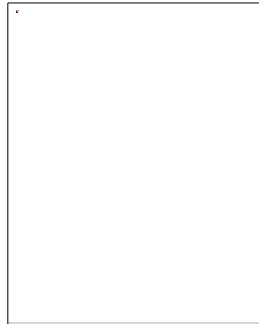


Endika Bengoetxea



Date of Birth: 23rd January 1971
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• Education:

2002: PhD in Image and Signal Processing - 'Très Honorable' mark awarded.

[Department of Image and Signal Treatment](#), Ecole Nationale Supérieure des Télécommunications (ENST), Paris (FR).

- * *PhD Thesis Title:* Inexact Graph Matching Using Estimation of Distribution Algorithms.
- * *PhD Thesis Viva:* 19th December 2002.
- * [more information about my PhD](#)

1999 MSc in Medical Imaging - 16 CAS mark awarded.

[Department of Bio-medical Physics & Bio-Engineering](#), University of Aberdeen, Scotland (UK).

- * *Deeper Studies:* MRI, Radiotherapy, Nuclear Medicine.
- * *MSc Project:* Use of PET in Radiotherapy.

1994 BSc (Hons) Computer Studies - 2.i. awarded June 1994.

[Department of Computer Science](#), University of Brighton, England (UK).

- * *Final Year Subjects:* Databases, Computer Graphics, VLSI design.
- * *Final Year Dissertation:* Possible use of Research in Genetics to improve Artificial Intelligence and Computer Engineering.
- * *Final Year Project:* Design and implementation of an Ethernet controller Board for IBM PC AT and compatible computers.

1994 Licenciado/Ingeniero en Informática - Informatikan lizentziatua/Ingeniaria

[Computer Engineering Faculty](#), University of the Basque Country - Euskal Herriko Unibertsitatea (ES).

- * *Awarded prize by the Kutxa bank for best all round performance.*
- * *Received certificate of acknowledgement from the Spanish Ministry of Education and Science in recognition of academic excellence.*
- * *Obtained 6 honour levels in different subjects.*

• Research:

Member of the [Intelligent Systems Group](http://www.sc.ehu.es/isc) (<http://www.sc.ehu.es/isc>) at the Computer Engineering Faculty, University of the Basque Country, Spain.

I have mainly worked in developing optimization algorithms based on the learning and simulation of Bayesian and Gaussian networks, inexact graph matching, and evolutionary computation techniques.

Current research interests also include application of these techniques to Medical Imaging, and Bioinformatics.

• Work Experience:

1996-date: Lecturer at the University of the Basque Country, Spain.

- * Lecturing subjects: *Operating Systems* and *Computer Networks*.
- * Erasmus Coordinator of the Computer Engineering Faculty of the University of the Basque Country (1998-2003).
- * Academic Secretary of the Computer Engineering Faculty of the University of the Basque Country (2001-2003).
- * Director for Campus Development, Vicerrectorate of Gipuzkoa. University of the Basque Country (from June 2004).

2001,1997: Course Leader of two international Intensive Courses organised for more than 24 Erasmus students, Co-ordination of several Universities from Europe (Spain,United Kingdom, Portugal, France). Subjects: Business on the Internet and e-Commence.

1998: Responsible for the Coordination of an Intensive Program organised at the University of Salamanca (Spain) for about 20 Erasmus students. Subject: Colaborative working.

1996-1997: Analyst-programmer of an application in Visual Basic and MS Access for the Kutxa Bank.

1996: Teacher of Visual Basic courses for continuous training of IT professionals.

- * Subjects on the courses: Visual programming, visual methodology, interaction of VB programs with different types of databases.
- * Courses organised by the University of the Basque Country and funded by the local Basque Government.

1995 - 1996: first job in Bilbao (North of Spain) as a programmer,

- * Creation of an application in NSDK (a programming language similar to Visual Basic that runs both on OS/2 and Windows) for a Spanish Bank Company (Kutxa);
- * The program included interconnection between a SQL Server database on a PC and an IBM mainframe's corporative DB2 database.
- * Analyst-programmer's job since the end of 1995.

● Experience as independent academic evaluator for the European Commission

- Expert Evaluator in Brussels of **Leonardo da Vinci** pre-proposals. Years: 2002, 2003, 2004.
- Expert Evaluator in Brussels of **Leonardo da Vinci** full proposals. Years: 2001, 2002, 2003, 2005.
- Expert Evaluator in Brussels of **Leonardo da Vinci - Transfer of Innovation** proposals. Year: 2004.
- Expert Evaluator of two Final Reports of finished **Leonardo da Vinci** projects on the subject of e-learning. Year: 2003.
- Expert Evaluator in Brussels of **Tempus** proposals. Years: 2003 (CARDS countries), 2004 (TACIS countries).
- Expert Evaluator on the selection procedure of **Tempus - Structural Complementary Measures** proposals. Years: 2004, 2005 (CARDS countries)
- Expert Evaluator in Brussels of **Socrates/Erasmus Curriculum Development** proposals. Years: 2004, 2005.
- Expert Evaluator in Brussels of **Erasmus Mundus** proposals. Years: 2004 (June & November), 2005 (June & November).
- Facilitator Expert in Brussels of **Leonardo da Vinci** full proposals.
Duties: training of new EU evaluators of the LdV programme, and quality control of evaluations.
Year: 2004.
- Facilitator Expert in Ankara (Turkey) of **Leonardo da Vinci** pre-proposals.
Duties: training of new Turkish evaluators of the B-type projects of the LdV programme, and quality control of evaluations at the Turkish Leonardo da Vinci National Agency.
Year: 2004.
- Trainer of experts in Madrid (Spain) of **Leonardo da Vinci** procedure B proposals.
Duties: training of Spanish national evaluators (2 days) in the Spanish Leonardo da Vinci National Agency.
Year: 2005 (March).
- Facilitator Expert in Madrid (Spain) of **Leonardo da Vinci** procedure B pre-proposals.
Duties: training of new Spanish evaluators of the B-type projects of the LdV programme, and quality control of evaluations at the Spanish Leonardo da Vinci National Agency.
Year: 2005 (October).
- Lead Expert in Brussels of **Erasmus Mundus** master proposals.
Duties: chair of the Hard Sciences Panel, and representative on the Erasmus Mundus Selection Board of the Hard Sciences group of experts.
Year: 2005 (June).
- Expert Evaluator in Brussels on the selection procedure of **6th Framework Program** proposals (call 4 of **ICT for Health**).

Duties: two weeks of individual evaluation and panel meetings, and a week as part of a jury of hearings. of
Year: 2005.

• **Taught subjects at the Computer Engineering Faculty**

- Operating Systems (old study plan, academic years: 1995-1996, and 1996-1997)
- Operating Systems (study plan of 1994, academic years: 1997-1998, and 1999-2000)
- Operating Systems Design (study plan of 1994, academic years: 1997-1998, 1998-1999, 1999-2000, and 2000-2001)
- Laboratory of Operating Systems (practical subject; study plan of 1994, academic years: 1996-1997, 1997-1998, and 2000-2001)
- Operating Systems 1 (study plan of 1999, academic years: 2002-2003, 2003-2004, and 2005-2006)
- Operating Systems 2 (study plan of 1999, academic years: 2000-2001, 2001-2002, 2002-2003, 2003-2004, 2004-2005, and 2005-2006)
- Data Communication (study plan of 1994, academic years: 1998-1999, and 2000-2001)
- Laboratory of Computer Technology (study plan of 1994, academic year: 1999-2000)
- Supervisor of Final Year Projects in Computer Engineering: 1998-99 (3), 1999-2000 (2), 2000-01 (2), 2001-02 (6), 2002-03 (5), and 2003-04 (3).

• **Long placements abroad**

- 1993-94: I took my final year as an Erasmus student in the University of Brighton (Brighton, United Kingdom), where I did my Final Year Project. 10 months.
- 1997: Beginning of the MSc in Medical Imaging in Aberdeen, Scotland. 3 months.
- 1999: Second part of the MSc in Medical Imaging in Aberdeen, Scotland. 9 months.

• **Languages:**

- **SPANISH** and **BASQUE** as mother languages.
- Complete understanding of **FRENCH**, good enough to participate on any conversation.
- Fluent in **ENGLISH** speaking and writing. Student in English and Scottish universities occasionally from 1993 to 1999.
- Notions in basic **GERMAN**. Studying it for three years.
- Basic understanding of **ITALIAN**. One summer of intensive studies.

• **Further Information:**

- I hold a full clean driving licence, valid to drive all kind of vehicles from motorbikes to lorries and buses. Driving licence for motorbikes and cars since April 1989. Driving licence for van, big lorries and buses since February 1992. I own a car and I have been driving emergency ambulances in the Red Cross of Gipuzkoa (Basque Country, Spain) since 1992.

- I have been working in the Spanish ambulance system as sanitary responsible since October 1989, and I drive ambulances since April 1992. I have completed my military service in the Spanish Red Cross in September 1993, spending most of the time working as an ambulance driver, and I have been the secretary of the Red Cross of Rentería from January 1993 to September 1993. I have references from medical doctors and from other staff of the ambulance service in my Country. Currently I am part of the sea rescue team at the Red Cross of Pasaia.

• **Publications:**

Teaching:

2003

- E. Bengoetxea Castro, C. Díaz García. Bases tecnológicas de la Medicina Nuclear (2): La imagen digital y el ordenador. In *Técnicas de Exploración en Medicina Nuclear*. César Díaz García and Javier de Haro del Moral (eds.) Editorial Masson. pp 97-116.

2000

- M. Daniels, L. Pemberton, R. Griffiths, T. Nodenot, E. Bengoetxea. Distance Learning and the International Dimension. The European Intensive Course Experience
In *New Direction in Professional Higher Education*, T. Bouner, T. Katz, and D. Watson (eds.) Open University Press 2000, pp 149-154.

Management:

2005

- E. Bengoetxea, J. Arteaga (october 2005).
Diseño, Solicitud e Implementación de Postgrados Erasmus Mundus en la Universidad Española: revisión de los principales aspectos académicos y de gestión (in Spanish).
Proyecto EA2005-0283 del Programa de Estudios y Análisis, Dirección General de Universidades, Ministerio de Educación y Ciencia.

Research:

2005

- R.M. Cesar, E. Bengoetxea, I. Bloch, P. Larrañaga. Inexact graph matching for mdel-based recognition: Evaluation and comparison of optimization algorithms. *Pattern Recognition* (accepted for publication).
- T. Miquélez, O. Pérez-Beltrán, E. Bengoetxea, and P. Larrañaga. (2005). Optimización mediante clasificadores Bayesianos evolutivos en entornos continuos. *CEDI 2005, IV Congreso Español sobre Metaheurísticas, Algoritmos Evolutivos y Bioinspirados*, Spain.

2004

- T. Miquélez, O. Pérez-Beltrán, E. Bengoetxea, and P. Larrañaga. (2004). Evolutionary Computation based on Bayesian Classifiers. *International Journal of Applied Mathematics and Computer Science*, 14(3), 101-115.
- T. Miquélez, E. Bengoetxea, and P. Larrañaga. (2004). Applying Bayesian Classifiers to Evolutionary Computation. *Technical report, KAT-IK-04-01 of the Department of Computer Architecture and Technology*, University of the Basque Country, Spain.

2003

- E. Bengoetxea. (2003). Inexact Graph Matching Using Estimation of Distribution Algorithms. *PhD Thesis*.
Last Version: March 2003

2002

- E. Bengoetxea, P. Larrañaga, I. Bloch, A. Perchant, and C. Boeres. (2002). Learning and simulation of Bayesian networks applied to inexact graph matching. *Pattern Recognition* 35(12):2867-2880.
- R.M. Cesar, E. Bengoetxea, I. Bloch. Inexact graph matching using stochastic optimization techniques for facial feature recognition.
In *International Conference on Pattern Recognition (ICPR 2002)*. Quebec, Canada.
- A. Mendiburu, E. Bengoetxea, J. Miguel. Paralelización de algoritmos de estimación de distribuciones. In *XIII Jornadas de Paralelismo*, pages 37-41. ISBN: 64-8409-159-7.

2001

- E. Bengoetxea, P. Larrañaga, I. Bloch, and A. Perchant. (2001). Estimation of Distribution Algorithms: A New Evolutionary Computation Approach For Graph Matching Problems. *Lecture notes in Computer Science 2134. Third International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR-2001)*. M. Figueiredo, J. Zerubia and A. K. Jain (eds.), pages 454-468, Sophia Antipolis, France.
- E. Bengoetxea, P. Larrañaga, I. Bloch, and A. Perchant. (2001). Image Recognition with

Graph Matching Using Estimation of Distribution Algorithms. *Proceedings of the Medical Image Understanding and Analysis (MIUA 2001)*, 89-92, Birmingham, UK.

- E. Bengoetxea, P. Larrañaga, I. Bloch, P. Perchant. (2001). Solving graph matching with EDAs using a permutation-based representation. *Estimation of Distribution Algorithms. A new tool for Evolutionary Computation*, Larrañaga, P. and Lozano, J.A. (eds.). Kluwer Academic Publishers.
- P. Larrañaga, E. Bengoetxea, J.A. Lozano, V. Robles, A. Mendiburu, and P. de Miguel. (2001). Searching for the Best Permutation with estimation of Distribution Algorithms. *Proceedings of the Seventeenth International Joint Conference on Artificial Intelligence (IJCAI 2001)*. Workshop on Stochastic Search Algorithms, pages 7-14, Seattle, USA.
- E. Bengoetxea, T. Miquélez, J.A. Lozano, and P. Larrañaga. (2001). Experimental results in function optimization with EDAs in continuous domain. *Estimation of Distribution Algorithms. A new tool for Evolutionary Computation*, Larrañaga, P. and Lozano, J.A. (eds.). Kluwer Academic Publishers.
- P. Larrañaga, J.A. Lozano, and E. Bengoetxea. (2001). Estimation of Distribution Algorithms based on multivariate normal and Gaussian networks. *Technical Report KZZA-IK-1-01 of the Department of Computer Science and Artificial Intelligence, University of the Basque Country, Spain*.
- T. Miquélez, E. Bengoetxea, I. Morlán, and P. Larrañaga. (2001). Obtention of filters for Image Restoration Using Estimation of Distribution Algorithms. *CAEPIA 2001*, Spanish Society for the Artificial Intelligence. (in Spanish).

2000

- E. Bengoetxea, P. Larrañaga, I. Bloch, A. Perchant, and C. Boeres. (2000). Inexact graph matching using learning and simulation of Bayesian networks. An empirical comparison between different approaches with synthetic data. *Proceedings of CaNew workshop, ECAI 2000 Conference, ECCAI*. Berlin, Germany.

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