



## **Cruz Enrique Borges Hernández**

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**Cruz Enrique Borges Hernández**

Surname(s): **Borges Hernández**  
 Name: **Cruz Enrique**  
 DNI: **78624081F**  
 Date of birth: **02/03/1983**  
 Gender: **Male**  
 Nationality: **Spain**  
 Country of birth: **Spain**  
 Aut. comm./reg. of birth: **Canary Islands**  
 Contact province: **Biscay**  
 City of birth: **Los Realejos**  
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**Current professional situation****Name of institution:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA**Department, service, etc.:** Energy Unit, DeustoTech**Category/position or post:** Research assistant**City of job:** Bilbao, Basque Country, Spain**Start date:** 01/05/2010**Type of contract:** Temporary employment contract**Type of dedication:** Full time**Primary (UNESCO code):** 120304 - Artificial intelligence**Secondary (UNESCO code):** 120315 - Heuristics**Activity keywords:** Artificial intelligence**Previous posts and activities**

	<b>Name of institution</b>	<b>Category/position or post</b>	<b>Start date</b>
<b>1</b>	Santander's UNED associated center	Tutor	10/2009
<b>2</b>	Universidad de Cantabria	Formación del Profesorado Universitario grant	01/04/2006

**1 Name of institution:** Santander's UNED associated center**City of job:** Santander, Cantabria, Spain**Category/position or post:** Tutor**Teaching management:** No



**Start-End date:** 10/2009 - 06/2010      **Duration:** 9 months  
**Type of contract:** Temporary employment contract  
**Type of dedication:** Part time

- 2** **Name of institution:** Universidad de Cantabria      **Type of institution:** University  
**Department, service, etc.:** Departamento de Matemáticas, Estadística y Computación, Facultad de Ciencias (UC)  
**City of job:** Santander, Cantabria, Spain  
**Category/position or post:** Formación del Profesorado Universitario grant  
**Start date:** 01/04/2006      **Duration:** 4 years  
**Type of contract:** Grant-assisted student (pre or post-doctoral, others)  
**Type of dedication:** Full time



## Official training received

### University education

#### University degrees, engineering degrees or master's degrees

- 1 Official qualification:** Higher degree  
**Name of qualification:** Curso de Aptitud Pedagógica  
**City of qualification:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Universidad de Cantabria  
**Type of institution:** University  
**Date of qualification:** 2009
- 2 Official qualification:** Higher degree  
**Name of qualification:** Licenciado en Matemáticas  
**City of qualification:** La Laguna, Canary Islands, Spain  
**institution issuing the qualification:** Universidad de La Laguna  
**Type of institution:** University  
**Date of qualification:** 07/09/2005  
**Average mark:** Good

#### Doctorates

**Doctorate programme:** Matemáticas y sus aplicaciones  
**University issuing the qualification:** Universidad de Cantabria  
**Type of institution:** University  
**City of qualification:** Santander, Cantabria, Spain  
**Date of qualification:** 25/03/2011  
**University where DEA was obtained:** Universidad de Cantabria  
**DEA, date:** 08/02/2008  
**Thesis title:** Programación Genética, Algoritmos Evolutivos y Aprendizaje Inductivo: Hacia una solución al problema XVII de Smale en el caso real.  
**Thesis director:** Luis Miguel Pardo Vasallo  
**Thesis co-director:** Jose Luis Montaña  
**Mark:** Distinction "cum laude" by unanimity  
**Recognition of quality:** Yes

### Specialised, lifelong, technical, professional and refresher training (other than formal academic and healthcare training)

- 1 Type of training:** Course  
**Training title:** Santaló's Summer School on Recent Advances in Real Complexity and Computation  
**City:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Universidad Internacional Menéndez Pelayo  
**Type of institution:** University



**Training manager:** Luis Miguel Pardo Vasallo

**Training end date:** 20/07/2012

**Duration in hours:** 30 hours

**2 Type of training:** Seminar

**Training title:** V Jornadas de Genética

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Facultad de Biología (ULL)

**Training manager:** Mariano Hernández Ferrer

**Training end date:** 27/12/2011

**Type of institution:** University Department

**Duration in hours:** 10 hours

**3 Type of training:** Course

**Training title:** Las patentes, fuentes de información

**City:** Santander, Cantabria, Spain

**institution issuing the qualification:** Universidad de Cantabria

**Training manager:** María Jesús Sáiz Vega

**Training end date:** 26/11/2010

**Type of institution:** University

**Duration in hours:** 4 hours

**4 Type of training:** Course

**Training title:** II Curso intensivo i-MATH de software libre orientado a Ciencias e Ingeniería: Software Matemático Básico

**City:** Santander, Cantabria, Spain

**institution issuing the qualification:** Universidad de Cantabria

**Training manager:** Rafael Rodríguez Galván

**Training end date:** 2009

**Type of institution:** University

**Duration in hours:** 30 hours

**5 Type of training:** Course

**Training title:** PHP y MySQL: Soluciones Open Source" para portales web de pequeñas empresas

**City:** Santander, Cantabria, Spain

**institution issuing the qualification:** Universidad de Cantabria

**Training manager:** Eduardo Mora Monte

**Training end date:** 2009

**Type of institution:** University

**Duration in hours:** 30 hours

**6 Type of training:** Workshop

**Training title:** II Workshop on Mathematical Cryptology

**City:** Santander, Cantabria, Spain

**institution issuing the qualification:** Algorithmic Mathematics And Cryptography Group

**Training manager:** Jaime Gutiérrez Gutiérrez

**Training end date:** 2008

**Type of institution:** University Department

**Duration in hours:** 20 hours

**7 Type of training:** Course

**Training title:** Ciclo de Talleres Divulgativos Matemáticas en Acción 2007"

**City:** Santander, Cantabria, Spain

**institution issuing the qualification:** Departamento de Matemáticas, Estadística y Computación (UC)

**Training manager:** Luis Alberto Fernández

**Training end date:** 2007

**Type of institution:** University Department

**Duration in hours:** 20 hours



- 8** **Type of training:** Course  
**Training title:** Ciclo de Talleres Divulgativos Matemáticas en Acción 2006”  
**City:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Departamento de Matemáticas, Estadística y Computación (UC)  
**Training manager:** Luis Alberto Fernández  
**Training end date:** 2006  
**Type of institution:** University Department  
**Duration in hours:** 20 hours
- 9** **Type of training:** Congress  
**Training title:** International Congress of Mathematicians 2006  
**City:** Madrid, Community of Madrid, Spain  
**institution issuing the qualification:** International Mathematical Union  
**Training end date:** 2006  
**Type of institution:** Associations and Groups  
**Duration in hours:** 80 hours
- 10** **Type of training:** Congress  
**Training title:** int.eu.grid Kick-Off Meeting  
**City:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Instituto de Física de Cantabria (IFCA)  
**Training end date:** 2006  
**Type of institution:** Public Research Body  
**Duration in hours:** 20 hours
- 11** **Type of training:** Workshop  
**Training title:** I Workshop on Mathematical Cryptology  
**City:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Algorithmic Mathematics And Cryptography Group  
**Training manager:** Jaime Gutiérrez Gutiérrez  
**Training end date:** 2006  
**Type of institution:** University Department  
**Duration in hours:** 20 hours
- 12** **Type of training:** Course  
**Training title:** Ciclo de Talleres Divulgativos Matemáticas en Acción 2005”  
**City:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Departamento de Matemáticas, Estadística y Computación (UC)  
**Training manager:** Luis Alberto Fernández  
**Training end date:** 2005  
**Type of institution:** University Department  
**Duration in hours:** 20 hours
- 13** **Type of training:** Course  
**Training title:** Ciclo de Talleres Divulgativos Matemáticas en Acción 2004”  
**City:** Santander, Cantabria, Spain  
**institution issuing the qualification:** Departamento de Matemáticas, Estadística y Computación (UC)  
**Training manager:** Luis Alberto Fernández  
**Training end date:** 2004  
**Type of institution:** University Department  
**Duration in hours:** 20 hours
- 14** **Type of training:** Course  
**Training title:** Cosmología: Problemas de actualidad Física, Filosofía y Religión  
**City:** La Laguna, Canary Islands, Spain  
**Type of institution:** University Department



**institution issuing the qualification:** Facultad de Física (ULL)

**Training end date:** 2004

**Duration in hours:** 20 hours

**15 Type of training:** Course

**Training title:** Matemáticas Estocásticas aplicadas a las Finanzas y al Análisis de Riesgos (Módulo IV)

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Departamento de Análisis Matemático (ULL) **Type of institution:** University Department

**Training end date:** 2004

**Duration in hours:** 20 hours

**16 Type of training:** Course

**Training title:** Sociedad, Tecnología y Matemáticas (Módulo I)

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Universidad de La Laguna **Type of institution:** University

**Training manager:** M<sup>a</sup>. Isabel Marrero Rodríguez

**Training end date:** 2004

**Duration in hours:** 30 hours

**17 Type of training:** Course

**Training title:** Topics in Galois Theory

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Departamento de Matemática Fundamental (ULL) **Type of institution:** University Department

**Training manager:** Margarita Rivero Álvarez

**Training end date:** 2004

**Duration in hours:** 10 hours

**18 Type of training:** Course

**Training title:** Curso de Introducción a LINUX CILA 2003 (Módulo I,II y III)

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Fundación Empresa Universidad de La Laguna **Type of institution:** Foundation

**Training end date:** 2003

**Duration in hours:** 30 hours

**19 Type of training:** Course

**Training title:** Sociedad, Tecnología y Matemáticas (Módulos I, II y III)

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Universidad de La Laguna **Type of institution:** University

**Training manager:** M<sup>a</sup>. Isabel Marrero Rodríguez

**Training end date:** 2003

**Duration in hours:** 60 hours

**20 Type of training:** Course

**Training title:** Instalación GNU/LINUX (Módulo II)

**City:** La Laguna, Canary Islands, Spain

**institution issuing the qualification:** Universidad de La Laguna **Type of institution:** University

**Training end date:** 2002

**Duration in hours:** 10 hours



**21** **Type of training:** Course  
**Training title:** Monitor de Natación  
**City:** Santa Cruz de Tenerife, Canary Islands, Spain  
**institution issuing the qualification:** Real Federación Española de Natación  
**Training end date:** 2002  
**Type of institution:** Associations and Groups

**22** **Type of training:** Course  
**Training title:** Grado Elemental en Piano  
**City:** Los Realejos, Canary Islands, Spain  
**institution issuing the qualification:** Real Conservatorio Superior Música de Santa Cruz de Tenerife  
**Training end date:** 1997  
**Type of institution:** University

## Language skills

Language	Speaking	Reading	Writing
Spanish	Advanced	Advanced	Advanced
English	Advanced	Advanced	Advanced

## Teaching activity

### Subjects given

**1** **Type of teaching:** Official teaching  
**Name of subject/course:** Técnicas de Inteligencia Artificial aplicadas a la Ingeniería  
**Type of programme:** Doctorate  
**Type of subject:** Doctorate  
**Qualification:** Doctorado  
**Number of times:** 1  
**Start date:** 2014  
**Date of the last time:** 03/02/2015  
**Number of hours/credits:** 1  
**institution:** Universidad de Deusto  
**Faculty, institute or centre:** Facultad de Ingeniería  
**City:** Bilbao, Basque Country, Spain  
**Subject language:** Spanish  
**Type of teaching:** In person theory  
**End date:** 2015  
**Type of hours/credits:** Hours  
**Type of institution:** University

**2** **Type of teaching:** Official teaching  
**Name of subject/course:** Fundamentos de Informática  
**Type of programme:** Engineering  
**Type of subject:** Core  
**Qualification:** Grado en Ingeniería Electrónica  
**Course given:** 1º  
**Date of the last time:** 21/05/2010  
**Number of hours/credits:** 1,5  
**Type of teaching:** Tutor  
**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University





**institution:** Universidad Nacional de Educación a Distancia

**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Industriales

**City:** Santander, Cantabria, Spain

**Subject language:** Spanish

**3 Type of teaching:** Official teaching

**Name of subject/course:** Fundamentos de Informática

**Type of programme:** Engineering

**Type of teaching:** Tutor

**Type of subject:** Core

**Qualification:** Grado en Ingeniería Eléctrica

**Course given:** 1º

**Number of times:** 1

**Date of the last time:** 21/05/2010

**Type of hours/credits:** Credits

**Number of hours/credits:** 1,5

**institution:** Universidad Nacional de Educación a Distancia

**Type of institution:** University

**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Industriales

**City:** Santander, Cantabria, Spain

**Subject language:** Spanish

**4 Type of teaching:** Official teaching

**Name of subject/course:** Fundamentos de Informática

**Type of programme:** Engineering

**Type of teaching:** Tutor

**Type of subject:** Core

**Qualification:** Grado en Ingeniería Mecánica

**Course given:** 1º

**Number of times:** 1

**Date of the last time:** 21/05/2010

**Type of hours/credits:** Credits

**Number of hours/credits:** 1,5

**institution:** Universidad Nacional de Educación a Distancia

**Type of institution:** University

**Faculty, institute or centre:** Escuela Técnica Superior de Ingenieros Industriales

**City:** Santander, Cantabria, Spain

**Subject language:** Spanish

**5 Type of teaching:** Official teaching

**Name of subject/course:** Programación II

**Type of programme:** Technical engineering

**Type of teaching:** Tutor

**Type of subject:** Core

**Qualification:** Ingeniero Técnico en Informática de Gestión

**Course given:** 1

**Number of times:** 1

**Date of the last time:** 21/05/2010

**Type of hours/credits:** Credits

**Number of hours/credits:** 3

**institution:** Universidad Nacional de Educación a Distancia

**Type of institution:** University

**Faculty, institute or centre:** Escuela Técnica Superior de Ingeniería Informática

**City:** Santander, Cantabria, Spain

**Subject language:** Spanish

**6 Type of teaching:** Official teaching

**Name of subject/course:** Matemáticas y Máquinas de Calcular

**Type of programme:** SENIOR

**Type of teaching:** In person theory



**Type of subject:** Optional  
**Assessment type:** Internal assessment  
**Qualification:** Programa SENIOR  
**Course given:** 1<sup>o</sup>  
**Date of the last time:** 29/03/2010  
**Number of hours/credits:** 3  
**institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Escuela Técnica Superior de Náutica  
**City:** Santander, Cantabria, Spain  
**Assessing institution:** Vicerrectorado de Calidad e Innovación Educativa  
**City:** Santander, Cantabria, Spain  
**Assessment type:** Internal assessment  
**Mark obtained:** 2.4  
**Subject language:** Spanish

**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University  
**Type of institution:** University Department  
**Top mark possible:** 3

**7** **Type of teaching:** Official teaching  
**Name of subject/course:** Programación III  
**Type of programme:** Technical engineering  
**Type of subject:** Core  
**Qualification:** Ingeniero Técnico en Informática de Gestión  
**Course given:** 2<sup>o</sup>  
**Date of the last time:** 15/02/2010  
**Number of hours/credits:** 3  
**institution:** Universidad Nacional de Educación a Distancia  
**Faculty, institute or centre:** Escuela Universitaria de Informática  
**City:** Santander, Cantabria, Spain  
**Subject language:** Spanish

**Type of teaching:** Tutor  
**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University

**8** **Type of teaching:** Official teaching  
**Name of subject/course:** Programación 1  
**Type of programme:** Engineering  
**Type of subject:** Core  
**Assessment type:** Internal assessment  
**Qualification:** Ingeniero en Informática  
**Course given:** 1<sup>o</sup>  
**Date of the last time:** 01/10/2009  
**Number of hours/credits:** 5,4  
**institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Facultad de Ciencias  
**Department:** Departamento de Matemáticas, Estadística y Computación  
**City:** Santander, Cantabria, Spain  
**Assessing institution:** Vicerrectorado de Calidad e Innovación Educativa  
**City:** Santander, Cantabria, Spain  
**Assessment type:** Internal assessment  
**Mark obtained:** 3.30  
**Subject language:** Spanish

**Type of teaching:** Laboratory work  
**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University  
**Top mark possible:** 5



- 9** **Type of teaching:** Official teaching  
**Name of subject/course:** Algorítmica  
**Type of programme:** Engineering  
**Type of subject:** Optional  
**Assessment type:** Internal assessment  
**Qualification:** Ingeniero en Informática  
**Course given:** 3<sup>o</sup>  
**Date of the last time:** 01/10/2008  
**Number of hours/credits:** 2,45  
**institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Facultad de Ciencias  
**Department:** Departamento de Matemáticas, Estadística y Computación  
**City:** Santander, Cantabria, Spain  
**Assessing institution:** Vicerrectorado de Calidad e Innovación Educativa  
**City:** Santander, Cantabria, Spain  
**Assessment type:** Internal assessment  
**Mark obtained:** 2.61  
**Subject language:** Spanish
- Type of teaching:** Laboratory work  
**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University  
**Type of institution:** University Department  
**Top mark possible:** 5
- 10** **Type of teaching:** Official teaching  
**Name of subject/course:** Algorítmica  
**Type of programme:** Bachelor's degree  
**Type of subject:** Optional  
**Assessment type:** Internal assessment  
**Qualification:** Licenciado en Matemáticas  
**Course given:** 3<sup>o</sup>  
**Date of the last time:** 01/10/2008  
**Number of hours/credits:** 0,55  
**institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Facultad de Ciencias  
**Department:** Departamento de Matemáticas, Estadística y Computación  
**City:** Santander, Cantabria, Spain  
**Assessing institution:** Vicerrectorado de Calidad e Innovación Educativa  
**City:** Santander, Cantabria, Spain  
**Assessment type:** Internal assessment  
**Mark obtained:** 2.61  
**Subject language:** Spanish
- Type of teaching:** Laboratory work  
**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University  
**Type of institution:** University Department  
**Top mark possible:** 5
- 11** **Type of teaching:** Official teaching  
**Name of subject/course:** Informática  
**Type of programme:** Bachelor's degree  
**Type of subject:** Core  
**Assessment type:** Internal assessment  
**Qualification:** Licenciado en Matemáticas  
**Course given:** 1<sup>o</sup>  
**Date of the last time:** 01/10/2008  
**Number of hours/credits:** 3  
**institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Facultad de Ciencias
- Type of teaching:** Laboratory work  
**Number of times:** 1  
**Type of hours/credits:** Credits  
**Type of institution:** University



**Department:** Departamento de Matemáticas, Estadística y Computación

**City:** Santander, Cantabria, Spain

**Assessing institution:** Vicerrectorado de Calidad e Innovación Educativa

**City:** Santander, Cantabria, Spain

**Assessment type:** Internal assessment

**Mark obtained:** 3.62

**Subject language:** Spanish

**Type of institution:** University Department

**Top mark possible:** 5

**12 Type of teaching:** Official teaching

**Name of subject/course:** Álgebra Avanzada

**Type of programme:** Bachelor's degree

**Type of subject:** Core

**Assessment type:** Internal assessment

**Qualification:** Licenciado en Matemáticas

**Course given:** 4<sup>o</sup>

**Date of the last time:** 01/10/2007

**Number of hours/credits:** 3

**institution:** Universidad de Cantabria

**Faculty, institute or centre:** Facultad de Ciencias

**Department:** Departamento de Matemáticas, Estadística y Computación

**City:** Santander, Cantabria, Spain

**Assessing institution:** Vicerrectorado de Calidad e Innovación Educativa

**City:** Santander, Cantabria, Spain

**Assessment type:** Internal assessment

**Mark obtained:** 3.03

**Subject language:** Spanish

**Type of teaching:** Practical work (classroom-problems)

**Number of times:** 1

**Type of hours/credits:** Credits

**Type of institution:** University

**Type of institution:** University Department

**Top mark possible:** 5

## Supervision of dissertations and/or final projects

**1 Project title:** Development of meta-heuristics for the optimization of artificial intelligence models applied to industrial processes

**Type of project:** End of course project

**University issuing the qualification:** Universidad de Deusto

**City:** Bilbao, Basque Country, Spain

**Doctorate student:** David Orive

**Mark:** 9.5

**Date of reading:** 16/07/2014

**Type of institution:** University

**2 Project title:** Developing a social and friendly GIS editor: Towards the "gamification" of OpenStreetMap

**Type of project:** End of course project

**University issuing the qualification:** Universidad de Deusto

**City:** Bilbao, Basque Country, Spain

**Doctorate student:** Hugo Welt

**Mark:** 10

**Date of reading:** 22/01/2013

**Quality recognition:** No

**Type of institution:** University



- 3** **Project title:** Herramienta de visualización SIG de infraestructuras eléctricas con proyección a largo plazo.  
**Type of project:** End of course project  
**Co-director of thesis:** Yoseba Peña  
**University issuing the qualification:** Universidad de Deusto  
**Type of institution:** University  
**City:** Bilbao, Basque Country, Spain  
**Doctorate student:** Ander Pijoan Lamas  
**Mark:** 9.7  
**Date of reading:** 07/2012
- 4** **Project title:** Optimización de las constantes de una estrategia evolutiva mediante el método de Gauss-Newton  
**Type of project:** Work leading to an ASD  
**Co-director of thesis:** César Alonso  
**University issuing the qualification:** Universidad del País Vasco  
**Type of institution:** University  
**City:** Leioa, Basque Country, Spain  
**Doctorate student:** Borja Artamendi  
**Date of reading:** 10/2010
- 5** **Project title:** Geosimulaciones del desarrollo urbano  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** A. Alonso-Vicario  
**University issuing the qualification:** Universidad de Deusto  
**Type of institution:** University  
**City:** Bilbao, Basque Country, Spain  
**Doctorate student:** Ander Pijoan
- 6** **Project title:** Metodología de ecodiseño de instalaciones eléctricas fotovoltaicas de corriente continua para edificios aislados  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** Ana Macarulla  
**University issuing the qualification:** Universidad de Deusto  
**Type of institution:** University  
**City:** Bilbao, Basque Country, Spain  
**Doctorate student:** Tony Castillo
- 7** **Project title:** Una nueva estructura de datos para la aplicación de algoritmos de inteligencia artificial a la predicción de procesos del sector eléctrico  
**Type of project:** Doctoral thesis  
**Co-director of thesis:** A. Alonso-Vicario  
**University issuing the qualification:** Universidad de Deusto  
**Type of institution:** University  
**City:** Bilbao, Basque Country, Spain  
**Doctorate student:** Oihane Kamara Esteban



## Academic tuition of students

**Programme:** Prácticas en Empresa  
**institution:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Number of tutored students:** 3

## Participation in teaching innovation projects

**Project title:** Guía académica. Licenciado en Matemáticas. Curso 2008-2009, Adaptación al EEES  
**City:** Santander, Cantabria, Spain  
**Type of participation:** Collaborator  
**Contribution to the project:** Participation on a pilot plan for the adaptation of the Bachelor of Mathematics to the European Higher Education Area (EHEA)  
**Dedication:** Part time  
**Funding institution:** Universidad de Cantabria      **Type of institution:** University  
**Start-End date:** 2008 - 2009

## Experience in science and technology

### Participation in research, development or innovation groups/teams

- Name of the group:** Gestión energética integral, medioambiente, sostenibilidad y tecnologías limpias  
**Aims of the group:** Research  
**Name of the group's manager:** Ainhoa Alonso Vicario      **Number of members:** 15  
**Type of collaboration:** Co-authorship of projects and their development  
**City:** Bilbao, Basque Country, Spain  
**Institution the group belongs to:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**Number of theses directed:** 1      **No. of post-docs directed:** 2  
**Start date:** 01/05/2010
- Name of the group:** Grupo de Álgebra de la Universidad de Cantabria  
**Aims of the group:** Research  
**Name of the group's manager:** Luis M. Pardo      **Number of members:** 10  
**Type of collaboration:** Co-authorship of publications  
**City:** Santander, Cantabria, Spain  
**Institution the group belongs to:** Universidad de Cantabria      **Type of institution:** University  
**Start date:** 01/04/2006      **Duration:** 4 years



## Scientific or technological activity

### Participation in R&D&I projects funded in competitive calls by public or private bodies

**1** **Name of the project:** GREEN\_TREVELLING: A platform to analyse and foster the use of Green Travelling Options

**Project type:** Research and development, including transfer **Project area:** European Union

**Role:** Scientific coordinator

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Cruz E. Borges (DeustoTech); Luis Rodríguez Repiso

**Number of researchers:** 12

**Funding institution or bodies:**

Departamento de Desarrollo Económico y Competitividad del Gobierno Vasco

**Type of institution:** State agency

**City:** Vitoria-Gasteiz, Basque Country, Spain

Diputación Foral de Bizkaia

**Type of institution:** Public Administration

**City:** Bilbao, Basque Country, Spain

**Type of participation:** Coordinator

**Name of the programme:** Era Net Transport

**Code acc. to the funding institution:** 6/12/IN/2014/195

**Start-End date:** 01/06/2014 - 01/04/2017

**Duration of the project:** 3 years

**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Factor CO2; MANTIS Software Company; Saitec S.A.; Silesian University of Technology

**Total amount:** 2.826.493

**Sub-project amount:** 181.700

**Dedication:** Part time

**2** **Name of the project:** VISIONTECH4LIFE: control por visión multiespectral de los impactos ambientales generados por los proyecto de obra civil

**Project type:** Demonstration, pilot projects, conceptual formulations and design of processes and services **Project area:** European Union

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Jose Pablo Ormaechea; Ainhoa Alonso Vicario (DeustoTech)

**Funding institution or bodies:**

Comisión Europea

**Type of institution:** Life+ Program

**City:** Madrid, Community of Madrid, Spain

**Name of the programme:** Programa Life+ 2013

**Code acc. to the funding institution:** ENV/ES/001163

**Start-End date:** 01/07/2013 - 31/03/2017

**Duration of the project:** 3 years - 8 months

**Participating bodies:** Deustotech; Erabi; Fulcrum

**Total amount:** 1.876.321

**Sub-project amount:** 690.414

**Percentage as grant:** 334.843

**Dedication:** Part time



- 3** **Name of the project:** MOVESMART: Renewable Mobility Services in Smart Cities  
**Project type:** Basic research (including archaeological digs, etc) **Project area:** European Union  
**Role:** Researcher  
**Institution where project took place:** Universidad de Deusto **Type of institution:** University  
**City:** Bilbao, Basque Country, Spain  
**Head(s) researcher(s):** Konstantinos Genikomsakis (Universidad de Deusto)  
**Funding institution or bodies:** Comisión Europea **Type of institution:** Public Institution  
**City:** Madrid, Community of Madrid, Spain  
**Type of participation:** Collaborator  
**Name of the programme:** Seventh Framework Programme  
**Code acc. to the funding institution:** Grant agreement no: 609026  
**Start-End date:** 01/11/2013 - 31/10/2016 **Duration of the project:** 3 years  
**Total amount:** 3.205.582 **Sub-project amount:** 212.136  
**Dedication:** Part time
- 4** **Name of the project:** WATER-M Unified Intelligent WATER  
**Project type:** Industrial research **Project area:** European Union  
**Role:** Researcher  
**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Head(s) researcher(s):** Eloy Gonzalez Ortega; Yoseba Peña (DeustoTech)  
**Number of people/year:** 199,25  
**Type of participation:** Collaborator  
**Name of the programme:** ITEA 2 label; Pendiente de financiación nacional  
**Code acc. to the funding institution:** ITEA2: 13029  
**Start-End date:** 01/07/2014 - 30/09/2016 **Duration of the project:** 2 years - 2 months  
**Participating bodies:** Acd Bilgi Islem Ltd.sti.; BEIA Consult International; CEE - Centre for Environment and Energy; CEMIS - Centre for Measurement and Information Systems; DISTRAME; EHP-Tekniikka Oy; Eolane; FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; ITRON; Indra Sistemas, S.A.; Institut Mines-Télécom; Instituto Tecnológico de Informatica; Keypro Oy; MER Group; Mantis; Measurepolis Development Ltd; National Institute for Health and Welfare; Oulu Water Alliance Ltd.; Peak-Dynamics; Planora Oy; Prodevelop; Savonia University of Applied Sciences; Siveco Romania S.A.; TeamNet International; Technical University of Madrid (UPM); Telecom Saint-Etienne; University of Girona; Ville de Saint-Etienne  
**Total amount:** 14.124.000 **Sub-project amount:** 51.000  
**Dedication:** Part time
- 5** **Name of the project:** SEPARA: Mejora del grado de separación y eficiencia energética de la recolección de RSU de Bizkaia  
**Project type:** Demonstration, pilot projects, conceptual formulations and design of processes and services **Project area:** Regional  
**Role:** Researcher  
**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Head(s) researcher(s):** A. Alonso-Vicario  
**Number of researchers:** 6  
**Funding institution or bodies:**





Diputación Foral de Bizkaia  
**City:** Bilbao, Basque Country, Spain

**Type of institution:** Administración Pública

**Type of participation:** Collaborator

**Name of the programme:** Bizkailab

**Start-End date:** 01/10/2014 - 31/12/2015

**Duration of the project:** 14 years

**Total amount:** 60.000

**Dedication:** Part time

**6 Name of the project:** HEFICAL2: Herramienta para la mejora de la EFiciencia energética en la producción de agua CALiente sanitaria y CALefacción en edificios de Euskadi

**Project type:** Research and development, including transfer **Project area:** Regional

**Role:** Coordinator of total project, network or consortium

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Cruz E. Borges

**Number of researchers:** 3

**Funding institution or bodies:**

Diputación Foral de Bizkaia

**Type of institution:** Public Administration

**City:** Bilbao, Basque Country, Spain

**Type of participation:** Coordinator

**Name of the programme:** Promoción de la investigación

**Code acc. to the funding institution:** 6/12/IN/2014/39

**Start-End date:** 01/04/2014 - 31/12/2015

**Duration of the project:** 1 year - 9 months

**Participating bodies:** GUE S.A.

**Total amount:** 311.083,3

**Sub-project amount:** 72.200

**Percentage as grant:** 28.000

**Dedication:** Part time

**7 Name of the project:** SENNET Self-Protected and Self-Healing ENergy NETworks

**Project type:** Industrial research

**Project area:** European Union

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Eloy Gonzalez Ortega; Yoseba Peña (DeustoTech)

**Number of researchers:** 211

**Number of people/year:** 215,93

**Type of participation:** Collaborator

**Name of the programme:** ITEA 2 label; Pendiente de financiación nacional

**Code acc. to the funding institution:** ITEA2: 12021

**Start-End date:** 01/07/2013 - 31/12/2015

**Duration of the project:** 2 years - 6 months

**Participating bodies:** AIA Group; Cassidian Cybersecurity; Empower; Endesa; Ericsson; Evoleo Technologies; FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Havelsan; INABENSA; ISEP; Indra Sistemas, S.A.; Institut Mines-Télécom; Instituto Tecnológico de Informática; Inycom; Mantis; Metso; Oberthur Technologies; Tampere University of Technology; Technical University of Madrid (UPM); UMV Inc; University Paris-Est Marne-la-Vallée; University of Angers; University of Girona; University of Malaga; University of Oulu; VTT; WALLIX; Ymon Oy

**Total amount:** 15.920.000

**Sub-project amount:** 134.000

**Dedication:** Part time



**8** **Name of the project:** BIOTRANS: Herramientas de nueva generación para la intensificación de procesos de transformación de biomasa

**Project type:** Basic research (including archaeological digs, etc)

**Project area:** Regional

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Ainhoa Alonso-Vicario

**Funding institution or bodies:**

Gobierno Vasco

**Type of institution:** State agency

**City:** Vitoria-Gasteiz, Basque Country, Spain

**Name of the programme:** Proyecto de investigación Básica y Aplicada

**Code acc. to the funding institution:** PI2013-40

**Start-End date:** 01/01/2013 - 31/12/2015

**Duration of the project:** 3 years

**Total amount:** 54.741

**Percentage as grant:** 100

**Dedication:** Part time

**9** **Name of the project:** NEMO&CODED NETworked Monitoring & Control, Diagnostic for Electrical Distribution

**Project type:** Industrial research

**Project area:** European Union

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Eloy Gonzalez Ortega; Yoseba Peña (DeustoTech)

**Number of researchers:** 4

**Number of people/year:** 112

**Funding institution or bodies:**

Centro para el Desarrollo Tecnológico Industrial

**Type of institution:** Business

**City:** Madrid, Community of Madrid, Spain

**Type of participation:** Collaborator

**Name of the programme:** ITEA 2 label, Fondo tecnológico CDTI

**Code acc. to the funding institution:** ITEA2 08022; IDI-20110864

**Start-End date:** 01/12/2009 - 31/10/2013

**Duration of the project:** 3 years - 10 months

**Participating bodies:** ANSWARETECH, S.L.; Atecnic; Critical Software; FUNDACION TECNALIA CORPORACION TECNOLOGICA; FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Indra Sistemas, S.A.; Kema Energy; Universidad Politécnica de Madrid; Universidade de Lisboa

**Total amount:** 4.535.000

**Sub-project amount:** 193.333

**Dedication:** Part time

**10** **Name of the project:** IMPONET Intelligent Monitoring of POver NETworks

**Project type:** Industrial research

**Project area:** European Union

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Eloy Gonzalez Ortega; Yoseba Peña (DeustoTech)

**Number of researchers:** 4

**Number of people/year:** 127

**Funding institution or bodies:**

Ministerio de Industria Turismo y Comercio

**Type of institution:** Public administration

**City:** Madrid, Community of Madrid, Spain

**Type of participation:** Collaborator



**Name of the programme:** ITEA2 label, Avanza Competitividad I+D+i Proyectos De Investigación Industrial

**Code acc. to the funding institution:** ITEA2: 09030; TSI 0204 00-2010-103

**Start-End date:** 12/2010 - 02/2013

**Duration of the project:** 2 years - 3 months

**Participating bodies:** ANSWARETECH, S.L.; FUNDACION TECNALIA CORPORACION TECNOLOGICA; Indra Sistemas, S.A.; Indra Software Labs; Innova IT Solutions Inc; Kapion D.O.O.; Kema; LNL Elektrik Elektronik; Prodevelop; UNION FENOSA DISTRIBUCION, S.A.; Universidad Politécnica de Madrid; Universidad Politécnica de Madrid; Universitat de Girona; University of Ljubljana; Unión Fenosa Distribución-Gas Natural; Wooam Inc

**Total amount:** 7.537.860

**Sub-project amount:** 87.448

**Most relevant results:** ITEA2 Award of Excellence in the category "Seizing the High Ground"

**Dedication:** Part time

**11 Name of the project:** ENERGOS: Tecnologías para la gestión automatizada e inteligente

**Project type:** Industrial research

**Project area:** National

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Yoseba K. Peña (DeustoTech)

**Number of researchers:** 6

**Funding institution or bodies:**

Centro para el Desarrollo Tecnológico Industrial

**Type of institution:** Business

**City:** Madrid, Community of Madrid, Spain

**Name of the programme:** CENIT

**Code acc. to the funding institution:** CEN2009-1048

**Start-End date:** 10/2009 - 12/2012

**Participating bodies:** ANSWARETECH, S.L.; Brainstorm Multimedia; Centre Tecnològic de Telecomunicacions de Catalunya; DIAGNOSTIQA CONSULTORIA TECNICA, S.L.; European Centre for Soft Computing ; FUNDACIO PRIVADA ASCAMM; FUNDACION PARA EL FOMENTO DE LA INNOVACION INDUSTRIAL; FUNDACION TECNALIA CORPORACION TECNOLOGICA; FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; GAS NATURAL SDG, S.A.; Grupo IAI; INDRA SOFTWARE LABS SL; Indra Sistemas, S.A.; Instituto de Robótica; PRODEVELOP, S.L.; SISTEMAS AVANZADOS DE CONTROL, S.A.; Universidad de Alcalá; Universidad de Castilla-La Mancha; Universidad de La Coruña; Universidad de Mondragón; Universidad de Valladolid; Universitat de Girona; Visual Tools S.A.; ZIV I+D SMART ENERGY NETWORKS

**Total amount:** 26.000.000

**Sub-project amount:** 422.571

**Dedication:** Part time

**12 Name of the project:** ENEPRO ENergy Efficient foundry PROduction

**Project type:** Demonstration, pilot projects, conceptual formulations and design of processes and services

**Project area:** Regional

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Yoseba Peña (DeustoTech)

**Number of researchers:** 4

**Funding institution or bodies:**

Departamento de Industria, Innovación, Comercio y Turismo del Gobierno Vasco

**Type of institution:** Public administration

**City:** Vitoria, Basque Country, Spain

**Name of the programme:** MANUNET label, GAITEK

**Code acc. to the funding institution:** IG-2010-000198; IG-2011-0001135



**Start-End date:** 01/2010 - 12/2011

**Duration of the project:** 1 year - 11 months

**Participating bodies:** Azterlan; DeustoTech; Fuchosa S.L.; Mondragón Sistemas; Universidad de Deusto

**Total amount:** 226.000

**Sub-project amount:** 41.000

**Dedication:** Part time

**13 Name of the project:** ZEROWASTE2011: I International Workshop on Waste Minimization and Intersectorial Cooperation

**Project type:** Research and development, including transfer **Project area:** National

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Ainhoa Alonso Vicario

**Number of researchers:** 7

**Funding institution or bodies:**

Gobierno Vasco

**Type of institution:** Public administration

**City:** Basque Country, Spain

**Name of the programme:** Hedatu

**Code acc. to the funding institution:** HE-2011-0000001

**Start-End date:** 01/01/2011 - 31/10/2011

**Duration of the project:** 10 months

**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Universidad de Deusto

**Total amount:** 11.000

**Dedication:** Part time

**14 Name of the project:** EIKE Energía Ikerketak

**Project type:** Industrial research

**Project area:** Regional

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head(s) researcher(s):** Yoseba Peña

**Number of researchers:** 3

**Funding institution or bodies:**

Diputación Foral de Gipuzkoa

**Type of institution:** District Council

**City:** Donostia San Sebastián, Basque Country, Spain

**Code acc. to the funding institution:** Expediente 51/08

**Start date:** 01/2009

**Duration of the project:** 11 months

**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Universidad de Deusto

**Total amount:** 96.000

**Dedication:** Part time

**15 Name of the project:** Hacia la eliminación no universal: en la frontera de la intratable

**Project type:** Basic research (including archaeological digs, etc)

**Project area:** National

**Role:** Researcher

**Institution where project took place:** Universidad de Cantabria

**Type of institution:** University

**City:** Santander, Cantabria, Spain

**Head(s) researcher(s):** Luis Miguel Pardo Vasallo

**Number of researchers:** 10

**Funding institution or bodies:**



MINISTERIO DE EDUCACION Y CIENCIA

City: Madrid, Community of Madrid, Spain

Name of the programme: Plan Nacional de I+D+i

Code acc. to the funding institution: MTM2007-62799

Start date: 01/10/2007

Duration of the project: 2 years - 10 months - 4 days

Total amount: 61.125

Percentage as grant: 100

Dedication: Full time

**16** Name of the project: Algoritmos no-universales y algoritmos alternativos en eliminacion geometrica: un estudio de eficacia

Project type: Basic research (including archaeological digs, etc)

Project area: National

Role: Researcher

Institution where project took place: Universidad de Cantabria

Type of institution: University

City: Santander, Cantabria, Spain

Head(s) researcher(s): LUIS MIGUEL PARDO VASALLO

Number of researchers: 10

Funding institution or bodies:

Ministerio de Educación, Política Social y Deporte

Type of institution: State agency

City: Madrid, Community of Madrid, Spain

Name of the programme: Plan nacional I+D+i

Code acc. to the funding institution: MTM2004-01167

Start date: 13/12/2004

Duration of the project: 3 years - 1 day

Total amount: 51.520

Percentage as grant: 100

Dedication: Full time

### Participation in R&D&I non-competitive projects, contracts or agreements with administrations or public or private bodies

**1** Name of the project: SEPARA: Mejora del grado de separación y eficiencia energética de la recolección de RSU de Bizkaia

Project type: Basic research (including archaeological digs, etc)

Project area: Regional

Role: Researcher

Institution where project took place: FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

City: Bilbao, Basque Country, Spain

Head researcher: Ainhoa Alonso-Vicario

Number of researchers: 5

Participating bodies: FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

Funding institution or bodies:

Diputación Foral de Bizkaia

Type of institution: Public administration

City: Bilbao, Basque Country, Spain

Name of the programme: BizkaiLab

Start date: 01/09/2014

Duration of project: 1 year - 3 months

Total amount: 60.000



- 2** **Name of the project:** ONSPIRE FASE I: Asistencia técnica en el análisis técnico-económico de las herramientas para la toma de datos sobre distribución de especies  
**Project type:** Research and development, including transfer **Project area:** Regional  
**Role:** Researcher  
**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Head researcher:** Cristina Martín Andonegui  
**Number of researchers:** 4  
**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Universidad de Deusto  
**Funding institution or bodies:** Gobierno Vasco **Type of institution:** Public Administration  
**City:** Spain  
**Start date:** 01/05/2014 **Duration of project:** 8 months  
**Total amount:** 17.200
- 3** **Name of the project:** ONSPIRE FASE II: Asistencia técnica para la definición de una plataforma piloto para la toma y gestión de datos de biodiversidad  
**Project type:** Research and development, including transfer **Project area:** Regional  
**Role:** Researcher  
**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Head researcher:** Cruz E. Borges  
**Number of researchers:** 4  
**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Universidad de Deusto  
**Funding institution or bodies:** Gobierno Vasco **Type of institution:** Public Administration  
**City:** Spain  
**Start date:** 01/05/2014 **Duration of project:** 8 months  
**Total amount:** 5.800
- 4** **Name of the project:** DECIDE cómo te mueves: herramienta de análisis de impacto ambiental y toma de decisión para la movilidad intermodal de personas  
**Project type:** Demonstration, pilot projects, conceptual formulations and design of processes and services **Project area:** Regional  
**Role:** Researcher  
**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Head researcher:** Ana María Macarulla  
**Number of researchers:** 11  
**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**Funding institution or bodies:** Departamento de Industria, Innovación, Comercio y Turismo del Gobierno Vasco **Type of institution:** State agency  
**City:** Vitoria-Gasteiz, Basque Country, Spain  
**Name of the programme:** SaioTek  
**Code acc. to the funding institution:** SA-2012/00098



**Start date:** 01/09/2012  
**Total amount:** 211.950  
**Percentage as grant:** 100

**Duration of project:** 1 year - 3 months  
**Sub-project amount:** 113.623

**5 Name of the project:** W2.0E: Herramientas para el diseño de estrategias de gestión para la transformación de residuos en energía en el País Vasco (W2.0E)

**Project type:** Research and development, including transfer **Project area:** Regional

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head researcher:** Ainhoa Alonso-Vicario

**Number of researchers:** 11

**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**Funding institution or bodies:**

Departamento de Industria, Innovación, Comercio y Turismo del Gobierno Vasco **Type of institution:** State agency

**City:** Vitoria-Gasteiz, Basque Country, Spain

**Name of the programme:** SaioTek

**Code acc. to the funding institution:** SA-2001-00267

**Start date:** 01/10/2011

**Duration of project:** 1 year - 3 months

**Total amount:** 117.362

**Percentage as grant:** 100

**6 Name of the project:** BizkaiSense: Infraestructura sensorial inteligente para la mejora de la sostenibilidad

**Project type:** Basic research (including archaeological digs, etc) **Project area:** Regional

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head researcher:** Ainhoa Alonso-Vicario; Diego López de Ipiña

**Number of researchers:** 8

**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Universidad de Deusto

**Funding institution or bodies:**

Diputación Foral de Bizkaia

**Type of institution:** Public administration

**City:** Bilbao, Basque Country, Spain

**Name of the programme:** BizkaiLab

**Start date:** 10/09/2011

**Duration of project:** 1 year - 3 months

**Total amount:** 78.500

**7 Name of the project:** ERAGIN: Energiaren eRabilera erAginkorra Gestio Industrialean

**Project type:** Research and development, including transfer **Project area:** Regional

**Role:** Researcher

**Institution where project took place:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

**Head researcher:** Yoseba K. Penya

**Number of researchers:** 5

**Participating bodies:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA; Universidad de Deusto

**Funding institution or bodies:**



Departamento de Industria, Innovación, Comercio y Turismo del Gobierno Vasco

**City:** Vitoria, Basque Country, Spain

**Name of the programme:** SaioTek

**Code acc. to the funding institution:** S-PC09FD02

**Start date:** 01/10/2009

**Total amount:** 72.055

**Percentage as grant:** 100

**Type of institution:** State agency

**Duration of project:** 1 year - 2 months

## Scientific and technological activities

### Scientific production

**H index:** 7

**Date:** 30/07/2014

### Publications, scientific and technical documents

- 1** Cruz Enrique Borges Hernández; Yoseba Peña; Iván Fernández. Evaluating Combined Load Forecasting in Large Power Systems and Smart Grids. IEEE Transactions on Industrial Informatics. 9 - 3, pp. 1570 - 1577. IEEE, 16/08/2013. Available online at: <<http://dx.doi.org/10.1109/TII.2012.2219063>>. ISSN 1551-3203

**Type of production:** Article

**Ranking:** 1

**Impact source:** SCOPUS

**Impact index:** 1.235

**Position:** 35

**Impact source:** Google Scholar H5

**Impact index:** 46

**Impact source:** ISI

**Impact index:** 8.785

**Position:** 1

**Impact source:** ISI

**Impact index:** 8.785

**Position:** 1

**Impact source:** ISI

**Impact index:** 8.785

**Position:** 1

**Source of quotes:** SCOPUS

**Source of quotes:** Google Scholar

**Relevant publication:** Yes

**Format:** Journal

**Acting as:** Author or co-author of article in journal with external admissions assessment committee

**Category:** Control and Systems Engineering

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 170

**Category:** Science Edition - COMPUTER SCIENCE, INTERDISCIPLINARY APPLICATIONS

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 102

**Category:** Science Edition - ENGINEERING, INDUSTRIAL

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 43

**Category:** Science Edition - AUTOMATION & CONTROL SYSTEMS

**Journal in the top 25%:** Yes

**No. of journals in the cat.:** 59

**Quotes:** 5

**Quotes:** 8



- 2** Cruz E. Borges Hernández; Yoseba K. Peña; Iván Fernández; Juan Prieto; Óscar Bretos. Assessing Tolerance-Based Robust Short-Term Load Forecasting in Buildings. *Energies*. 6 - 4, pp. 2110 - 2129. Basel(Switzerland): MDPI, 17/04/2013. Available online at: <<http://www.mdpi.com/1996-1073/6/4/2110>>. ISSN 1996-1073
- Type of production:** Article  
**Ranking:** 1
- Impact source:** SCOPUS  
**Impact index:** 0.717  
**Position:** 59
- Impact source:** ISI  
**Impact index:** 1.602  
**Position:** 43
- Impact source:** Google Scholar H5  
**Impact index:** 29
- Source of quotes:** SCOPUS  
**Source of quotes:** Google Scholar  
**Relevant publication:** Yes
- Format:** Journal  
**Acting as:** Author or co-author of article in journal with external admissions assessment committee  
**Category:** Computer Science (miscellaneous)
- No. of journals in the cat.:** 165  
**Category:** Science Edition - ENERGY & FUELS  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 82
- Quotes:** 2  
**Quotes:** 3
- 3** Yoseba K. Peña; Juan Carlos Nieves; Angelina Espinoza; Cruz E. Borges; Aitor Peña; Mariano Ortega. Distributed Semantic Architecture for Smart Grids. *Energies*. 5 - 11, pp. 4824 - 4843. Postfach(Switzerland): MDPI AG, 03/10/2012. Available online at: <<http://dx.doi.org/10.3390/en5114824>>. ISSN 1996-1073
- Type of production:** Article  
**Ranking:** 4
- Impact source:** SCOPUS  
**Impact index:** 0.543  
**Position:** 59
- Impact source:** ISI  
**Impact index:** 1.844  
**Position:** 38
- Impact source:** Google Scholar H5  
**Impact index:** 25
- Source of quotes:** WOS  
**Source of quotes:** SCOPUS  
**Source of quotes:** Google Scholar  
**Relevant publication:** Yes
- Format:** Journal  
**Acting as:** Author or co-author of article in journal with external admissions assessment committee  
**Category:** Computer Science (miscellaneous)
- No. of journals in the cat.:** 165  
**Category:** Science Edition - ENERGY & FUELS  
**Journal in the top 25%:** No  
**No. of journals in the cat.:** 81
- Quotes:** 1  
**Quotes:** 2  
**Quotes:** 2
- 4** C. E. Borges; C. L. Alonso; J. L. Montaña. Model Selection in Genetic Programming. Proceedings of Genetic and Evolutionary Computation Conference, GECCO 2010 Portland, Oregon, USA, July 7-11, 2010. pp. 985 - 986. Portland(United States of America): ACM Press, 07/07/2010. Available online at: <<http://doi.acm.org/10.1145/1830483.1830662>> Número de citas: 0>. ISBN 978-1-4503-0072-8
- Type of production:** Chapters of books  
**Ranking:** 1  
**Impact source:** CORE
- Format:** Book  
**Acting as:** Author or co-author of chapter in book

**Impact index:** A**Source of quotes:** Google Scholar**Quotes:** 8**Relevant publication:** Yes

- 5** Cruz Enrique Borges Hernández; Luis Miguel Pardo Vasallo. On the probability distribution of data at points in real complete intersection varieties. *Journal of Complexity*. 24 - 4, pp. 492 - 523. Elsevier, 01/01/2008. Available online at: <<http://dx.doi.org/10.1016/j.jco.2008.01.001>>. ISSN 0885-064X

**Type of production:** Article**Format:** Journal**Acting as:** Author or co-author of article in journal with external admissions assessment committee**Impact source:** ISI**Category:** Science Edition - COMPUTER SCIENCE, THEORY & METHODS**Impact index:** 0.825**Journal in the top 25%:** No**Position:** 50**No. of journals in the cat.:** 84**Impact source:** ISI**Category:** Science Edition - MATHEMATICS, APPLIED**Impact index:** 0.825**Journal in the top 25%:** No**Position:** 83**No. of journals in the cat.:** 175**Impact source:** SCOPUS**Category:** Computational Mathematics**Impact index:** 1.287**Journal in the top 25%:** Yes**Position:** 11**No. of journals in the cat.:** 74**Impact source:** SCOPUS**Category:** Analysis**Impact index:** 1.287**Journal in the top 25%:** Yes**Position:** 14**No. of journals in the cat.:** 87**Impact source:** SCOPUS**Category:** Mathematics (miscellaneous)**Impact index:** 1.287**Journal in the top 25%:** Yes**Position:** 63**No. of journals in the cat.:** 323**Impact source:** Google Scholar H5**Impact index:** 20**Source of quotes:** WOS**Quotes:** 6**Source of quotes:** SCOPUS**Quotes:** 6**Source of quotes:** Google Scholar**Quotes:** 9**Relevant publication:** Yes

- 6** Cruz E. Borges; Jose L. Montaña; Luis M. Pardo. A Sharp Fitness Function for the problem of Finding Roots of Polynomial Equations Systems. *Proceedings of the International Joint Conference on Computational Intelligence*. pp. 294 - 301. INSTICC Press, 22/10/2014. Available online at: <<http://dx.doi.org/10.5220/0005140002940301>>. ISBN 978-9-8975-8052-9

**Type of production:** Chapters of books**Ranking:** 1**Acting as:** Author or co-author of article in journal with external admissions assessment committee**Impact source:** SCOPUS**Category:** Artificial Intelligence**Impact index:** 0,107**Position:** 479**No. of journals in the cat.:** 688



- 7** David Orive; Gorka Sorrosal Yarritu; Cruz E. Borges; Cristina Martín Andonegui; Ainhoa Alonso-Vicario. Evolutionary Algorithms for Hyperparameter Tuning on Neural Networks Models. 26th European Modeling & Simulation Symposium. Burdeos, Aquitaine(France): 10/09/2014.  
**Type of production:** Chapters of books  
**Ranking:** 3  
**Impact source:** SCOPUS  
**Impact index:** 0,126  
**Position:** 260  
**Acting as:** Author or co-author of chapter in book  
**Category:** Modeling and Simulation  
**No. of journals in the cat.:** 412  
**Impact source:** CORE 2013  
**Impact index:** B
- 8** Cruz E. Borges; Oihane Kamara Esteban; Ander Pijoan; Yoseba K. Peña. Multi-Agent GIS System for Improved Spatial Load Forecasting (Demonstration). Proceedings of the 13th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2014). pp. 1667 - 1668. ACM, 07/05/2014. ISBN 978-1-4503-2738-1  
**Type of production:** Article  
**Ranking:** 1  
**Format:** Journal  
**Acting as:** Author or co-author of article in journal with external admissions assessment committee  
**Impact source:** CORE  
**Impact index:** A\*
- 9** Ander Pijoan; Oihane Kamara Esteban; Cruz E. Borges; Yoseba K. Peña. GIS and MAS tight coupling for Spatial Load Forecasting. E4MAS - 10 Years Later. Springer, 06/05/2014. ISBN 978-1-4503-2738-1  
**Collection:** Lecture Notes in Computer Science  
**Type of production:** Article  
**Ranking:** 3  
**Format:** Journal  
**Acting as:** Author or co-author of chapter in book  
**Category:** Computer Science (miscellaneous)  
**Impact source:** SCOPUS  
**Impact index:** 0,332  
**Position:** 89  
**No. of journals in the cat.:** 192  
**Impact source:** CORE  
**Impact index:** A\*
- 10** C.E. Borges; A. Peña; Y.K. Peña. On the influence of surrounding load demand to improve primary substation STLF. Proceedings of the 39th Annual Conference of the IEEE Industrial Electronics Society (IECON 2013). pp. 8158 - 8163. Vienna(Austria): IEEE, 10/11/2013. Available online at: <<http://dx.doi.org/10.1109/IECON.2013.6700499>>. ISBN 978-1-4799-0223-1  
**Type of production:** Chapters of books  
**Ranking:** 1  
**Acting as:** Author or co-author of chapter in book  
**Category:** Electrical and Electronic Engineering  
**Impact source:** SCOPUS  
**Impact index:** 0.196  
**Position:** 299  
**No. of journals in the cat.:** 426  
**Relevant results:** Best Paper in Session SS64-1
- 11** Y.K. Peña; C.E. Borges; A. Peña; O. Kamara. Service-orientation vs. Real-Time: Integrating Smart-Homes into the Smart-Grid. Proceedings of the 39th Annual Conference of the IEEE Industrial Electronics Society (IECON 2013). pp. 5753 - 5758. Viena(Austria): IEEE, 10/11/2013. Available online at: <<http://dx.doi.org/10.1109/IECON.2013.6700077>>. ISBN 978-1-4799-0223-1  
**Type of production:** Chapters of books  
**Ranking:** 2  
**Acting as:** Author or co-author of chapter in book



**Impact source:** SCOPUS  
**Impact index:** 0.196  
**Position:** 299

**Category:** Electrical and Electronic Engineering  
**No. of journals in the cat.:** 426

- 12** Y.K. Peña; C.E. Borges; J. Haase; D. Bruckner. Smart Buildings and the Smart Grid. Proceedings of the 39th Annual Conference of the IEEE Industrial Electronics Society (IECON 2013). pp. 111 - 115. Vienna(Austria): IEEE, 10/11/2013. Available online at: <<http://dx.doi.org/10.1109/IECON.2013.6699120>>. ISBN 978-1-4799-0223-1
- Type of production:** Chapters of books  
**Ranking:** 2  
**Impact source:** SCOPUS  
**Impact index:** 0.196  
**Position:** 299
- Format:** Book  
**Acting as:** Author or co-author of review  
**Category:** Electrical and Electronic Engineering  
**No. of journals in the cat.:** 426

- 13** C.L. Alonso; J.L. Montaña; C.E. Borges. Model Complexity Control in Straight Line Program Genetic Programming. IJCCI 2013 - Proceedings of the 5th International Joint Conference on Computational Intelligence. pp. 25 - 36. Vilamoura, Algarve(Portugal): SCITEPRESS, 16/10/2013. Available online at: <<http://dx.doi.org/10.5220/0004554100250036>>. ISBN 978-9-8985-6577-8
- Type of production:** Chapters of books  
**Ranking:** 3  
**Source of quotes:** SCOPUS  
**Relevant results:** Best Paper Award
- Format:** Book  
**Acting as:** Author or co-author of chapter in book  
**Quotes:** 0

- 14** Cruz E. Borges; Ander Pijoan Lamas; Yoseba Peña Landaburu; Juan Ignacio Larrauri Villamor; Ainhoa Alonso Vicario. Uso de Fuentes de Información Geográfica Voluntarias en Proyectos de Energía y Sostenibilidad. Deusto Ingeniería. 14, pp. 51 - 53. Bilbao, Basque Country(Spain): 15/07/2013. Available online at: <<http://www.deusto-publicaciones.es/ud/revistaspdf/ingenieria14.pdf>>. ISSN 1130-8354
- Legal deposit:** BI-599-00  
**Type of production:** General interest journals  
**Ranking:** 1
- Format:** Journal  
**Acting as:** Author or co-author of scientific or technical document for the general public

- 15** C.L. Alonso; J.L. Montaña; C.E. Borges; M.C. Echeandia; A.O. de la Puente. Model Regularization in Coevolutionary Architectures Evolving Straight Line Code. Revised and Selected Papers of the International Joint Conference, IJCCI 2010, Valencia, Spain, October 2010. 339, pp. 49 - 65. Springer Berlin/Heidelberg., 2012. Available online at: <[http://dx.doi.org/10.1007/978-3-642-27534-0\\_4](http://dx.doi.org/10.1007/978-3-642-27534-0_4)>. ISSN 1860-949X, ISBN 978-3-642-27533-3
- Collection:** Studies in Computational Intelligence  
**Type of production:** Chapters of books  
**Ranking:** 3  
**Impact source:** SCOPUS  
**Impact index:** 0.192  
**Position:** 98  
**Source of quotes:** WOS
- Format:** Book  
**Acting as:** Author or co-author of chapter in book  
**Category:** Artificial Intelligence  
**No. of journals in the cat.:** 114  
**Quotes:** 0

- 16** C.E. Borges. ¿Qué hace -y aporta- un matemático en un Centro Tecnológico?. Matematicalia. 7 - 4, pp. 1 - 7. Consolider Ingenio Mathematica, 01/12/2011. Available online at: <<http://www.matematicalia.net/articulos/v7n4dic2011/cborges.pdf>>. ISSN 1699-7700
- Type of production:** General interest journals  
**Ranking:** 1
- Format:** Journal  
**Acting as:** Author or co-author of educational publication



- 17** C. E. Borges; Y. K. Peña; I. Fernández. Optimal combined short-term building load forecasting. Proceedings of the 2011, IEEE PES Innovative Smart Grid Technologies, ISGT Asia 2011 Nov. 13-16, Perth, Australia. pp. 1 - 7. Perth(Australia): IEEE, 13/11/2011. Available online at: <<http://dx.doi.org/10.1109/ISGT-Asia.2011.6167091>>. ISBN 978-1-4577-0875-6
- Type of production:** Chapters of books  
**Ranking:** 1  
**Source of quotes:** Google Scholar
- Format:** Book  
**Acting as:** Author or co-author of chapter in book  
**Quotes:** 9
- 18** Y. K. Peña; C.E. Borges; I. Fernández. Short-term load forecasting in non-residential Buildings. Proceedings of the 10th IEEE Region 8 Conference (AFRICON). pp. 1 - 6. Livingstone(Zambia): IEEE, 13/09/2011. Available online at: <<http://dx.doi.org/10.1109/AFRCON.2011.6072062>>. ISBN 978-1-61284-991-1
- Type of production:** Chapters of books  
**Ranking:** 2  
**Impact source:** SCOPUS  
**Impact index:** 0.100  
**Position:** 344
- Acting as:** Author or co-author of chapter in book  
**Category:** Engineering (miscellaneous)  
**No. of journals in the cat.:** 359  
**Quotes:** 0
- Source of quotes:** WOS  
**Source of quotes:** Google Scholar  
**Quotes:** 7
- 19** I. Fernández; Y. K. Peña; C. E. Borges. Efficient Building Load Forecasting. Proceedings of the 16th IEEE International Conference on Emerging Technology & Factory Automation. pp. 1 - 8. Toulouse, Midi-Pyrénées(France): IEEE, 05/09/2011. Available online at: <<http://dx.doi.org/10.1109/ETFA.2011.6059103>>. ISBN 978-1-4577-0016-3
- Type of production:** Chapters of books  
**Ranking:** 3  
**Source of quotes:** Google Scholar
- Format:** Book  
**Acting as:** Author or co-author of chapter in book  
**Quotes:** 15
- 20** Y. K. Peña; C. E. Borges; D. Agote; I. Fernández. Short-term load forecasting in air-conditioned non-residential Buildings. Proceedings of the 20th IEEE International Symposium on Industrial Electronics. pp. 1359 - 1364. Gdańsk, Pomorskie(Poland): IEEE, 27/06/2011. Available online at: <<http://dx.doi.org/10.1109/ISIE.2011.5984356>>. ISBN 978-1-4244-9311-1
- Type of production:** Chapters of books  
**Ranking:** 2  
**Source of quotes:** SCOPUS
- Format:** Book  
**Acting as:** Author or co-author of chapter in book  
**Quotes:** 5
- Source of quotes:** Google Scholar  
**Quotes:** 14
- 21** J.L. Montaña; C.L. Alonso; C.E. Borges; J. de la Dehesa. Penalty Functions for Genetic Programming Algorithms. International Conference on Computational Science and Its Applications - ICCSA 2011, Santander, Spain, June 20-23, 2011. Proceedings, Part I. 6782, pp. 550 - 562. Santander, Cantabria(Spain): Springer Berlin Heidelberg, 20/06/2011. Available online at: <[http://dx.doi.org/10.1007/978-3-642-21928-3\\_40](http://dx.doi.org/10.1007/978-3-642-21928-3_40)>. ISSN 0302-9743, ISBN 978-3-642-21927-6
- Collection:** Lecture Notes in Computer Science  
**Type of production:** Chapters of books  
**Ranking:** 2  
**Impact source:** SCOPUS  
**Impact index:** 0.331  
**Position:** 67
- Format:** Book  
**Acting as:** Author or co-author of chapter in book  
**Category:** Theoretical Computer Science  
**No. of journals in the cat.:** 79  
**Category:** Hardware and Architecture
- Impact source:** SCOPUS

**Impact index:** 0.331**Position:** 75**Impact source:** SCOPUS**Impact index:** 0.331**Position:** 86**Impact source:** CORE**Impact index:** C**Source of quotes:** WOS**No. of journals in the cat.:** 124**Category:** Computer Science (miscellaneous)**No. of journals in the cat.:** 165**Quotes:** 0

- 22** C.E. Borges.; C.L. Alonso; J.L. Montaña; A.O. de la Puente; M.C. Echeandia. Coevolutionary Architectures with Straight Line Programs for solving the Symbolic Regression Problem. Proceedings of the International Conference on Evolutionary Computation, ICEC 2010 Valencia, Spain, October 24-26, 2010. pp. 41 - 50. Valencia, Valencian Community(Spain): SciTePress, 24/10/2010. Available online at: <<http://dx.doi.org/10.5220/0003075100410050>>. ISBN 978-989-8425-31-7

**Type of production:** Chapters of books**Ranking:** 1**Impact source:** CORE**Impact index:** C**Source of quotes:** WOS**Format:** Book**Acting as:** Author or co-author of chapter in book**Quotes:** 0

- 23** J.L. Montaña; C.E. Borges; C.L. Alonso. Evolution Strategies for Constants Optimization in Genetic Programming. Proceedings of the 21st IEEE International Conference on Tools with Artificial Intelligence, Newark, New Jersey, USA, November 2-4 2009. pp. 703 - 707. Newark(United States of America): IEEE Computer Society, 02/11/2009. Available online at: <<http://dx.doi.org/10.1109/ICTAI.2009.35>>. ISBN 978-1-4244-5619-2

**Type of production:** Chapters of books**Ranking:** 2**Impact source:** SCOPUS**Impact index:** 0.332**Position:** 73**Impact source:** SCOPUS**Impact index:** 0.332**Position:** 73**Impact source:** CORE**Impact index:** B**Impact source:** SCOPUS**Position:** 63**Source of quotes:** WOS**Source of quotes:** Google Scholar**Format:** Book**Acting as:** Author or co-author of chapter in book**Category:** Computer Science (miscellaneous)**No. of journals in the cat.:** 124**Category:** Hardware and Architecture**No. of journals in the cat.:** 124**Category:** Theoretical Computer Science**No. of journals in the cat.:** 79**Quotes:** 1**Quotes:** 6

- 24** César Alonso González; Jose Luis Montaña Arnaiz; Jorge Puente Peinador; Cruz Enrique Borges Hernández. A New Linear Genetic Programming Approach Based on Straight Line Programs: Some Theoretical and Exeperimental Aspects. International Journal on Artificial Intelligence Tools. 18 - 5, pp. 757 - 781. World Scientific, 01/10/2009. Available online at: <<http://dx.doi.org/10.1142/S0218213009000391>>. ISSN 0218-2130

**Type of production:** Article**Ranking:** 4**Format:** Journal

**Impact source:** SCOPUS**Impact index:** 0.334**Position:** 72**Impact source:** SCOPUS**Impact index:** 0.334**Position:** 99**Impact source:** ISI**Impact index:** 0.436**Position:** 92**Impact source:** ISI**Impact index:** 0.436**Position:** 95**Impact source:** Google Scholar H5**Impact index:** 11**Source of quotes:** Google Scholar**Acting as:** Author or co-author of article in journal with external admissions assessment committee**Category:** Artificial Intelligence**No. of journals in the cat.:** 114**Category:** Computer Science (miscellaneous)**No. of journals in the cat.:** 204**Category:** Science Edition - MATHEMATICS, INTERDISCIPLINARY APPLICATIONS**Journal in the top 25%:** No**No. of journals in the cat.:** 95**Category:** Science Edition - COMPUTER SCIENCE, ARTIFICIAL INTELLIGENCE**Journal in the top 25%:** No**No. of journals in the cat.:** 103**Quotes:** 4

- 25** J. L. Montaña; C. E. Borges. Lower Bounds for Approximation of some classes of Lebesgue measurable functions by Sigmoidal Neural Networks. 10th International Work-Conference on Artificial Neural Networks, IWANN 2009, Salamanca, Spain, June 10-12, 2009. Proceedings, Part I. 5517, pp. 1 - 8. Salamanca, Castile and León(Spain): Springer, 10/06/2009. Available online at: <[http://dx.doi.org/10.1007/978-3-642-02478-8\\_1](http://dx.doi.org/10.1007/978-3-642-02478-8_1)>. ISBN 978-3-642-02477-1

**Collection:** Lecture Notes in Computer Science**Type of production:** Chapters of books**Ranking:** 2**Impact source:** SCOPUS**Impact index:** 0.332**Position:** 63**Impact source:** SCOPUS**Impact index:** 0.332**Position:** 73**Impact source:** SCOPUS**Impact index:** 0.332**Position:** 86**Impact source:** CORE**Impact index:** B**Source of quotes:** WOS**Format:** Book**Acting as:** Author or co-author of chapter in book**Category:** Theoretical Computer Science**No. of journals in the cat.:** 79**Category:** Hardware and Architecture**No. of journals in the cat.:** 124**Category:** Computer Science (miscellaneous)**No. of journals in the cat.:** 165**Quotes:** 0

- 26** J. L. Montaña; C. E. Borges; C. L. Alonso; J. L. Crespo. Adaptation, Performance and Vapnik-Chervonenkis Dimension of Straight Line Programs. 12th European Conference, EuroGP 2009 Tübingen, Germany, April 15-17, 2009 Proceedings. 5481, pp. 315 - 327. Tübingen, Tübingen(Germany): Springer, 15/04/2009. Available online at: <[http://dx.doi.org/10.1007/978-3-642-01181-8\\_27](http://dx.doi.org/10.1007/978-3-642-01181-8_27)>. ISBN 978-3-642-01180-1



**Collection:** Lecture Notes in Computer Science

**Type of production:** Chapters of books

**Ranking:** 2

**Impact source:** CORE

**Impact index:** B

**Source of quotes:** WOS

**Format:** Book

**Acting as:** Author or co-author of chapter in book

**Quotes:** 1

- 27** C.E. Borges; Y.K. Peña; A. Pijoan. Agent Based Spatial Load Forecasting. Proceedings of the 11th International Conference on Autonomous Agents and Multiagent Systems. pp. 107 - 108. Valencia, Valencian Community(Spain): International Foundation for Autonomous Agents and Multiagent Systems, 04/06/2012. ISBN 0-9817381-3-3

**Type of production:** Chapters of books

**Ranking:** 1

**Impact source:** CORE

**Impact index:** A\*

**Relevant publication:** No

**Acting as:** Author or co-author of chapter in book

### Work presented in conferences at the national or international level

- 1** **Title:** Demonstration of innovative metering technology in real-life network  
**Name of the conference:** The Cities of the Future - Transitions to the Urban Water Services of Tomorrow  
**Type of event:** Conference  
**Type of participation:** Poster  
**Field of the conference:** Non EU International  
**Reasons for participation:** Review before acceptance  
**City:** Mülheim an der Ruhr, Düsseldorf, Germany  
**Date:** 28/04/2015  
**End date:** 30/04/2015  
**Organising institution:** IWA Cities of the Future Programme and the European collaborative TRUST projec  
**Type of institution:** Proyectos Europeos  
**With ext. admission assessment committee:** Yes  
**Type:** Article  
C. Martín; C. E. Borges; A. Pijoan; O. Kamara-Esteban; A. Alonso-Vicario.

- 2** **Title:** Geosimulaciones: cuando un SIG no es suficiente  
**Name of the conference:** IX Jornadas SIG Libre  
**Type of event:** Conference  
**Type of participation:** Speaker  
**Field of the conference:** National  
**Reasons for participation:** Review before acceptance  
**City:** Girona, Catalonia, Spain  
**Date:** 25/03/2015  
**End date:** 27/03/2015  
**Organising institution:** SIGTE - Universitat de Girona  
**Type of institution:** University Department  
**City:** Girona, Catalonia, Spain  
**Publication in conference proceedings:** Yes  
**With ext. admission assessment committee:** Yes  
**Type:** Article  
A. Pijoan; O. Kamara-Esteban; C.E. Borges; I. Oribe-García; C. Martín-Andonegui; A. Alonso-Vicario. En: *Actas de las IX Jornadas SIG Libre.*





**3** **Title:** Ciudades Amigables para Todos: Investigación-Acción universitaria en Accesibilidad urbana a través de OpenStreetMap

**Name of the conference:** Congreso Nacional de Aprendizaje-Servicio Universitario: "ApS(U)5: de la iniciativa individual a la institucional"

**Type of event:** Conference

**Field of the conference:** National

**Type of participation:** Speaker

**Reasons for participation:** Review before acceptance

**City:** Madrid, Community of Madrid, Spain

**Date:** 30/05/2014

**End date:** 31/05/2014

**Organising institution:** Red Universitaria de Aprendizaje Servicio

**Publication in conference proceedings:** Yes

**With ext. admission assessment committee:** Yes

**Type:** Article

A. Mugarra; C.E. Borges; A. García-Pérez.

**4** **Title:** Uso de algoritmos de enrutamiento para el cálculo de indicadores de sostenibilidad

**Name of the conference:** VIII Jornadas SIG Libre

**Type of event:** Conference

**Field of the conference:** National

**Type of participation:** Speaker

**Reasons for participation:** Review before acceptance

**City:** Girona, Catalonia, Spain

**Date:** 26/03/2014

**End date:** 28/03/2014

**Organising institution:** SIGTE - Universitat de Girona

**Publication in conference proceedings:** Yes

**With ext. admission assessment committee:** Yes

**Type:** Article

A Pijoan; C.E. Borges; Y.K. Penya; A. Alonso-Vicario. En: *Actas de las VIII Jornadas SIG Libre*.

**5** **Title:** Modelado del reactor químico del proceso BTO mediante redes neuronales artificiales

**Name of the conference:** XXXIV Jornadas de Automática

**Type of event:** Conference

**Field of the conference:** National

**Type of participation:** Poster

**Reasons for participation:** Review before acceptance

**City:** Tarrasa, Catalonia, Spain

**Date:** 04/09/2013

**End date:** 06/09/2013

**Organising institution:** Comité Español de Automática

**Publication in conference proceedings:** Yes

**With ext. admission assessment committee:** Yes

**Type:** Article

G. Sorrosal; E. Irigoyen; C.E. Borges; A. Alonso-Vicario. En: *Actas de las XXXIV Jornadas de Automática*. pp. 572 - 579. ISBN 978-8-4616-5063-7

**Legal deposit:** B-17365-2013

**6** **Title:** Use of Marble in Engineering Projects

**Name of the conference:** akademy

**Type of event:** Conference

**Field of the conference:** Non EU International

**Type of participation:** Speaker

**Reasons for participation:** Review before acceptance

**City:** Bilbao, Basque Country, Spain

**Date:** 11/07/2013

**End date:** 19/07/2013



**Organising institution:** KDE e.v.

**Type of institution:** Foundation

**City:** Berlin, Berlin, Germany

**With ext. admission assessment committee:** Yes

O.K. Esteban; G. Sorrosal; C.E. Borges. Available online at: <[https://conf.kde.org/system/attachments/1/original/Use\\_of\\_Marble\\_in\\_Engineering\\_Projects.pdf?1363178201](https://conf.kde.org/system/attachments/1/original/Use_of_Marble_in_Engineering_Projects.pdf?1363178201)>.

- 7** **Title:** Aprendizaje y Servicio en contextos universitarios: construyendo ciudades amigable  
**Name of the conference:** II Jornadas Interuniversitarias de Innovación Docente  
**Type of event:** Conference **Field of the conference:** National  
**Reasons for participation:** Review before acceptance  
**City:** Bilbao, Basque Country, Spain  
**Date:** 04/07/2013  
**End date:** 05/07/2013  
**Organising institution:** Universidad de Deusto  
**Publication in conference proceedings:** Yes **With ext. admission assessment committee:** Yes  
**Type:** Article  
A. Mugarra; C.E. Borges; A. García-Pérez. ISBN 978-84-271-3515-4
- 8** **Title:** Colaborando en proyectos de software libre: una experiencia enriquecedora, multidisciplinar y transfronteriza  
**Name of the conference:** Congreso Nacional de Aprendizaje-Servicio Universitario: "ApS(U)4: Creando sinergias"  
**Type of event:** Conference **Field of the conference:** National  
**Type of participation:** Poster **Reasons for participation:** Review before acceptance  
**City:** Bilbao, Basque Country, Spain  
**Date:** 14/06/2013  
**End date:** 14/06/2013  
**Organising institution:** Red Universitaria de Aprendizaje Servicio  
**Publication in conference proceedings:** Yes **With ext. admission assessment committee:** Yes  
**Type:** Article  
C.E. Borges; A. García-Pérez.
- 9** **Title:** Construyendo ciudades amigable: una propuesta de Aprendizaje y Servicio Universitario  
**Name of the conference:** Congreso Nacional de Aprendizaje-Servicio Universitario: "ApS(U)4: Creando sinergias"  
**Type of event:** Conference **Field of the conference:** National  
**Type of participation:** Poster **Reasons for participation:** Review before acceptance  
**City:** Bilbao, Basque Country, Spain  
**Date:** 14/06/2013  
**End date:** 14/06/2013  
**Organising institution:** Red Universitaria de Aprendizaje Servicio  
**Publication in conference proceedings:** Yes **With ext. admission assessment committee:** Yes  
**Type:** Article  
A. Mugarra; C.E. Borges; A. García-Pérez.
- 10** **Title:** Uso de fuentes de información geográfica voluntarias en proyectos de ingeniería  
**Name of the conference:** VII Jornadas SIG Libre  
**Type of event:** Conference **Field of the conference:** National  
**Type of participation:** Speaker **Reasons for participation:** Review before acceptance



**City:** Girona, Catalonia, Spain

**Date:** 06/03/2013

**End date:** 08/03/2013

**Organising institution:** SIGTE - Universitat de Girona

**Publication in conference proceedings:** Yes

**With ext. admission assessment committee:** Yes

**Type:** Article

C.E. Borges; A Pijoan; G. Sorrosal; I. Oribe-García; M. González; O. Kamara

Esteban. En: *Actas de las VII Jornadas SIG Libre*. Available online at:

<[http://www.sigte.udg.edu/jornadassiglibre2013/uploads/articulos\\_13/a1.pdf](http://www.sigte.udg.edu/jornadassiglibre2013/uploads/articulos_13/a1.pdf)>. ISBN 978-84-694-1624-2

**11 Title:** Tutorial de importación de datos de Catastro a OSM

**Name of the conference:** VI Jornadas de SIG Libre

**Type of event:** Conference

**Field of the conference:** National

**Type of participation:** Others

**Reasons for participation:** Upon invitation

**City:** Girona, Catalonia, Spain

**Date:** 22/03/2012

**End date:** 23/03/2012

**Organising institution:** SIGTE - Universitat de Girona

**Type of institution:** University Department

**City:** Girona, Catalonia, Spain

**Publication in conference proceedings:** Yes

**With ext. admission assessment committee:** Yes

**Type:** Scientific and technical document or report

Ander Pijoan; Cruz E. Borges. En: *Tutorial de importación de datos de*

*Catastro a OSM*. Catalonia (Spain): 22/03/2012. Available online at:

<[http://www.sigte.udg.edu/jornadassiglibre2012/uploads/abstracts/abstracts2012/st\\_cat2osm.pdf](http://www.sigte.udg.edu/jornadassiglibre2012/uploads/abstracts/abstracts2012/st_cat2osm.pdf)>. ISBN 978-84-694-9927-6

## Work presented in national or international conferences, seminars, workshops and/or courses

**1 Title:** Validación de Modelos Geoespaciales Predictivos

**Name of the event:** Cuarto Encuentro de Jóvenes Investigadores en Matemáticas

**Type of event:** Workshop

**Field of the event:** Regional

**Reasons for participation:** Speaker

**City:** La Laguna, Canary Islands, Spain

**Date:** 19/12/2014

**End date:** 22/12/2014

**Organising institution:** Universidad de La Laguna

**Type of institution:** University

**City:** La Laguna, Canary Islands, Spain

**With ext. admission assessment committee:** Yes

**2 Title:** Análisis técnico-económico de las herramientas existentes para la toma de datos en campo sobre distribución de especies

**Name of the event:** Estableciendo las bases de una plataforma de ciencia ciudadana en materia de biodiversidad

**Type of event:** Workshop

**Field of the event:** National

**Reasons for participation:** Upon invitation

**City:** Vitoria-Gasteiz, Basque Country, Spain

**Date:** 22/05/2014

**Organising institution:** Gobierno Vasco

**Type of institution:** Public Administration

**City:** Vitoria-Gasteiz, Basque Country, Spain

**With ext. admission assessment committee:** No



**Type:** Scientific and technical document or report

22/05/2014, Available online at: <<http://ingurumena.blog.euskadi.net/gertaerak/jornada-taller-estableciendo-las-bases-de-una-plataforma-de-ciencia-ciudadana-en-materia-de-biodiversidad/>>.

**3 Title:** ¿Cómo ahorrar en la factura energética?

**Name of the event:** Tercer Encuentro de Jóvenes Investigadores en Matemáticas

**Type of event:** Workshop

**Field of the event:** National

**Reasons for participation:** Upon invitation

**City:** La Laguna, Canary Islands, Spain

**Date:** 18/09/2013

**Organising institution:** Facultad de Matemáticas

**Type of institution:** University Centres and Structures and Associated Bodies

**City:** La Laguna, Canary Islands, Spain

**With ext. admission assessment committee:** Yes

Cruz E. Borges.

**4 Title:** Retos matemáticos en las redes eléctricas inteligentes

**Name of the event:** Ciclo de Talleres Divulgativos "Matemáticas en Acción 2012"

**City:** Santander, Cantabria, Spain

**Date:** 20/02/2013

**Organising institution:** Departamento de Matemáticas, Estadística y Computación (UC)

**Type of institution:** University Department

**City:** Santander, Cantabria, Spain

Cruz Enrique Borges Hernández.

**5 Title:** Energos: Tecnologías para la gestión automatizada e inteligente

**Name of the event:** Workshop Energías Renovables Aquitaine Euskadi - Navarra

**City:** Bidart, Aquitaine, France

**Date:** 30/11/2012

**End date:** 30/11/2012

**Organising institution:** Aquitaine Euskadi - Navarra y École supérieure des technologies industrielles avancées

**City:** Bordeaux, Aquitaine, France

Cruz Enrique Borges Hernández.

**6 Title:** Test de Turing: Can machines think?

**Name of the event:** Año Turing - Año de la Informática 2012

**Field of the event:** Regional

**Reasons for participation:** Speaker

**Date:** 27/11/2012

**End date:** 27/11/2012

**Organising institution:** Facultad de Ingeniería

**Type of institution:** University Centres and Structures and Associated Bodies

**City:** Bilbao, Basque Country, Spain

Cruz Enrique Borges Hernández. Available online at: <<http://turing2012.ingenieria.deusto.es/>>.

**7 Title:** Modelado automático mediante programación genética

**Name of the event:** Seminarios DeustoTech

**City:** Bilbao, Basque Country, Spain

**Date:** 10/11/2011

**Organising institution:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain



Cruz Enrique Borges Hernández.

**8 Title:** ¿Qué hace (y aporta) un matemático en un Centro Tecnológico?

**Name of the event:** Primer Encuentro de Jóvenes Investigadores en Matemáticas

**Type of event:** Workshop

**Field of the event:** National

**Reasons for participation:** Upon invitation

**City:** La Laguna, Canary Islands, Spain

**Date:** 27/09/2011

**Organising institution:** Facultad de Matemáticas

**Type of institution:** University Centres and Structures and Associated Bodies

**City:** La Laguna, Canary Islands, Spain

**With ext. admission assessment committee:** Yes

**Type:** Article

C.E. Borges. "Matematicalia". En: *¿Qué hace (y aporta) un matemático en un Centro Tecnológico?*. 7 - 4. Community of Madrid (Spain): Consolider Ingenio Mathematica, 31/12/2011, pp. 1 - 7. Available online at: <<http://www.matematicalia.net/articulos/v7n4dic2011/cborges.pdf>>. ISSN 1699-7700

**9 Title:** Short-term load forecasting in non-residential buildings

**Name of the event:** VII Jornada de Sistemas Industriales y Tecnologías Energéticas

**City:** Madrid, Community of Madrid, Spain

**Date:** 21/06/2011

**Organising institution:** Universidad Pontificia Comillas

**Type of institution:** University

**City:** Madrid, Community of Madrid, Spain

Cruz Enrique Borges Hernández.

**10 Title:** Complejidad algorítmica, resolución de ecuaciones y algoritmos bio-inspirados

**Name of the event:** Seminarios DeustoTech

**Type of event:** Seminar

**City:** Bilbao, Basque Country, Spain

**Date:** 01/06/2010

**Organising institution:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA

**City:** Bilbao, Basque Country, Spain

Cruz Enrique Borges Hernández.

**11 Title:** Un poco de teoría de juegos y equilibrios de Nash

**Name of the event:** ASCLEPIOS

**Type of event:** Workshop

**City:** Santander, Cantabria, Spain

**Date:** 25/02/2008

**Organising institution:** Departamento de Matemáticas, Estadística y Computación (UC)

**Type of institution:** University Department

**City:** Santander, Cantabria, Spain

Cruz Enrique Borges Hernández.

**Experience in R&D&I management and participation in scientific committees****Experience organising R&D&I activities**

- 1** **Title:** Akademy 2013  
**Type of activity:** Conference **Area of the activity:** Internacional  
**City:** Bilbao, Basque Country, Spain  
**Convening institution:** KDE e.V. **Type of institution:** Foundation  
**City:** Berlín, Berlin, Germany  
**Type of participation:** Organiser  
**Number of attendees:** 200  
**Start-End date:** 13/07/2013 - 19/07/2013
- 2** **Title:** Qt Contributors Summit 2013  
**Type of activity:** Conference **Area of the activity:** Non EU International  
**City:** Bilbao, Basque Country, Spain  
**Convening institution:** Digia **Type of institution:** Business  
**City:** Oslo, Etelä-Suomi, Finland  
**Type of participation:** Organiser  
**Number of attendees:** 100  
**Start-End date:** 15/07/2013 - 16/07/2013
- 3** **Title:** Akademy-es 2013  
**Type of activity:** Conference **Area of the activity:** National  
**City:** Bilbao, Basque Country, Spain  
**Convening institution:** Asociación Cultural KDE España.  
**City:** Manresa, Catalonia, Spain  
**Type of participation:** Organiser  
**Number of attendees:** 100  
**Start-End date:** 11/07/2013 - 13/07/2013
- 4** **Title:** International Workshop on Waste Minimization and Intersectorial Cooperation 2011  
**Type of activity:** Workshop **Area of the activity:** Internacional  
**City:** Bilbao, Basque Country, Spain  
**Convening institution:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Type of participation:** Organiser  
**Number of attendees:** 30  
**Start-End date:** 21/07/2011 - 22/07/2011
- 5** **Title:** VII Jornadas de Matemática Discreta y Algorítmica  
**Type of activity:** Workshop **Area of the activity:** National  
**City:** Castro Urdiales, Cantabria, Spain  
**Convening institution:** Universidad de Cantabria **Type of institution:** University  
**City:** Santander, Cantabria, Spain  
**Type of participation:** Organiser  
**Number of attendees:** 50  
**Start-End date:** 07/07/2010 - 09/07/2010



- 6** **Title:** Foundations of Computacional Mathematics 2005  
**Type of activity:** Conference **Area of the activity:** Congreso Internacional  
**City:** Santander, Cantabria, Spain  
**Convening institution:** Foundations of Computational Mathematics **Type of institution:** Associations and Groups  
**Type of participation:** Organiser  
**Number of attendees:** 400  
**Start-End date:** 30/06/2005 - 09/07/2005
- 7** **Title:** Jornadas OpenStreetMap Deusto 2011  
**Type of activity:** Seminario **Area of the activity:** Regional  
**City:** Bilbao, Basque Country, Spain  
**Convening institution:** FUNDACIÓN DEUSTO-DEUSTU FUNDAZIOA  
**City:** Bilbao, Basque Country, Spain  
**Type of participation:** Organiser  
**Number of attendees:** 25  
**Start date:** 07/09/2011 **Duration:** 1 day
- 8** **Title:** Libre Linux Party 3.0  
**Type of activity:** Workshop **Area of the activity:** Regional  
**City:** Santander, Cantabria, Spain  
**Convening institution:** Facultad de Ciencias (UC) - Linuca  
**City:** Santander, Cantabria, Spain  
**Type of participation:** Organiser  
**Number of attendees:** 15  
**Start date:** 16/09/2009 **Duration:** 1 day
- 9** **Title:** Libre Linux Party 2.0  
**Type of activity:** Seminar **Area of the activity:** Regional  
**City:** Santander, Cantabria, Spain  
**Convening institution:** Facultad de Ciencias (UC) - Linuca  
**City:** Santander, Cantabria, Spain  
**Type of participation:** Organiser  
**Number of attendees:** 15  
**Start date:** 14/03/2009 **Duration:** 1 day



## Other achievements

### Grants and scholarships obtained

- Name of the grant:** Programa de Formación del Profesorado Universitario  
**City:** Santander, Cantabria, Spain  
**Aims:** Pre-doctoral  
**Conferring institution:** Ministerio de Ciencia e Innovación. Investigación  
**Type of institution:** Public administration  
**Amount of the grant:** 56.000  
**Conferral date:** 01/04/2006  
**Duration of the grant:** 4 years  
**End date:** 31/03/2010  
**Name of institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Facultad de Ciencias
- Name of the grant:** Becas SÉNECA  
**City:** Santander, Cantabria, Spain  
**Aims:** Mobility  
**Conferring institution:** Ministerio de Ciencia e Innovación. Investigación  
**Type of institution:** Public administration  
**Amount of the grant:** 4.430  
**Conferral date:** 2004  
**Duration of the grant:** 1 year  
**End date:** 2005  
**Name of institution:** Universidad de Cantabria  
**Faculty, institute or centre:** Facultad de Ciencias

### Membership of scientific societies and professional associations

**Name:** KDE España  
**City:** Manresa, Catalonia, Spain  
**Number of members:** 32  
**Start date:** 01/10/2013

### Recognitions, distinctions and awards received throughout the career

- Description:** UD-Santander Award to the project "SmartGrid 3.0 hacia la SmartCity"  
**Conferring institution:** Universidad de Deusto  
**Type of institution:** University  
**City:** Bilbao, Basque Country, Spain  
**Conferral date:** 2015  
**Recognition linked:** Cash prize of 7000€
- Description:** Accesit for one of my students in the "Arquímedes" University Contest 2014  
**Conferring institution:** Dirección Provincial del Ministerio de Educación y Cultura  
**Type of institution:** Public Authority  
**City:** Madrid, Community of Madrid, Spain  
**Conferral date:** 13/11/2014





- 3** **Description:** Best Demo award of the 13th International Conference on Autonomous Agents and Multiagent Systems  
**Conferring institution:** International Foundation for Autonomous Agents and Multiagent Systems **Type of institution:** Foundation  
**City:** Paris, Île de France, France  
**Conferral date:** 08/05/2014
- 4** **Description:** Best Paper in Session SS64-1 of the 39th Annual Conference of the IEEE Industrial Electronics Society  
**Conferring institution:** IEEE Industrial Electronics Society **Type of institution:** Foundation  
**Conferral date:** 13/11/2013
- 5** **Description:** Best Paper Award  
**Conferring institution:** Program Committee of ECTA 2013 conference  
**City:** Vilamoura, Algarve, Portugal  
**Conferral date:** 22/09/2013
- 6** **Description:** Best journal paper in Mathematics by a non-doctor  
**Conferring institution:** Facultad de Ciencias (Universidad de Cantabria)  
**City:** Santander, Cantabria, Spain  
**Conferral date:** 2010  
**Recognition linked:** Cash prize
- 7** **Description:** Second prize in the problem solving contest "Javier Martínez Maurica"  
**Conferring institution:** Departamento de Matemáticas, Estadística y Computación (UC) **Type of institution:** University Department  
**City:** Santander, Cantabria, Spain  
**Conferral date:** 2004  
**Recognition linked:** Cash prize
- 8** **Description:** Honors Degree in Secondary School  
**Conferring institution:** I.E.S. Mencey Bencomo **Type of institution:** Instituto de Educación Secundaria  
**City:** Los Realejos, Canary Islands, Spain  
**Conferral date:** 2001  
**Recognition linked:** Exemption from tuition fees during first year of the university studies