

# ACADEMIC & RESEARCH CV Carlos F. Enguix

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- Blog: <https://carlosfenguix.blogspot.com/>



## CURRENT RESEARCH INTERESTS

- **Semantic Web:** RDF, RDF-Schema, Ontologies, Ontology-based Data Querying, Semantic Querying
- **Semantic Web Databases:** Federated Search With RDF-based Databases
- **Knowledge Graphs:** Knowledge Graph Querying, Query formulation on top of Domain-specific Knowledge graphs
- **Data Science & Data engineering:** data clustering algorithms
- **Social Web & Web Intelligence:** AI-based frameworks for Intelligent Querying of Disperse Web Data

## EDUCATION

- 2000 PhD Candidateship Doctorate in Philosophy, Department of Information Systems, Wollongong University, Wollongong, NSW-Australia PhD Thesis Title: “Resource Discovery on WWW/Internet Databases: Integrating Structured & Information Retrieval Models”. Thesis focused on resource discovery of heterogeneous, autonomous & distributed WWW/Internet Databases.
- 1998 Master of Information Systems (Honours) By Research, Department of Information Systems, University of Wollongong, Wollongong, NSW-Australia. Master Thesis Title: “Database Querying on the WWW: The Design & Implementation of Domain-specific Database Search Engines”. Thesis focused in structured/domain-specific Web Information Retrieval and parametric database search engines.
- 1996 Postgraduate Diploma Business Information Systems, Department of Information Systems, Wollongong, NSW-Australia. Postgraduate degree Information Systems & Commercial Business Programming. High Distinction Average, Best Graduating Student, 1996 UNISYS Award Honours
- 1994 Dip. Informatics, EU Informatica Universidad Politecnica de Valencia. Equivalent to a BSc in Computer Science/Software Engineering and to the current Spanish degree entitled “Computer and Information Systems Engineering”. A combination of Computer Science, Software Engineering and Information Systems courses. The final degree project/thesis included the development of a client-server database/work-flow system via evolutionary prototyping, RAD techniques & 4GL's.

## RESEARCH AND ACADEMIC POSITIONS

- 2007 NICTA Research Scholarship at the Knowledge Management Research Group (KMRG) at the School of Information Technologies University of Sydney, NSW, Australia. Research Activities Focused Towards Developing a “Hypothesis Formulation and Testing Framework” for Life Sciences Bio-ontologies and Semantic Web Distributed Data Repositories
- 2005 Research Fellowship Digital Enterprise Research Institute (DERI), National University of Ireland, Galway, Ireland. Work package Leader Knowledge Web Network of Excellence FP6-507482: work package leader of the WP 2.3 Dynamics (Versioning of Ontologies) within the four year Network of Excellence project funded by the European Commission 6th Framework Program. Member of the “Paraconsistent Trustworthy Reasoning in Emerging Systems” (PATRES) FP6-2002-IST-C: Future and Emerging Technologies, an FP6 Specific Targeted Research Project (STREP) proposal.
- 2002-2004 Computer Science Lecturer Mediterranean University of Science & Technology (MUST), Universidad Politecnica de Valencia, Valencia, Spain. Computer Science lecturer at the Department of Computer Science teaching the following courses Programming & Databases, Database Management Systems, Information & Data Structures, Methodology & Technology of Programming, Introduction to Programming and Advanced administration of Databases. Task included designing course programs, preparing course contents, preparing practical assignments, quizzes, projects and exercises, theory and practical class lectures, weekly tutorials, setup of web pages including course programs and preparation of the “*Venia Docendi*” in the area of Computer Languages and Information Systems focused in the area of database management systems
- 2000 R&D Software Engineer, R&D Innovit, Australian Technology Park, Sydney, NSW, Australia. Development Intelligent Catalogue Management Engine for B2B & B2C E-Commerce Catalogues. Responsibilities involved data modelling with Oracle Designer CASE tool, object/database/interface/library layer deployed with JAVA JDK/J2EE/JDBC, JAVA IDE's, Ansi SQL, DB2, Cloudscape. Also code re-factoring, query & transaction management, object-relational mapping, JDBC connectivity, DB2 & Cloudscape maintenance & set up, database design & performance, automated tests with JUnit framework, Extreme Programming practices, CVS code repositories and the Bugzilla bug tracking system

## RESEARCH PROJECTS

- 2005 Semversion: a layered approach to versioning RDF Knowledge Web NOE. Semversion Knowledge Web FP6 NOE Deliverable D2.3.1: Specification of a methodology for ontology syntactic and semantic versioning. Contributed to the design and implementation of Semversion, a research prototype for versioning RDF and RDF schema Ontologies. Semversion includes basic bi-temporal database features such as valid time and transaction time. Semversion is based upon syntactic and semantic diffs applied to a layered approach to versioning RDF and RDF Schema Ontologies.
- 2000 Intelligent Catalogue Engine Commercial Project Innovit R&D. E-Commerce content catalogue management software *iICE*, Innovit R&D, Australian Technology Park, Sydney, Australia. Innovit is now a multi-national company with branches in Asia, UK and Australia. I was part of the initial start-up R&D team. This commercial project included the development of an Intelligent Catalogue Engine software for B2B & B2C E-Commerce Catalogues, aggregator of heterogeneous E-catalogue systems. *iICE* included important and innovative features such as universal data import/export (i.e. CIF, XML, CSV, ASCII), ontology conversion/reconciliation, parametric search for incomplete data, automatic unit-conversion and universal RDBMS-ORDBMS access. Innovit's homepage: <http://www.innovit.com>
- 1999 CBR-BDI Web Information Retrieval Agent, Collaborative Research Project Decision Systems Lab. Case-Base Reasoning Belief-Desire-Intention Real-Time Web Information Retrieval Agent (CBR-BDI Web IR Agent), Decision Systems Laboratory, University of Wollongong, Wollongong, NSW, Australia. Project led by Professor Dr. Aditya K. Ghose (PhD Alberta), director of the Decision Systems Lab at the School of IT and Computer Science, University of Wollongong. The project included the definition, design and implementation of domain-specific Web IR real-time agents following the agent-oriented BDI framework coupled with Case-Based Reasoning (CBR) and domain-specific knowledge-bases. The architecture included a forward-chaining rule sub-system, a case memory and a CBR-BDI interpreter. Presented at the “Intelligent Agents in Cyberspace AAAI Spring Symposium”, Stanford University, USA, 1999.
- 1998 UniGuide Database Search Engine Research Project, Master By Research Information Thesis, Decision Systems Lab. Domain-specific parametric search engine, Decision Systems Laboratory, University of Wollongong, Wollongong, NSW, Australia. Project coordinated by Professor Dr. Joseph G. Davis (PhD Pittsburgh) leader at that time of the Decision Systems Lab at Wollongong University. The project outcome was a proof-of-concept Beta-release research prototype, parametric database search engine suited for resource discovery in well-demarcated

domains on the WWW such as domain-specific sub-webs. The architecture was based upon multi-threaded indexing agents traversing domain-specific sub-webs and collecting specialised metadata. Presented at the “WWW7 Conference”, Brisbane, Australia, 1998.

**PUBLICATIONS (selected) CODE: B = Book BC = Book Chapter P = paper R = revision E = editor**

- Google Scholar ID: [Publications @Google Scholar](#)
- Semantic Scholar ID: [Publications @Semantic Scholar](#)
- Microsoft Academic: [Publications @Microsoft Academic](#)

2005

AUTHORS: Sebastian Schaffert, François Bry, Philippe Besnard, Hendrik Decker, Stefan Decker, Carlos F. Enguix and Andreas Herzig

TITLE: “[Paraconsistent Reasoning for the Semantic Web](#)”

PUBLISHER: Proceedings International Semantic Web Conference ISWC 2005 Workshop Uncertainty Reasoning for the Semantic Web

REF. JOURNAL/BOOK:(ISBN, ISSN,...):

CODE: P

VOLUME:

PAGES: 104-105

YEAR: 2005

2003

AUTHORS: Daniel Jimenez, Edgardo Ferreti, Vicente Vidal, Paolo Rosso and Carlos F. Enguix

TITLE: “[The Influence of Semantics in IR using LSI and K-Means Clustering Techniques](#)”

PUBLISHER International Symposium on Information and Communication Technologies, ISICT 03, Trinity College Dublin, Ireland. ACM Digital Library

REF. JOURNAL/BOOK:(ISBN, ISSN,...): ISBN: 0-9544145-2-7

CODE: P

VOLUME:

PAGES: 286-291

YEAR: 2003

2002

AUTHORS: Jimenez, D., Enguix, C. F., Vidal, V.

TITLE: “[A Comparison of Experiments with the Bisecting-Spherical K-Means Clustering and SVD Algorithms](#)”

PUBLISHER I Workshop on Processing and Information Retrieval, JOTRI 2002, Polytechnic University of Valencia, Valencia, Spain, July 2002. Editors Sanchis, E., Moreno, L., Gil

REF. JOURNAL/BOOK:(ISBN, ISSN,...): ISBN 84-9705-199-8

CODE: P

VOLUME:

PAGES: 45-52

YEAR: 2002

1999

AUTHORS: Cindy Olivia, C.F Enguix, C.F Chang, A.K. Ghose

TITLE: “[Domain-Specific Intelligent Search with Case-based BDI Agents](#)”

PUBLISHER WWW8 Conference Posters

REF. JOURNAL/BOOK: (ISBN, ISSN,...): WWW8 Conference Posters

CODE: P

VOLUME:

PAGES: 140-141

YEAR: 1999

AUTHORS: Cindy Olivia, C.F Chang, C.F Enguix, A.K. Ghose

TITLE: “[Case-Based BDI Agents: An Effective Approach for Intelligent Search on the World Wide Web](#)”

PUBLISHER American Association for Artificial Intelligence (AAAI)

REF. JOURNAL/BOOK:(ISBN, ISSN,...): Intelligent Agents in Cyberspace Papers from the AAAI

CODE: P

Spring Symposium ISBN 1-57735-081-2

VOLUME: SS-99-03

PAGES: 20-27

YEAR: 1999

1998

AUTHORS: Carlos F. Enguix, Joseph G. Davis

TITLE: “[Database Querying on the World Wide Web: UniGuide an Object-Relational Search Engine For Australian Universities](#)”

PUBLISHER Computer Networks and ISDN systems, Elsevier Science Direct

REF. JOURNAL/BOOK: (ISBN, ISSN,...): ISSN 0169-7552/98

CODE: P

VOLUME: 30 Issues 1-7

PAGES: 567-572

YEAR: 1998

AUTHORS: Enguix, C. F., Davis, J.G., Ghose, A.K.

TITLE: “[Database Querying on the World Wide Web: UniGuide an Object-Relational Search Engine For Australian Universities](#)” (extended version)

PUBLISHER Proceedings of the Workshop on Reuse of Web Information held in conjunction with the 7<sup>th</sup> WWW Conference

REF. JOURNAL/BOOK: (ISBN, ISSN,...): CSIRO Report Number CMIS 98-11

CODE: P

VOLUME:

PAGES: 107

YEAR: 1998

2002

AUTHORS: Jimenez, D., Enguix, C. F., Vidal, V.

TITLE: "A Comparison of Experiments with the Bisecting-Spherical K-Means Clustering and SVD Algorithms"

TYPE OF PARTICIPATION: ATTENDANCE

WORKSHOP/CONFERENCE: I Workshop on Processing and Information Retrieval, JOTRI 2002, Universidad Politecnica de Valencia, Valencia, Spain, July 2002

PUBLICATION: I Workshop on Processing and Information Retrieval, JOTRI 2002, Editors Emilio Sanchis, Lidia Moreno e Isidoro Gil, Technical University of Valencia (UPV) Publications

PLACE: Universidad Politecnica de Valencia, Valencia, Spain

YEAR: 4/5 July 2002

1999

AUTHORS: Carlos F. Enguix and Joseph G. Davis

TITLE: "Filling the Gap: New Models for Systematic Page-based Web Application Development &amp; Maintenance"

TYPE OF PARTICIPATION: PAPER PRESENTATION

WORKSHOP/CONFERENCE: WWW8 Workshop Web Engineering'99

PUBLICATION: ACM SIGWEB Newsletter, Volume 8 Issue 3 WWW8 Workshop Web Engineering'99

PLACE: Toronto, Canada

YEAR: 11 May 1999

AUTHORS: Cindy Olivia, C.F Enguix, C.F Chang, A.K. Ghose

TITLE: "Domain-Specific Intelligent Search with Case-based BDI Agents"

TYPE OF PARTICIPATION: POSTER PRESENTATION

WORKSHOP/CONFERENCE: 8<sup>th</sup> World Wide Web Conference

PUBLICATION: WWW8 Conference Posters

PLACE: Toronto, Canada

YEAR: May 11-14 1999

1998

AUTHORS: Carlos F. Enguix and Joseph G. Davis

TITLE: "Database Querying on the World Wide Web: UniGuide an Object-Relational Search Engine For Australian Universities"

TYPE OF PARTICIPATION: PAPER PRESENTATION

WORKSHOP/CONFERENCE: Workshop on Reuse of Web Information held in conjunction with the 7<sup>th</sup> WWW ConferencePUBLICATION: Proceedings of the Workshop on Reuse of Web Information held in conjunction with the 7<sup>th</sup> WWW Conference, 14 April 1998, Brisbane, Austral Anne-Marie Vercoustre, Maria Milosavljevic and Ross Wilkinson. Editors, CSIRO Report Number CMIS 98-11, 107 pages

PLACE: Brisbane, Australia

YEAR: 14 April 1998

AUTHORS: Enguix, C. F., Joseph G. Davis

TITLE: "Database Querying on the World Wide Web: UniGuide an Object-Relational Search Engine For Australian Universities"

TYPE OF PARTICIPATION: PAPER PRESENTATION

WORKSHOP/CONFERENCE: 7<sup>th</sup> World Wide Web Conference: Doctoral Consortium

PUBLICATION: Computer Networks and ISDN systems 30 (1998) 567-572

PLACE: Brisbane, Australia

YEAR: April 1998

**SEMINARS PRESENTED & INVITED TALKS**

2005

CENTRE: Research Unit Programming and Modelling Languages

INSTITUTION: Institute for Informatics, University of Munich

TITLE: Seminar "PATRES Presentation The Semantic Web Search Engine and Paraconsistency Logic

*Detecting Data Integration Inconsistencies on the Semantic Web"*

SUBJECT: An example of an application of Paraconsistency logic applied to the Semantic Web. Integration of paraconsistency logic in a semantic web search engine order to detect data inconsistencies.

NUMBER HOURS: 30 minutes

DATE: 8/07/2005

CENTRE: Aldemar Knossos Royal Village Hotel, Hersonissos, Crete, Greece

INSTITUTION: Knowledge Web General Assembly 2-3/06/2005, Heraklion, Crete

TITLE: Seminar "Analysis of Requirements for Further Language Extensions"

SUBJECT: A proposal of inclusion of bitemporal database features and context querying to RDQL and SPARQL

NUMBER HOURS: 30 minutes

DATE: 2/06/2005

2003

CENTRE: Computing &amp; Information System Division, Business School

INSTITUTION: University of Wales Institute, Cardiff, Wales, United Kingdom  
 TITLE: Seminar “*Semantic Search on the Web: Integrating IR & NLP Techniques*”  
 SUBJECT: Integration of Information Retrieval and natural language techniques for semantic search: a proposal  
 NUMBER HOURS: 1  
 DATE: 21/03/2003

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2002

CENTRE: Department of Mathematics and Computer Science, University of Leicester, England  
 INSTITUTION:  
 TITLE: Seminar “*Resource Discovery On WWW/Internet Databases: Integrating Structured and Information Retrieval Models and Search Techniques*”  
 SUBJECT: Presentation of a Query Language suited for integration of distributed relational databases  
 NUMBER HOURS: 1  
 DATE: 03/07/2002

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2001

CENTRE: Department of Information Systems, Rochester Institute of Technology, Rochester, New York, USA  
 INSTITUTION:  
 TITLE: Seminar “*Resource Discovery On WWW/Internet Databases: a System Proposal For Integrating Structured and Information Retrieval Models and Search Techniques*”  
 SUBJECT: Presentation of a Query Language suited for integration of distributed relational databases: a proposal  
 NUMBER HOURS: 1  
 DATE: 9/12/2001

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1998

CENTRE: Department of Information Systems, Wollongong University  
 INSTITUTION:  
 TITLE: Seminar “*Database Querying on the World Wide Web: UniGuide an Object-relational Database Search Engine for Australian Universities*”  
 SUBJECT: Database search engine mapping unstructured/semi-structured data to structured relational databases  
 NUMBER HOURS: 1  
 DATE: 15/4/1998

**SERVICES & ACADEMIC ACTIVITIES**    **CODE:**    **B = Book Review**    **J = Journal Review**    **P = Conference Paper Review**    **PC = Program Committee**

Dec 2005            Reviewer ACM Computing Reviews, “*Spinning the semantic Web: bringing the world wide Web to its full potential*”, Fensel D., Hendler J., Lieberman H., Wahlster W., The MIT Press, 2005.  
                           CODE: B

Sep 2005            Reviewer ACM Computing Reviews, “*Handbook on ontologies (International Handbooks on Information Systems)*”, Staab S., Studer R., SpringerVerlag, 2004. CODE: B

Aug 2005            Reviewer International Semantic Web Conference ISWC 2005 CODE: P

Feb 2005            Reviewer ACM Computing Reviews, “*Explorer’s guide to the semantic Web*”, Passin T., Manning Publications Co., Greenwich, CT, 2004. CODE: B

May 2004            Reviewer CCCT’04, International Conference on Computing, Communications and Control Technologies, Austin, Texas, USA, August 14-17 2004 CODE: P

Mar. 2004            Reviewer Journal SYSTEMICS, CYBERNETICS AND INFORMATICS Volume 1 n.7 CODE: J

July 2003            Reviewer 1<sup>st</sup> Indian International Conference on Artificial Intelligence, Hyderabad, India, December 18-20, 2003. CODE: P

June 2003            Reviewer International Journal of Web Engineering and Technology (IJWET), special issue “Internet and Database Technologies in Business” CODE: J

Jan 2003            Reviewer 7th World Multi-Conference on SYSTEMICS, CYBERNETICS AND INFORMATICS SCI 2003, July 27-30, 2003, Orlando, Florida (USA) CODE: P

Oct 2002            Reviewer of IEEE Transactions on Knowledge and Data Engineering (TKDE)  
                           Special Issue on Mining and Searching the Web CODE: J

Aug 2002            Program & Organising Committee DBJunior Day EDBT Summer School, Cargese, Corsica France’2002 CODE: PC

Aug 2001            Reviewer of IEEE Transactions on Knowledge and Data Engineering (TKDE) CODE: J

Aug 1999            Reviewer of IEEE Transactions on Knowledge and Data Engineering (TKDE)  
                           Special Issue on Web Technologies, Vol. 11, No. 4 CODE: J

May 1999            Program & Organising Committee WWW8 Workshop Web Engineering’99, Toronto, Canada CODE: PC

MEMBERSHIPS

YEAR	INSTITUTION
2004-2005	ACM SIGMOD, SIGIR
2004-2005	IEEE Computer Society
1998-2000	ACM SIGMOD, SIGIR, SIGWEB, SIGECOM

**ACADEMIC AWARDS**

2003-2004 Teaching Award *Venia Docendi*  
 Universidad Politecnica de Valencia, Valencia, Spain.  
 Area of Computer Languages and Information Systems

**OTHER AWARDS, PRIZES & SCHOLARSHIPS**

2000 Australian Postgraduate Award Industry Scholarship (APAI)  
 Queensland University of Technology, Brisbane, Queensland, Australia

1999 University Postgraduate Award Scholarship (UPA)  
 Wollongong University, Wollongong, NSW, Australia

1997-1998 Business Systems Department Scholarship  
 Wollongong University, Wollongong, NSW, Australia

1997 Unisys Award Information Systems  
 Best Graduate Diploma Business Information Systems Student, Wollongong University

1997 Research Open Day Award  
 3<sup>rd</sup> Prize Research Poster Presentation, Wollongong University

**VISITS TO RESEARCH CENTERS** CODE: D = doctorate/PhD P = postdoctoral, I = invited E = employee O = others (specify)

CENTRE: Institut d'Etudes de Cargese

PLACE: Cargese, Córcega

COUNTRY: France

YEAR: 2002

DURATION 1 week

THEME: EDBT Summer School Distributed Databases on the Net: Models Languages and Infrastructures

CODE: D