntos Dominantes.** Revista Ciencias Matemáticas. Cuba. 2002

Book chapters and Collections

- Vasa Curcin, Roxana Danger, Wolfgang Kuchinke, Simon Miles, Adel Taweel, and Christian Ohmann. **Provenance model for randomized clinical trials**, Data Provenance and Data Management for eScience, in press, 2012.
- Danger R.; Berlanga, R. **A Semantic Web Approach for Ontological Instances Analysis**. Software and Data Technologies. Communications in Computer and Information Science, 2009, Volume 22, Part 2, IV, 269-282, DOI: 10.1007/978-3-540-88655-6_20.
- Garcia Lopez, A.; Berlanga, R.; Danger R. **A Description Clustering Data Mining Technique for Heterogeneous Data**. Software and Data Technologies. Communications in Computer and Information Science, 2008, Volume 10, Part 6, 361-373, DOI: 10.1007/978-3-540-70621-2_29.
- Jimenez-Ruiz, E; Berlanga, R.; Sanz, I; McClatchey, R; Danger, R.; Manset, D.; Paraire, J.; Rios, A. **The Management and Integration of Biomedical Knowledge: Application in the Health-e-Child Project (position paper)**. On the Move to Meaningful Internet Systems 2006. Lecture Notes in Artificial Intelligence 4278. ISBN: 978-3-540-48273-4. 2006.
- Danger, R.; Berlanga, R. **Inferring Multidimensional Cubes for representing Conceptual Document Spaces**. Current Topics in Artificial Intelligence, Lecture Notes in Artificial Intelligence 4177. ISBN: 978-3-540-45914-9. 2006.
- Jiménez, E; Berlanga, R.; Sanz, I.; Aramburu, M.J.; Danger, R. **OntoPathView: A Simple View Definition Language for the Collaborative Development of Ontologies**. Artificial Intelligence Research and Development. Volume 131 Frontiers in Artificial Intelligence and Applications. IOS Press, 2005. ISBN 1-58603-560-6. 2005.
- Danger, R.; Berlanga, R.; Ruíz-Shulcloper, J. **A proposal for the automatic generation of instances from unstructured text**. Progress in Pattern Recognition, Image Analysis and Applications, Lecture Notes in Artificial Intelligence 3287. ISBN: 978-3-540-23527-9. 2004.
- Danger, R.; Berlanga, R.; Ruíz-Shulcloper, Jé. **CRISOL: An approach for automatically populating a Semantic Web from Unstructured Text Collections**. Database and Expert Systems Applications, Lecture Notes in Artificial Intelligence 3180. ISBN 978-3-540-22936-0. 2004
- Danger, R.; Sanz, I.; Berlanga, R.; Ruíz-Shulcloper, J. **Text Mining using the hierarchical syntactical structure of documents**. Current Topics in Artificial Intelligence, Lecture Notes in Artificial Intelligence 3040. ISBN 3-540-22218-9. 2004.
- Pons, A.; Gil, R.; Danger, R.; Sanchiz, J. M.; Iñesta, J. M. **A generalisation study on neural corner detection**. Progress in artificial intelligence, Lecture Notes in Artificial Intelligence 1484. ISBN 3-540-64992-1, 1998.

Conference Proceedings

- Roxana Danger, Robin Joy, John Darlington and Vasa Curcin. **Access control for OPM provenance graphs**. 4th International Provenance and Annotation Workshop. Santa Barbara, California. June 2012.
- Danger Mercaderes R, Curcin V, Darlington J, Majeed A: "**TRANSFoRm Provenance model for clinical trial data collection**". European General Practive Research Network in Ljubljana-Slovenia. EGPRN 2012. 10-13 May 2012.
- Garcia-Blasco S., Mola-Velasco S., Danger R., Rosso P. **Automatic Drug-Drug Interaction Detection: A Machine Learning Approach With Maximal Frequent Sequence Extraction**. In: Proc. SEPLN Workshop on 1st Challenge Task on Drug-Drug Interaction Extraction (DDIExtraction), CEUR-WS.org, vol. 761, pp. 51-58.
- Degli Esposti M.; Danger R.; Rosso P.; García Blasco S. **Visual characterization of biomedical texts with word entropy**. Network Tools and Applications in Biology (NETTAB 2010), Biological Wikis. 2010.
- Danger R.; Pla, F.; Molina, A. **Protein-Protein interaction text analysis**. Sociedad Española para el Procesamiento del Lenguaje Natural (BIOSEPLN), No. 45. ISBN: 1135-5948. 2010.
- García-Blasco S., Danger S., Rosso P. **Drug-Drug Interaction Detection: A New Approach Based on Maximal Frequent Sequences**. Sociedad Española para el Procesamiento del Lenguaje Natural (BIOSEPLN), No. 45. ISSN: 1135-5948. 2010.
- Danger R.; Pla, F.; Molina, A. **PPIEs: Protein-Protein interaction information extraction system**. Sociedad Española para el Procesamiento del Lenguaje Natural (SEPLN), No. 40. ISSN: ISSN: 1135-5948. 2008.
- Danger, R.; Berlanga, R. **Generating complex ontology instances from documents.** Fourth Latin American Workshop on Non-Monotonic Reasoning. México. 2008.
- Lopez, A.G.; Berlanga, R.; Danger, R. **Mining of complex objects via description clustering**. I International Conference on Software and data technologies. ISBN: 972-8865-69-4. Setúbal, Portugal. 2006.
- Berlanga, R.; Scheppler, A.; Aramburu, M. J.; Sanz, I.; Danger R. **Inferencia de cubos multidimensionales para colecciones de documentos**. XI Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA 2005). ISBN: 84-96474-13-5. Santiago de Compostela, España. 2005.
- Berlanga, R.; Scheppler, A.; Aramburu, M. J.; Sanz, I.; Danger R. **OntoPath: A Query Language for Ontologies**. IX Jornadas de Ingeniería del Software y Bases de Datos. JISBD 2004. Málaga, España. 2004.
- Danger, R.; Berlanga, R.; Ruíz-Shulcloper, J. **ObjectMiner: A New Approach for Mining Complex Objects**. International Conference on Enterprise Information Systems. ICEIS 2004. ISBN: 972-8865-007. Oporto. Portugal. 2004.
- Danger, R.; Berlanga, R.; Ruíz-Shulcloper, J. **CRISOL: Text Mining using the hierarchical syntactical structure of document**. X Conferencia de la Asociación Española para la Inteligencia Artificial, CAEPIA 2003. ISBN: 84-8373-564-4. San Sebastián, España, 2003.
- Danger, R.; Sanz, I.; Berlanga, R.; Ruíz-Shulcloper, J. **CRISOL: Una aproximación a la generación automática de instancias para una Web Semántica**. VIII Jornadas de Ingeniería del Software y Bases de Datos (JISBD 2003), JISBD 2003. ISBN: 84-688-3836-5. Universidad de Alicante. Alicante. 2003.
- Danger, R.; Pineda, G.; Valcarcel, L. **Módulo para la implementación de Sistemas de Información Geográficos**. Proccedings of 2da Conferencia Internacional de Control Automático AUT'2002. Santiago de Cuba. 2002.
- Pons, A.; Iñesta, J. M; Gil, R.; Sanchiz, J. M; Danger, R. **Detección de puntos dominantes mediante redes neuronales.** Proceedings of CIARP'98, III Taller Iberoamericano de Reconocimiento de Patrones. ISBN: 970-18-1081-3. Mexico D.F.. 1998.

## Organized events

- Organizer and Chair of the Special Session on Language Technologies applied to Biomedical and Health documents at the Conference of the Spanish Society on Natural Language Processing, Valencia, 2010.

## Research projects as principal researcher

- Project title: *Extracción de información sobre interacciones entre proteínas (Extraction of information on protein-protein interaction)*. GVPRE/2008/097. Financial entity:

Conselleria d' Educación, Generalitat Valenciana. Principal researcher: Dr. Roxana Danger (5 researchers)

## Participation in research projects

- Project Title: TRANSFoRm: Translational Research and Patient Safety in Europe. Financial Entity: European Union, Programme acronym: FP7-ICT. Subprogramme area: ICT-2009.5.2 ICT for Patient Safety. Project reference: 247787. From 2010-03-01 to 2015-05-31. Total cost: EUR 9,726,688. EU contribution: EUR 7,540,000. Partners: The consortium consists of 21 partners from 10 EU Member States. 16 partners are centred on the ICT requirements of the project. 5 are clinical partners for use cases, testing, evaluation and dissemination (full list at: http://www.transformproject.eu/). Project principal manager: Vasa Curcin, Majeed A. Imperial College, London.
- Project title: *TEXT-MESS 2.0 (subproject UPV: TEXT-ENTERPRISE 2.0: Text comprehension techniques applied to the needs of the Enterprise 2.0)*. CICYT TIN2009-13391-C04-03. Financial entity: Spanish Ministry of Education and Science. 2010-2012. Principal researchers: Patricio Martínez (Univ. Alicante); TEXT-ENTERPRISE 2.0: Paolo Rosso (UPV). http://intime.dlsi.ua.es/textmess20/. (70 researchers, 10 UPV). Research centres: Univ. Alicante, Univ. Politécnica Valencia (UPV), Univ.Jaén, Univ. Barcelona.
- Project title: *TEXT-MESS: Minería de Textos Inteligente, Interactiva y Multilingüe basada en Tecnología del Lenguaje Humano (subproject UPV: MiDEs: Learning Methods for Text Mining in Specific Domains)*. CICYT, TIN2006-15265-C06. Financial entity: Spanish Ministry of Education and Science. 2006-2009. Principal researchers: Patricio Martínez (Univ. Alicante); MiDEs: Ferrán Pla (UPV). http://gplsi.dlsi.ua.es/text-mess. (70 researchers, 10 UPV). Research centers: Univ. Alicante, Univ. Politécnica Valencia (UPV), Univ.Jaén, Univ. Nacional de Educación a Distancia (UNED), Univ. Politécnica Cataluña, Univ. Barcelona.
- Project title: *Answer Extraction for Definition Questions in Arabic*. AECID-PCI B/017961/08. 2009-2010. Principal researcher: Paolo Rosso (UPV). (16 researchers) Research centres: UPV (Spain); University of Sfax (Tunisia).
- Project title: *Analysis and Exploitation of Spatio-Temporal Knowledge in a Semantic Web. An Application to Archaeological Research*. CICYT, TIC2002-04586-C04-03. Financial entity: Spanish Ministry of Education and Science. 2003-2005. Principal researcher: Dr. Rafael Berlanga Llavorí. (40 researchers)

## Participation in researcher networks:

- *Red Temática TIMM: Tratamiento de Información Multilingüe y Multimodal*, CICYT TIN2009-06135-E (2010-2011) and CICYT TIN 2005-25825-E (2006-2009). Coordinator: Alfonso Ureña (Univ. Jaén). (100 researchers). Research centres: Univ. Politécnica Valencia (UPV), Univ.Jaén, Univ. Nacional de Educación a Distancia (UNED), Univ. Politécnica Cataluña, Univ. Barcelona, Univ. País Vasco (EHU). http://sinai.ujaen.es/timm.

## Invited talks

- "Ontologies and their use in Information extraction in specific domains. Experiences in archaeology and bioinformatics". Laboratorio Tecnologías de Lenguaje Humano INAOE, México, October, 2008.

## Other

- Reviewer for international conferences;
- Participation in national (Spanish) courses;
- Consolidated knowledge of several informatics tools, programming languages and operating systems;
- Experience as project PI; supervisor of final degree and MSc. Thesis.

- Research interests: Natural Language Processing, Data and Text Mining, Semantic Web, Machine Learning.