



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s)

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Nationality

Date of birth

### eVIDA Research Group

Avda/ Universidades 24. 48007 Bilbao, Spain

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Spanish

2001

|  | 2010-2012   | 2013-2015   | 2016-2018 |
|--|-------------|-------------|-----------|
| Artículos en revistas ISI  | 3           | 35          | 15        |
| De ellos en 1er cuartil  | 1           | 9           | 1         |
| Otras publicaciones  | 22          | 15          | 8         |
| Tesis doctorales dirigidas y defendidas                            | 1           | 3           | 5         |
| De ellas tesis internacionales                                     | 1           | 2           | 1         |
| Becarios y contratados predoctorales y postdoctorales incorporados | 9           | 3           | 2         |
| Financiación externa (€)   | 1.416.283 € | 1.232.062 € | 752.165 € |
| Registros Propiedad Intelectual                                    | 8           | 18          | 4         |
| Contratos/convenios canalizados a través de OTRI o equivalente     | 4           | 18          | 3         |

## Academic activities

### Thesis presented in the eVIDA group:

- Ibon Oleagordia Ruiz. "Mejora de la calidad y la parametrización de la voz esofágica". Cum Laude. 2015.
- Amaia Méndez Zorrilla. "Algoritmo de parametrización de imágenes estroboscópicas de cuerdas vocales". Cum Laude. 2012
- Laura Fernandez Cordero. "Efectos de la incapacitación judicial en el ejercicio de los derechos fundamentales personalísimos en personas con discapacidad intelectual, en la CAPV. Una propuesta de cambio atendiendo al modelo de prestación de apoyos, recogido en la convención sobre los derechos de las personas con discapacidad, de la ONU". Registered in 2014.
- Gonzalo Eguluz Perez. "Sistema de tele-consulta y ayuda al diagnóstico mediante procesado de señal basado en web". Cum Laude 2015.
- Rizwan Ishaq. "Esophageal Speech improvement by signal processing methods on excitation (source) signal". 2015.
- Javier Vicente Sáez. "Arquitectura Novel de procesador DSP". 2016.
- Nuria Aresti Bartolomé. "Tecnologías de realidad mixta para el diseño e implementación de aplicaciones software para el diagnóstico y tratamiento de problemas de neurodesarrollo". Cum laude 2016.
- Jose Luis García Arroyo. "Algoritmo de detección y caracterización de patrones dermatoscópicos presentes en el melanoma". 2017.
- Fernando Jorge Hernández. "Algoritmo óptimo para la caracterización de patologías cerebrales sobre imágenes de resonancia magnética funcional". Cum Laude 2016
- Maite Frutos Pascual. "Algoritmo multi-variable basado en biofeedback para la adaptación en tiempo real de serious games for health orientados a personas con TDAH". Cum Laude 2016.
- Alain Sánchez González. "Algoritmos para el seguimiento y adecuación de la calidad de la colonoscopia en el cribado de cancer colorrectal". 2017.
- Yolanda García Chimeno: "Algoritmo de Biofeedback Multisensor para la optimización, monitorización y adaptación para técnicas terapéuticas de problemas de salud y calidad de vida", registered in 2015.
- Ornela Bardhi: "Cancer: Activating Technology for Connected Health", registered in 2017.
- Iranzu Mugueta "Solución tecnológica basada en juegos como terapia para reducir la fragilidad en personas mayores", registered in 2016 Will be defended in July 2017.
- Bassam Beyrouti: "Robust Watermarking Algorithms to protect Hi resolution personal and medical coloured images". Registered in 2016

## Research projects

PROJECT TITLE: NEUREHAB:Tele-rehabilitación enfocada al control y seguimiento de enfermedades Neurológicas y Neumológicas  
FUNDING ENTITY: Basque Government. Hazitek Program.  
STARTING DATE: 2015      ENDING DATE: 2016  
CHIEF RESEARCHER: Amaia Méndez Zorrilla

PROJECT TITLE: ViveWeb:Elaboración y diseño de la arquitectura técnica y física de la plataforma web  
FUNDING ENTITY: Basque Government. Hazitek Program.  
STARTING DATE: 2015      ENDING DATE: 2017  
CHIEF RESEARCHER: Ibon Oleagordia Ruiz

PROJECT TITLE: Piloto de juego básico basado en Kinect para trabajar la fragilidad en personas mayores  
FUNDING ENTITY: Emankor  
STARTING DATE: 2016      ENDING DATE: 2016  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: ELAGUN: Plataforma online para el tratamiento e intervención en pacientes con esquizofrenia  
FUNDING ENTITY: Basque Government. Hazitek Program  
STARTING DATE: 2016      ENDING DATE: 2017  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: BIOGAME: Plataforma tecnológica de ocio, training y rehabilitación neuromuscular interactiva  
FUNDING ENTITY: Basque Government. Hazitek Program  
STARTING DATE: 2016      ENDING DATE: 2017  
CHIEF RESEARCHER: Amaia Méndez Zorrilla

PROJECT TITLE: Estudio para la detección de Evidencias Científicas dentro del Programa de Reminiscencia del IFAS  
FUNDING ENTITY: Diputación Foral de Bizkaia  
STARTING DATE: 2016      ENDING DATE: 2017  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: ENVEJECIMIENTO ACTIVO\_2016  
FUNDING ENTITY: Diputación Foral de Bizkaia  
STARTING DATE: 2016      ENDING DATE: 2016  
CHIEF RESEARCHER: Amaia Méndez Zorrilla

PROJECT TITLE: EBIHOTZA: ALGORITMOS DE PROCESADO DIGITAL MULTI-SENSOR ASOCIADOS A ENFERMEDADES CARDIOVASCULARES PARA LA MONITORIZACIÓN Y ANÁLISIS CON TÉCNICAS DE MACHINE LEARNING  
FUNDING ENTITY: Basque Government. Elkartek Program  
STARTING DATE: 2016      ENDING DATE: 2017  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: SUPRA: Sistema Avanzado para el control de úlceras por presión mediante evaluación y reconocimiento de imagen  
FUNDING ENTITY: Basque Government. Hazitek Program  
STARTING DATE: 2016      ENDING DATE: 2017  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: SMARTXA: Solución tecnológica para monitorización de la marcha y movilidad como parámetro de medida del estado de salud de personas con esclerosis múltiple y enfermedades neurodegenerativas  
FUNDING ENTITY: Basque Government. Hazitek Program  
STARTING DATE: 2016      ENDING DATE: 2018  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: Bizkaia Talent  
FUNDING ENTITY: BIZKAIA-XEDE Programa de Ayudas para Investigadores

STARTING DATE: 2014      ENDING DATE: 2017  
CHIEF RESEARCHER: M<sup>a</sup> Begoña García-Zapirain

PROJECT TITLE: CATCH - Cancer: Activating Technology for Connected Health  
FUNDING ENTITY: European Commission – MSCA-ITN-2016: Innovative Training Networks  
STARTING DATE: 2016      ENDING DATE: 2020  
CHIEF RESEARCHER: Brian Caulfield

PROJECT TITLE: AMIS - Access Multilingual Information OpinionS  
FUNDING ENTITY: European Commission – Chist-ERA II  
STARTING DATE: 01/10/2015      ENDING DATE: 30/09/2018  
CHIEF RESEARCHER: Smaïli Kamel

PROJECT TITLE: IMPRUVER - Sistema de Imagen para la Evaluación, Diagnóstico, Predicción y Monitorización de las úlceras por presión.  
FUNDING ENTITY: Spanish Ministry of Economy y competitiveness.  
STARTING DATE: 01/01/2015      ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Begoña García-Zapirain Soto

PROJECT TITLE: REST: Red Social de apoyo al respiro dirigido, training y coaching de cuidadores de personas mayores y/o dependientes  
FUNDING ENTITY: Regional Government of Biscay. Department of Economic Promotion  
STARTING DATE: 01/07/2015      ENDING DATE: 31/12/2015  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Soluciones tecnológicas para facilitar la práctica de mindfulness: caminando hacia mHealth. Ref.: TEC2013-50049-EXP  
FUNDING ENTITY: Ministerio de Economía y Competitividad.  
STARTING DATE: 01/09/2014      ENDING DATE: 31/08/2016  
CHIEF RESEARCHER: Inmaculada Plaza García

PROJECT TITLE: Solución tecnológica para el seguimiento y adecuación de la calidad de la colonoscopia en el cribado de cáncer colorrectal  
FUNDING ENTITY: Basque Government. Proyectos de Investigación en Salud  
STARTING DATE: 2014      ENDING DATE: 2016  
CHIEF RESEARCHER: Begoña García-Zapirain Soto

PROJECT TITLE: SUNFRAIL: Reference Sites Network for Prevention and Care of Frailty and Chronic Conditions in community dwelling persons of EU Countries  
FUNDING ENTITY: European Commission. HP-PJ-2014.  
STARTING DATE: 15/02/2015      ENDING DATE: 15/08/2017  
CHIEF RESEARCHER: Antonio Addis

PROJECT TITLE: Caracterización articuladora tridimensional del español y su aplicación a la enseñanza de su pronunciación  
FUNDING ENTITY: MINECO- Proyectos I+D Excelencia 2013  
STARTING DATE: 01/01/2014      ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Rosa Miren Pagola

PROJECT TITLE: JOKOGLAS: Herramienta tecnológica para fomentar la estimulación física y cognitiva mediante actividades y juegos con dispositivos adaptados  
FUNDING ENTITY: Basque Government. Gaitek Program.  
STARTING DATE: 01/07/2014      ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Oskar Rueda

PROJECT TITLE: LINFOCAD: Sistema automatizado para la detección y monitorización 3D de inflamaciones de ganglios linfáticos de cara a la mejora en los diagnósticos y tratamientos oncológicos  
FUNDING ENTITY: Basque Government. Gaitek Program.  
STARTING DATE: 01/07/2014      ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Mercedes Gozalbo Mestres

PROJECT TITLE: MyZain: Plataforma tecnológica de apoyo a los cuidadores informales para mejorar la intervención en personas dependientes  
FUNDING ENTITY: Basque Government. Gaitek Program.  
STARTING DATE: 01/07/2014 ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Naiara Esteban Foruria

PROJECT TITLE: Shark: Middleware adaptativo para el desarrollo de sistemas de apoyo a la rehabilitación de personas con discapacidad física a través del ocio y bio-feedback  
FUNDING ENTITY: Basque Government. Gaitek Program.  
STARTING DATE: 01/07/2013 ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Begoña Garcia Zapirain

PROJECT TITLE: eBIP: Plataforma de información y seguimiento para mujeres embarazadas mediante la comunicación directa con sus especialistas médicos.  
FUNDING ENTITY: Basque Government. Gaitek Program  
STARTING DATE: 01/07/2013 ENDING DATE: 31/12/2016  
CHIEF RESEARCHER: Begoña Garcia Zapirain

PROJECT TITLE: CASE 3D: Caracterización articulatoria de la producción de los sonidos del euskara a partir de la modelización 3D del tracto vocal  
FUNDING ENTITY: Basque Government. Basic research.  
STARTING DATE: 01/01/2013 ENDING DATE: 31/12/2015  
CHIEF RESEARCHER: Rosa Miren Pagola Petrirena

PROJECT TITLE: ABC- Play : Customización automática y evaluación mediante biofeedback de Serious Games for Health orientados a personas con TDAH.  
FUNDING ENTITY: Basque Government. Saiotek Program.  
STARTING DATE: 01/08/2013 ENDING DATE: 31/12/2014  
CHIEF RESEARCHER: Amaia Mendez Zorrilla

PROJECT TITLE: Desarrollo de un Dispositivo de Análisis Telemático para Biomarcadores de Salud (Teletest)  
FUNDING ENTITY: Department of Industry, Innovation Trade and Tourism of the Basque Government. GAITEK Program  
STARTING DATE: 01/01/2013 ENDING DATE: 31/12/2014  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Solución Tecnológica basada en Robot Lego combinado con Dispositivos Táctiles para el Desarrollo de Habilidades Sociales y Hábitos Saludables  
FUNDING ENTITY: Aristos Campus Mundus (ACM 2015)  
STARTING DATE: 15/03/2015 ENDING DATE: 15/03/2016  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: EVEREAD  
FUNDING PROJECT TITLE: Sistema Integral de capacitación y apoyo a las personas con DI para mejorar la gestión de la toma y seguimiento de sus dietas para el cuidado e impulso de estilos de vida saludables  
FUNDING ENTITY: Department of Industry, Innovation Trade and Tourism of the Basque Government. GAITEK Program  
STARTING DATE: 01/01/2013 ENDING DATE: 31/12/2013  
CHIEF RESEARCHER: María Begoña García Zapirain  
ENTITY: Department of Industry, Innovation Trade and Tourism of the Basque Government. GAITEK Program  
STARTING DATE: 01/01/2013 ENDING DATE: 31/12/2013  
CHIEF RESEARCHER: Mari Luz Guenaga

PROJECT TITLE: Diseño y desarrollo de algoritmos avanzados de detección heurística y no heurística de tumores, caracterización de los mismos y modelado matemático de su evolución en 3D, de cara a la mejora en su diagnóstico y tratamiento (Detectum3D)

FUNDING ENTITY: Department of Industry, Innovation Trade and Tourism of the Basque Government. GAITEK Program

STARTING DATE:01/01/2013 ENDING DATE: 31/12/2013

CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: SMARTXA-BASIC: Solución tecnológica para monitorización de la marcha como parámetro de medida del estado de salud de las personas con problemas de movilidad. Ref: CTP2012/P05

FUNDING ENTITY: Communauté de Travail des Pyrénées

STARTING DATE:01/01/2013 ENDING DATE: 31/12/2014

CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Mejora de la calidad de vida y la salud de personas con diversidad funcional utilizando entornos virtuales y juegos de ordenador

FUNDING ENTITY: Spanish Ministry of Foreign Affairs and Cooperation

STARTING DATE:01/01/2012 ENDING DATE: 31/12/2012

CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Disfunción Orbito Frontal en Pacientes con Migraña Crónica y Abuso de Analgésicos. Estudio con Resonancia Magnética Funcional (fMRI). MIGREIN

FUNDING ENTITY: Instituto de Salud Carlos III (ISCIII). FIS Program

STARTING DATE:01/01/2012 ENDING DATE: 31/12/2014

CHIEF RESEARCHER: María Ángeles Beldarrain

PROJECT TITLE: jolasTEA: Solución tecnológica de ayuda al tratamiento de los trastornos del espectro autista (TEA) siguiendo los criterios del DSM - V

FUNDING ENTITY: Regional Government of Biscay. Department of Economic Promotion

STARTING DATE:2012 ENDING DATE: 31/12/2013

CHIEF RESEARCHER: María Ángeles Beldarrain

PROJECT TITLE: Ergolab

FUNDING ENTITY: Contract with Tecnalia Company

STARTING DATE:01/01/2012 ENDING DATE: 31/12/2012

CHIEF RESEARCHER: Ibon Ruiz Oleagordia

PROJECT TITLE: eMedical Coach - sistema integral de capacitación y apoyo a las personas con di para mejorar la gestión de la toma y seguimiento de sus dietas para el cuidado e impulso de estilos de vida saludables

FUNDING ENTITY: Basque Government. Gaitek Program

STARTING DATE: 01/07/2012 ENDING DATE: 31/12/2016

CHIEF RESEARCHER: Amaia Méndez Zorrilla

PROJECT TITLE: H-SEAT: Healthy Sleep And Exercise Analysis Tool

FUNDING ENTITY: European Union. Lead-ERA.

STARTING DATE: 01/01/2012 ENDING DATE: 01/01/2016

CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: Psicoestimula: "Gamificación y Psicoestimulación en las personas que envejecen"

FUNDING ENTITY: Spanish Ministry of Industry, Tourism and Commerce. Avanza Program.

STARTING DATE: 01/07/2012 ENDING DATE: 31/12/2013

CHIEF RESEARCHER: Amaia Méndez Zorrilla

PROJECT TITLE: Ejolas: Haurren Ohitura Osasungarrietarako Jolas Teknologikoa

FUNDING ENTITY: Regional Government of Biscay

STARTING DATE: 01/01/2012 ENDING DATE: 31/12/2015

CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: EMUGI: Herramienta Tecnológica Para El Apoyo A La Movilidad De Los Enfermos De Esclerosis Múltiple

FUNDING ENTITY: Regional Government of Biscay

STARTING DATE: 01/01/2012 ENDING DATE: 31/12/2015

CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: Envejecimiento Activo- hábitos saludables con la Kinect para personas mayores

FUNDING ENTITY: Regional Government of Biscay

STARTING DATE: 01/01/2012 ENDING DATE: 31/12/2012

CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: Euskal Ahotsak Ahoskatzen

FUNDING ENTITY: Regional Government of Biscay

STARTING DATE: 01/01/2011 ENDING DATE: 01/04/2012

CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: Promoción del ocio y deporte saludable en personas con diversidad funcional a través de apoyos tecnológicos

FUNDING ENTITY: Regional Government of Biscay

STARTING DATE: 01/01/2011 ENDING DATE: 01/04/2012

CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: Plataforma integral de apoyo a las personas con discapacidad intelectual y del desarrollo para la toma de decisiones de la vida cotidiana y promoción de la integración social. Proinso

FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. INNOTEK Program.

STARTING DATE: 01/07/2011 ENDING DATE: 31/12/2013

CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Análisis matemático de la periodicidad de la actividad epileptiforme periódica (PLEDS) que aparece en el EEG de algunos pacientes con sospecha clínica de estatus epiléptico no convulsivo. (ICTALPLED)

FUNDING ENTITY: Basque Government, Department of Social Welfare.

STARTING DATE: 01/10/2011 ENDING DATE: 31/12/2012

CHIEF RESEARCHER: Ibon Ruiz Oleagordia

PROJECT TITLE: Estudio de la función cerebral en reposo mediante resonancia magnética en pacientes con migraña crónica. MRESTIG

FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. SAIOOTEK Program

STARTING DATE: 01/10/2011 ENDING DATE: 31/12/2012

CHIEF RESEARCHER: Ibone Saralegui

PROJECT TITLE: Algoritmos de análisis y procesado de señales EEG para el estudio y caracterización del trastorno por déficit de atención e hiperactividad a través de las neuronas espejo  
FUNDING ENTITY: Basque Government, Department of Education, Universities and Research. Ref. PI2011-63  
STARTING DATE:09/2011 ENDING DATE: 31/12/2013  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Solución inteligente integral para AAL (Intelligent integrated solution for Ambient Assisted Living). ePERION  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. INNOTEK  
STARTING DATE:01/01/2011 ENDING DATE: 31/12/2013  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Solución Tecnológica para la Telerehabilitación para pacientes con trastornos medulares. eREMEDU  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/10/2010 ENDING DATE: 31/12/2012  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Herramienta tecnológica basada en el "Tangram" para la psicoestimulación de las personas mayores. eTANGRAM  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/10/2010 ENDING DATE: 31/12/2012  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Estudio de la función frontal en pacientes con diferentes tipos de migraña. MIGREIN  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. SAIOTEK Program.  
STARTING DATE:01/10/2010 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: Ibon Ruiz Oleagordia

PROJECT TITLE: Telerehabilitación para Pacientes con Movilidad Limitada. TELEREHAB  
FUNDING ENTITY: Regional Government of Biscay. Department of Economic Promotion  
STARTING DATE:01/07/2010 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: eTIDI (Solución Tecnológica como herramienta de Terapia e Inclusión para la Dislexia Infantil)  
FUNDING ENTITY: Regional Government of Biscay. Department of Economic Promotion  
STARTING DATE:01/07/2010 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Descripción articuladora experimental de la lengua; parámetros articulatorios del castellano y el euskara mediante cine-MRI (DAELPACE)  
FUNDING ENTITY: Spanish Ministry of Science and Innovation.  
STARTING DATE:01/01/2010 ENDING DATE: 31/12/2012  
CHIEF RESEARCHER: Rosa Miren Pagola Petrirena

PROJECT TITLE: Letralan Videoconsulta



FUNDING ENTITY: Letralan Company  
STARTING DATE: 01/02/2010 ENDING DATE: 01/05/2010  
CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: Easywalk  
FUNDING ENTITY: Contract with Adecco Foundation  
STARTING DATE:01/01/2010 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: Amaia Méndez Zorrilla

PROJECT TITLE: OESOVOX - INRIA 09/11  
FUNDING ENTITY: INRIA - Institut National de Recherche en  
Informatique et Automatique  
STARTING DATE: 01/01/2009 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: Joseph Di Martino

PROJECT TITLE: DISLEX-FIS Analisis de la activacion neuronal mediante  
Resonancia Magnetica Funcional en pacientes disléxicos.  
FUNDING ENTITY: Spanish Ministry of Science and Innovation  
STARTING DATE: 01/01/2009 ENDING DATE: 01/01/2011  
CHIEF RESEARCHER: Ibone Saralegi

PROJECT TITLE: NEURRILAN  
FUNDING ENTITY: OSALAN – Basque Government  
STARTING DATE: 01/01/2009 ENDING DATE: 31/12/2010  
CHIEF RESEARCHER: Begoña García Zapirain

PROJECT TITLE: MELANOTIC. Utilización de las TICs para el Desarrollo de  
Diagnósticos de Lesiones Dermatológicas con Riesgo de Melanoma  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque  
Government.  
STARTING DATE:01/07/2009 ENDING DATE: 01/07/2010  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: LANziurra.- Apoyo al trabajo independiente mediante el uso de las  
TICs para la prevención en riesgos laborales y modificaciones de conductas en  
personas con discapacidad  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque  
Government.  
STARTING DATE:01/07/2009 ENDING DATE: 30/06/2011  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: e- LIFE. Las TICs como Mejora de la Calidad de Vida  
Independiente de las Personas con Discapacidad Intelectual en el Hogar  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque  
Government.  
STARTING DATE:01/07/2009 ENDING DATE: 30/06/2010  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: VMS. Virtual Medicare System. Sistema Médico Virtual.  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque  
Government. STARTING DATE:01/07/2009 ENDING DATE: 01/03/2010  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: EvoCAN.- Modelo Matemático de Crecimiento Tumoral y su  
Parametrización mediante Imágenes Médicas para Optimización del Tratamiento

FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/07/2009 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Desarrollo del Diagnóstico, Rehabilitación y Aprendizaje de la Voz Esofágica a través de las TICs (DRAVOES)  
FUNDING ENTITY: Spanish Ministry of Industry, Trade and Tourism. AVANZA Program.  
STARTING DATE:01/04/2009 ENDING DATE: 31/12/2010  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Desarrollo del Diagnóstico, Rehabilitación y Aprendizaje de la Voz Esofágica a través del Uso de las TICs (ESOFATIC)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/03/2009 ENDING DATE: 31/03/2010  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Haur-Zaintz@ "Desarrollo de una solución tecnológica de ayuda al diagnóstico, seguimiento y evolución de trastornos del neurodesarrollo infantil."  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/02/2009 ENDING DATE: 31/12/2009  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Parametrización de la actividad neuronal mediante resonancia magnética. (DISLEXRM2)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/01/2009 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Análisis de la Activación Neuronal Mediante Resonancia Magnética Funcional en Pacientes Disléxico. DISLEXRM  
FUNDING ENTITY: Ministerio de Ciencia e Innovación  
STARTING DATE:01/01/2009 ENDING DATE: 31/12/2011  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Identificación de nuevos marcadores morfológicos y moleculares de utilidad en el diagnóstico diferencial entre nevi benignos y melanoma maligno. DERMOGEN  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. SAIOTEK Program  
STARTING DATE:01/10/2009 ENDING DATE: 31/12/2010  
CHIEF RESEARCHER: Ibon Ruiz Oleagordia

PROJECT TITLE: Desarrollo de un software de diagnóstico y estadificación de lesiones cutáneas basado en algoritmos de procesado digital de imagen (DERMOPAS)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/11/2008 ENDING DATE: 31/12/2009  
CHIEF RESEARCHER: Ibon Ruiz Oleagordia

PROJECT TITLE: Parametrización de la actividad neuronal mediante resonancia magnética.(DISLEXRM)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/11/2008 ENDING DATE: 31/12/2009  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: ROAD60: Retos y oportunidades digitales para una mejor calidad de vida en la población de personas mayores  
FUNDING ENTITY:  
STARTING DATE:10/2008 ENDING DATE: 12/2010  
CHIEF RESEARCHER: Diego López de Ipiña González de Artaza

PROJECT TITLE: Desarrollo del Diagnóstico, Rehabilitación y Aprendizaje de la Voz Esofágica a través del Uso de las TICs (ESOFATIC)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/07/2008 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Full EasyPAS  
FUNDING ENTITY: Universidad de Deusto  
STARTING DATE:01/06/2008 ENDING DATE: 01/06/2009  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Nuevo dispositivo biométrico para el acceso a entornos restringidos (BIOKEY 2)  
FUNDING ENTITY: Spanish Ministry of Employment and Social Security. AVANZA Program  
STARTING DATE:01/05/2008 ENDING DATE: 31/12/2009  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Software para la Voz Esofágica (II)  
FUNDING ENTITY: Spanish Ministry of Foreign Affairs and Cooperation  
STARTING DATE:01/01/2008 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Soluciones Tecnológicas para la Vida Diaria de los Mayores. e-SENIOR\_SOLUTIONS  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. INNOTEK  
STARTING DATE:01/01/2008 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Soluciones Tecnológicas para la Vida Diaria de los Mayores. e-SENIOR\_SOLUTIONS  
FUNDING ENTITY: Spanish Ministry of Industry, Trade and Tourism. PROFIT TRACTOR Program  
STARTING DATE:01/01/2008 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Home Biometrikoa (BIOHOME)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/01/2008 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: EVALUACIÓN OBJETIVA DE PATOLOGÍAS VOCALES EN BASE A CRITERIOS ACÚSTICOS Y DE MODELADO GRÁFICO (II)  
FUNDING ENTITY: Spanish Ministry of Foreign Affairs and Cooperation  
STARTING DATE:01/01/2008 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Mejora y evaluación objetiva de la voz esofágica en tiempo real  
FUNDING ENTITY: Spanish Ministry of foreign affairs.  
STARTING DATE: 01/01/2007 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: Begoña García Zapiráin

PROJECT TITLE: Análisis Objetivo de Lesiones Dermatológicas con Riesgo de Melanoma (AOLDERM)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/10/2007 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Sistema de adaptación de software técnico para personas con discapacidad visual y auditiva (SADAV)  
FUNDING ENTITY: Spanish Ministry of Industry, Trade and Tourism.  
STARTING DATE:01/06/2007 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Nuevo dispositivo biométrico para el acceso a entornos restringidos (BIOKEY)  
FUNDING ENTITY: Spanish Ministry of Industry, Trade and Tourism. PROFIT Program  
STARTING DATE:01/03/2007 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Software para la Voz Esofágica (I)  
FUNDING ENTITY: Spanish Ministry of Foreign Affairs and Cooperation  
STARTING DATE:01/01/2007 ENDING DATE: 31/12/2007  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: EVALUACIÓN OBJETIVA DE PATOLOGÍAS VOCALES EN BASE A CRITERIOS ACÚSTICOS Y DE MODELADO GRÁFICO (I)  
FUNDING ENTITY: Spanish Ministry of Foreign Affairs and Cooperation  
STARTING DATE:01/01/2007 ENDING DATE: 31/12/2007  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Sistema de Adaptación de Software Técnico para Personas con Discapacidad Visual y Auditiva (AVAS)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/01/2007 ENDING DATE: 31/12/2008  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Diagnóstico Asistido Remoto por la voz a partir de medidas biométricas y otras parametrizaciones (DAREVOZ)  
FUNDING ENTITY: Spanish Ministry of Science and Education  
STARTING DATE:01/01/2007 ENDING DATE: 31/12/2009  
CHIEF RESEARCHER: Juan Ignacio Godino Llorente

PROJECT TITLE: Diagnóstico automatizado del cáncer de laringe (DIACLA)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/11/2006 ENDING DATE: 31/12/2007  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: BIOGILTZ I. Giltza Biometrikoa. Programa Innotek  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/07/2006 ENDING DATE: 31/12/2007  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Biogiltz II. Giltza Biometrikoa  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/07/2006 ENDING DATE: 31/12/2007  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Amélioration Temps- Réel de la Voix des Personnes ayant subi une Ablation du Larynx (Voix Oesophagiennes)  
FUNDING ENTITY: L'Institut National De Recherche En Informatique Et En Automatique (Inria)  
STARTING DATE:01/01/2006 ENDING DATE: 31/12/2009  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Regeneración de la voz esofágica (REVOES)  
FUNDING ENTITY: University of Deusto  
STARTING DATE:01/01/2006 ENDING DATE: 31/12/2007  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Evaluación objetiva de la Evolución de las Enfermedades de la Voz (MEDIPROC)  
FUNDING ENTITY: Department of Industry, Trade and Tourism of the Basque Government.  
STARTING DATE:01/10/2005 ENDING DATE: 31/12/2006  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Descripción articuladora experimental y modelizada de los sonidos del euskara (DAREMOSE)  
FUNDING ENTITY: Department of Education, Universities and Research of the Basque Government  
STARTING DATE:01/07/2005 ENDING DATE: 30/06/2008  
CHIEF RESEARCHER: Rosa Miren Pagola Petirena

PROJECT TITLE: Mejora de la inteligibilidad en las comunicaciones telefónicas entre laringectomizados (LARPHONE)  
FUNDING ENTITY: Microsystem Engineering, Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/11/2004 ENDING DATE: 31/12/2005  
CHIEF RESEARCHER: María Begoña García Zapirain

PROJECT TITLE: Sistema de regeneración esofágica (ESOIMPROVE)  
FUNDING ENTITY: Microsystem Engineering, Department of Industry, Trade and Tourism of the Basque Government. STARTING DATE:01/01/2003 ENDING DATE: 31/12/2004  
CHIEF RESEARCHER: José María Angulo Usategui

PROJECT TITLE: Sistema de regeneración esofágica  
FUNDING ENTITY: University of Deusto  
STARTING DATE:01/01/2002 ENDING DATE: 31/12/2002  
CHIEF RESEARCHER: María Begoña García Zapirain

## Publications

## Indexed Journals

54. De la Torre I, García-Zapirain B, Lopez-Coronado M, Rodriguez J, Del Pozo C. A New m Health App for Monitoring and Awareness of Healthy Eating: Development and User Evaluation by Spanish Users. *Journal of Medical Systems*, 2017 (Accepted).
53. Alexander Iribar Ibabe, Rosa Miren Pagola Petrirena, Itziar Túrrez Aguirrezabal, José Luis García Arroyo, Begoña García Zapirain and Ibon Oleagordia Ruiz. Parameters of tongue shape of /n/ and /l/ in Basque. *Journal of the International Phonetic Association*. JCR= 0.439 (2015) Q3, 116/181 (LINGUISTICS). IN PRESS 2017
52. Jose Luis García Arroyo and Begoña García Zapirain. Segmentation of skin lesions based on fuzzy classification of pixels and histogram thresholding. *IEEE Journal of Biomedical and Health Informatics*. JCR= 2.093 (2015) Q1, 29/144 (COMPUTER SCIENCE) IN PRESS 2017
51. Alain Sánchez-González, Begonya García-Zapirain. EEG Mu rhythm suppression analysis during observation-execution tasks in children with Attention-Deficit/Hyperactivity Disorder. *Journal of Medical Imaging and Health Informatics*. Q4 In press
50. Jan Derkacz, Mikołaj Leszczuk, Michał Grega, Arian Koźbiał, Fernando Jorge Hernández, Amaia Mendez Zorrilla, Begoña García Zapirain, Kamel Smaili. Definition of Requirements for Accessing Multilingual Information Opinions. *Multimedia Tools and Applications* manuscript. IF: Q2 (In press)
49. Y. Garcia-Chimeno, B. Garcia-Zapirain, M. Gomez-Beldarrain, B. Fernandez-Ruanova, and J. C. Garcia-Monco, "Automatic migraine classification via feature selection committee and machine learning techniques over imaging and questionnaire data," *BMC Medical Informatics and Decision Making*, vol. 17, no. 1, p. 38, 2017. doi: 10.1186/s12911-017-0434-4) Q2
48. Bousquet, J., Bewick, M., Cano, A. et al. Building bridges for innovation in ageing: synergies between action groups of the EIP on AHA. *J Nutr Health Aging*. Volume 21, Number 1, pp 92 - 104. 2017. doi:10.1007/s12603-016-0803-1. JCR=3.199(2015) Q2.
47. David Ortiz-Puerta; Daniel Sierra-Sosa; Begonya Garcia-Zapirain, Ph.D. Pressure Ulcer image segmentation technique through Synthetic Frequencies generation and contrast variation using Toroidal Geometry. *Biomed Eng Online*. 2017; 16: 4. doi: 10.1186/s12938-016-0298-3. Q3
46. Isabel de la Torre Díez, Begoña Garcia-Zapirain, Miguel López-Coronado, Joel J. P. C. Rodrigues. Proposing Telecardiologic services on cloud for different Medical Institutions: A model of Reference. *Telemedicine and e-Health* doi:10.1089/tmj.2016.0234. IF: 1.791 (2015) Q2
45. Leire Lopez-Samaniego and Begonya Garcia-Zapirain. A Robot-Based Tool for Physical and Cognitive Rehabilitation of Elderly People Using Biofeedback. *Int. J. Environ. Res. Public Health* 2016, 13(12), 1176. 10.3390/ijerph13121176. IF: 2.035 Q2. 2016.
44. Zelai Saenz-de-Urturi and Begonya García-Zapirain Soto. Kinect-based Virtual Game for the Elderly that detects Incorrect Body Postures in Real Time. *Sensors* 2016, 16(5), 704; doi: 10.3390/s16050704, MDPI. Q1 2016
43. Jon Zarrajería, Begoña García-Zapirain. Using actual cases of pathological speech improvement to teach digital signal processing. *International Journal Of Engineering Education*, Vol 32, 2(A).PP: 830-840. ISSN: 0949-149X. JCR(2014)= 0.582. Q3. 2016
42. Alain Sánchez-González, Begonya Garcia-Zapirain. Color and texture based stool detection and classification in Colonoscopy for the automatized calculation of Boston Bowel Preparation Scale. *Journal of Medical Imaging and Health Informatics*. JCR: 0.503. Q4. Volume 6, Number 7, November 2016, pp. 1714-1719(6). <https://doi.org/10.1166/jmih.2016.1877>
41. Fernando Jorge Hernández, Begoña García Zapirain-Soto. Reliability Test for Processing of Magnetic Resonance Images in Resting State using Graph Theory.

Bio-Medical Materials and Engineering, Volume 6, Number 5, September 2016, pp. 1288-1292(5). JCR: 0.503 Q4. <https://doi.org/10.1166/jmih.2016.1914>

40. Gonzalo Eguiluz-Perez, Begonya Garcia-Zapirain. Human Trunk Correction System to Avoid Bad Postures Of Multiple Sclerosis Patients During Workout Sessions Using Image Processing Algorithms. *Journal of Medical Imaging and Health Informatics*. Volume 6, Number 5, September 2016, pp. 1260-1265(6) Q4. <https://doi.org/10.1166/jmih.2016.1909>
39. Begoña Garcia-Zapirain, Isabel de la Torre Díez, Miguel López-Coronado, Beatriz Sainz de Abajo. Development, Technical and User Evaluation of a Web-Mobile Application for Self-Control of Diabetes. *Telemedicine and e-Health*. 2016 Sep;22(9):778-85. doi: 10.1089/tmj.2015.0233. Epub 2016 Mar 16. Q3 2016
38. Marian Gomez Beldarrain, M.D.; Isabel Oroz, Psych. D; Begoña Garcia-Zapirain, Ph.D.Eng; Begoña Fernandez-Ruanova, M.D; Yolanda Garcia Chimeno, Eng; Alberto Cabrera, M.D; Ane Anton Ladislao, M.Sc; Urko Aguirre Larracochea, M.Sc; Juan Carlos Garcia-Monco, M.D. Right fronto-insular white matter tracts link Cognitive Reserve and Pain in migraine patients. *The Journal of Headache and Pain* 2016, 17:4. DOI:10.1186/s10194-016-0593-1. Q2 69/192 (Clinical Neurology)
37. Begonya Garcia-Zapirain; Yolanda Garcia-Chimeno; Ibone Saralegui; Begonya Fernandez-Ruanova; Ricardo Martinez. Differences in effective connectivity between children with dyslexia, monocular vision and typically developing readers: A DTI study. *Biomedical Signal Processing and Control*, Volume 23, January 2016, Pages 19–27. doi:10.1016/j.bspc.2015.07.009. (ISSN: 1746-8094). JCR(2014)= 1.419. Q3 15/30 (MEDICAL LABORATORY TECHNOLOGY)
36. Zelai Saenz de Urturi; Begoña García Zapirain; Amaya Mendez Zorrilla. Elderly user experience to improve a Kinect-based game playability. *Behaviour & Information Technology*. Volume 34, Issue 11. Pages 1040-1051. DOI:10.1080/0144929X.2015.1077889. (ISSN: 0144-929X) JCR(2014)=0.891. Q3 15/24 (COMPUTER SCIENCE, CYBERNETICS)
35. Jose Luis García Arroyo; Begoña García-Zapirain. Hypopigmentation pattern recognition in dermoscopy images for melanoma detection. *Journal of Medical Imaging and Health Informatics*, Vol. 5, 1875-1879 (ISSN 2156-7018) JCR(2013)=0.623. Q4 112/122 (RADIOLOGY, NUCLEAR MEDICINE & MEDICAL IMAGING). 2015
34. Nuria Aresti-Bartolome and Begonya Garcia-Zapirain. Cognitive rehabilitation system for children with Autism Spectrum Disorder using serious games: A pilot study. *Bio-Medical Materials and Engineering*. 26 (s1). 811-824. DOI: 10.3233/BME-151373. (ISSN 0959-2989) JCR(2013)=0.847. Q4. 62/77 (ENGINEERING, BIOMEDICAL). 2015
33. Amaia Méndez Zorrilla and Begoña García Zapirain. Vocal Folds Morphological Pathologies Detection using Gabor Filtering and Principal Components Analysis. *Technology and Health Care* (2015). IOS Press. (ISSN: 0928-7329) JCR(2013)=0.636. Q4. 67/76 (ENGINEERING, BIOMEDICAL) 2015
32. Yolanda Garcia-Chimeno; Begonya Garcia-Zapirain. hClass: Automatic classification tool for health pathologies using Artificial Intelligence Techniques. *Bio-Medical Materials and Engineering*, 26. S1821-S1828. DOI: 10.3233/BME-151484. (ISSN 0959-2989) JCR(2013)=0.847. Q4. 62/77 (ENGINEERING, BIOMEDICAL). 2015
31. Natalia Wrońska, María Begoña Garcia-Zapirain, Amaia Mendez-Zorrilla. iPad-based Tool for Improving Skills of Children with Attention Deficit Disorder. *International Journal of Environmental Research and Public Health*, 12, 6261-6280. DOI: 10.3390/ijerph120606261 (ISSN 1660-4601). JCR(2013)= 1.993, Q2, 90/215 (ENVIRONMENTAL SCIENCES). 2015
30. Alain Sánchez-González, Begoña García-Zapirain, Iratxe Maestro Saiz, Izaskun Yurrebaso Santamaría. Patient prognosis based on feature extraction, selection and classification of EEG periodic activity. *Bio-Medical Materials and Engineering*, 26, S1569–S1578. DOI 10.3233/BME-151456 (ISSN 0959-2989) JCR(2013)=0.847. Q4. 62/77 (ENGINEERING, BIOMEDICAL). 2015

29. Ibon Oleagordia-Ruiz and Begonya Garcia-Zapirain. Harmonic to noise ratio improvement in oesophageal speech. *Technology and Health Care* 00 (2015) 1–10. DOI 10.3233/THC-15090. IOS Press. ISSN: 0928-7329. JCR(2013)= 0.636 Q4.
28. Perez PJ, Garcia-Zapirain B, Mendez-Zorrilla A. Caregiver and social assistant robot for rehabilitation and coaching for the elderly. *Technol Health Care*. 2015 Feb 6. [Epub ahead of print]. ISSN: 0928-7329. JCR(2013)= 0.636 Q4.
27. L. Moreno-Alsasua, B. Garcia-Zapirain and A. Mendez-Zorrilla. Analysis of the sleep quality of elderly people using biomedical signals. *Bio-Medical Materials and Engineering*, 26. S1077-S1085. DOI:10.3233/BME-151404. ISSN (0959-2989) JCR(2013)=0.847 Q4.
26. Maite Frutos-Pascual and Begonya Garcia-Zapirain. Assessing Visual Attention Using Eye Tracking Sensors in Intelligent Cognitive Therapies Based on Serious Games. *Sensors* 2015, 15(5), 11092-11117. MDPI 2015. (ISBN:1424-8220) JCR(2013)=2.048 Q1
25. De la Torre Diez; M Lopez Coronado; Begoña Garcia-Zapirain Soto; Amaia Mendez Zorrilla. Secure Cloud-based Solutions for different E-health Services in Spanish Rural Health Centers. *Journal of Medical Internet Research* 17(7) e157. DOI: 10.2196/JMIR.4422. ISSN: 1438-8871. JCR= 3.4 (2014). Q1.
24. Ortiz-Vigon Uriarte, I.L.; Garcia-Zapirain, B.; Garcia-Chimeno, Y. Game Design to Measure Reflexes and Attention Based on Biofeedback Multi-Sensor Interaction. *Sensors* 2015, 15 (3), 6520-6548. JCR=2.048 (2013), Q1.
23. Asier Lopez-Basterretxea, Amaia Mendez-Zorrilla, María Begoña Garcia-Zapirain. Eye/Head Tracking Technology to Improve HCI with iPad Applications. *Sensors* 15, 2244-2264. (2), 2015. JCR=2.048 (2013), Q1.
22. J. A. Urigüen and B. García Zapirain, “EEG artifact removal – State-of-the-art and guidelines.” *Journal of Neural Engineering* (in press). JCR(2013)= 3.415, Q1.
21. Saralegui Ibone, Ontañón Jose M, Fernandez-Ruanova Begoña, García-Zapirain Begoña, Basterra Alejandro, Sanz-Arigita Ernesto. Reading networks in children with dyslexia compared to children with ocular motility disturbances revealed by fMRI. *Frontiers in Human Neuroscience* Vol. 8, DOI:10.3389/fnhum.2014.00936. (ISSN 1662-5161) JCR(2013)=2.9. Q2.
20. Leire Lopez-Samaniego, Begonya Garcia-Zapirain and Amaia Mendez-Zorrilla. Memory and accurate processing brain rehabilitation for the elderly: LEGO robot and iPad case study. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 3549-3556. DOI: 10.3233/BME-141181. (ISSN 0959-2989) JCR(2013)=0.847 Q4.
19. Yolanda García Chimeno, Begonya García Zapirain, Ibone Saralegui Prieto, Begonya Fernandez-Ruanova. Automatic classification of dyslexic children by applying Machine Learning to fMRI images. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 2995-3002. DOI: 10.3233/BME-141120. (ISSN 0959-2989) JCR(2013)=0.847 Q4.
18. Rizwan Ishaq, Begoña García Zapirain. Optimal Subband Kalman Filter for Normal and Oesophageal Speech Enhancement. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 3569-3578. DOI:10.3233/BME-141183. (ISSN 0959-2989) JCR(2013)=0.847 Q4.
17. Gonzalo Eguiluz-Perez, Begonya Garcia-Zapirain. Comprehensive Verticality Analysis and Web-based Rehabilitation System for People with Multiple Sclerosis with Supervised Medical Monitoring. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 3493-3502. DOI:10.3233/BME-141175. (ISSN 0959-2989) JCR(2013)=0.847 Q4.
16. María Viqueira Villarejo, Jose Maeso García, Begoña García Zapirain and Amaia Méndez Zorrilla. Technological solution for the objective gait parameterization using pressure sensors: case study Multiple Sclerosis patients. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 3511-3522. DOI:10.3233/BME-141177. (ISSN 0959-2989) JCR(2013)=0.847 Q4.



15. María Viqueira Villarejo, Begoña García Zapirain, Amaia Méndez Zorrilla. Shoe-integrated sensors in physical rehabilitation. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 3523-3528. DOI:10.3233/BME-141178. (ISSN 0959-2989) JCR(2013)=0.847 Q4.
14. Fernando Jorge-Hernandez; Yolanda Garcia Chimeno, Begonya Garcia-Zapirain, Alberto Cabrera Zubizarreta, Maria Angeles Gomez Beldarrain and Begonya Fernandez-Ruanova. Graph Theory for feature extraction and classification: a migraine pathology case study. *Bio-Medical Materials and Engineering* Volume 24, Issue - 6, 2979-2986. DOI: 10.3233/BME-141118. (ISSN 0959-2989) JCR(2013)=0.847 Q4.
13. Nuria Aresti Bartolomé, Begoña García Zapirain. Technologies as support tools for persons with Autistic Spectrum Disorder: A systematic review. *Int. J. Environ. Res. Public Health* 2014, 11. DOI: 10.3390/ijerph110807767. (ISSN 1660-4601) JCR(2013)=1.993 Q2.
12. Iskander Sánchez-Rola; Begoña García Zapirain. Mobile NBM - android medical mobile application designed to help in learning how to identify the different regions of interest in the brain's white matter. *BMC Medical Education* 2014, 14:148. DOI:10.1186/1472-6920-14-148 (ISSN: 1472-6920) JCR(2013)=1.409 Q2.
11. Asier Lopez Basterretxea; Amaia Mendez Zorrilla; Begoña Garcia Zapirain. A Telemonitoring Tool based on Serious Games Addressing Money Management Skills for People with Intellectual Disability. *Int. J. Environ. Res. Public Health*. 11 - 3, pp. 2361 - 2380. MDPI, 2014. DOI:10.3390/ijerph110302361 (ISSN 1660-4601) JCR(2013)=1.993 Q2.
10. Alvaro Muro de la Herran; Begoña Garcia Zapirain; Amaia Mendez Zorrilla. Gait Analysis Methods: An overview of wearable and non-wearable systems, Highlighting Clinical Applications. *Sensors*. 14 - 2, pp. 3362 - 3394. MDPI 2014. DOI:10.3390/s140203362 (ISBN:1424-8220) JCR(2013)=2.048 Q1.
9. Maite Frutos Pascual; Begoña Garcia Zapirain; Amaia Mendez Zorrilla. Adaptive Tele-Therapies Based on Serious Games for Health for People with Time-Management and Organisational Problems: Preliminary Results. *Int. J. Environ. Res. Public Health* 2014, Vol. 11, pp. 749 - 772. DOI:10.3390/ijerph110100749. (ISSN 1660-4601) JCR(2013)=1.993 Q2.
8. Jose Luis García Arroyo; Begoña García Zapirain. Detection of pigment network in dermoscopy images using supervised machine learning and structural analysis. *Computers in Biology and Medicine* 44, pp. 144 - 157. Elsevier, 2014. DOI: 10.1016/j.combiomed.2013.11.002. (ISSN: 0010-4825) JCR(2013)=1.475 Q2.
7. Gonzalo Eguiluz Pérez; Begoña Garcia Zapirain. Use A Time-Of-Flight Camera With Omek Beckon Framework To Analyze, Evaluate And Correct In Real Time The Verticality Of Multiple Sclerosis Patients During Exercise. *Advances In Telehealthcare, A Special Issue Of International Journal Of Environmental Research And Public Health*. Vol. 10(11):5807-29. MDPI, 2013. DOI:10.3390/ijerph10115807.(ISSN 1660-4601) JCR(2013)=1.993 Q2.
6. Florent Grenez, María Viqueira Villarejo, Begoña García Zapirain and Amaia Mendez Zorrilla. Wireless Prototype Based on Pressure and Bending Sensors for Measuring Gate Quality. *Sensors* 2013, 13, 9679-9703; doi:10.3390/s130809679. (ISSN:1424-8220) JCR (2013)=2.048 Q1
5. Villarejo, M.V.; Zapirain, B.G.; Zorrilla, A.M. Algorithms Based on CWT and Classifiers to Control Cardiac Alterations and Stress Using an ECG and a SCR. *Sensors* 2013, 13, 6141-6170. DOI:10.3390/s130506141 (ISSN:1424-8220) JCR(2013)=2.048 Q1.
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- Authors: Jose Luis García Arroyo and Begoña García Zapirain.  
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Chapter: Comparison of image processing techniques for reticular pattern recognition in melanoma detection  
Editorial: CRC Press/Taylor & Francis (2015). Pp. 131-181.
- Authors: María Viqueira Villarejo, Begoña García Zapirain, Amaia Méndez Zorrilla  
Title: Medical Imaging in Clinical Practice  
Chapter 6: Ocular Movement and Cardiac Rhythm Control using EEG techniques  
Editorial: InTech (2013)  
ISBN: 980-953-307-710-4
- Authors: Amaia Méndez Zorrilla, Begoña García Zapirain.  
Title: Medical Imaging in Clinical Practice  
Chapter 8: Vocal Folds Stroboscopic Image Processing for Otolaryngology  
Editorial: InTech (2013)  
ISBN: 980-953-307-710-4
- Authors: A Simancas; Amaia Méndez Zorrilla; Begoña García Zapirain.  
Title: Advances In Medicine And Biology 69, Pp. 237 - 248.  
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Editorial: Nova Science Publishers, 2013.
- Authors: Jose Luis García Arroyo; Begoña García Zapirain.  
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Chapter: Automated Detection Of Melanoma In Dermoscopic Images  
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- Authors: Alberto Ochoa; Nemesio Castillo Viveros; Lourdes Margain; Begoña García Zapirain; Amaia Méndez Zorrilla.  
Title: Blurring Organizational Issues And Social Phenomena In The Age Of Technology: A Multidisciplinary Perspective.  
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- Authors: Maite Frutos Pascual; Begoña García Zapirain.  
Title: Advances In Medicine And Biology 69  
Chapter: Evolution And Use Of Serious Games For Health: Review And Practical Case About People With ADHD.  
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Editorial: Nova Science Publishers, 2013.
- Authors: Javier Vicente Sáez; Begoña García Zapirain.  
Title: Advances In Engineering Research. 8  
Chapter: Hardware Acceleration Unit-Based Signal Processing Reconfigurable Through Software  
Editorial: Nova Science Publishers, 2013.
- Authors: Begoña García Zapirain; Amaia Méndez Zorrilla.  
Title: Handbook of Research on ICTs for Human-Centered Healthcare and Social Care Services.  
Chapter: Independent Living Support For Disabled And Elderly People Using Cell Phones.  
Editorial: IGI Global, 2013.
- Authors: Gonzalo Eguiluz Pérez; Begoña García Zapirain.  
Title: Advances In Engineering Research. 7, Pp. 125 - 152.  
Chapter: Technologies For Depth Measurement In Images: A State-Of-The-Art Review  
Editorial: Nova Science Publishers, 2013.
- Authors: Begoña García Zapirain, Ibon Ruiz Oleagordia, Amaia Mendez  
Title: Advanced in Wavelet Theory and their applications in Engineering, Physics, and Technology  
Chapter 5: Oesophageal Speech's Formants Measurement Using Wavelet Transform  
Editorial: In-Tech (2012)  
ISBN: 978-953-51-0494-0

Authors: María Viqueira, Begoña García Zapirain, Amaia Mendez, Ibon Ruiz Oleagordia,  
Title: Advanced in Wavelet Theory and their applications in Biology and Geoscience  
Chapter 5: Wavelet Transform for the analysis of EEG signals in patients with oral communications problems.

Editorial:In-Tech (2012)  
ISBN: 978-953-51-0212-0

- Authors: Ibon Ruiz Oleagordia ,Begoña García Zapirain  
Title: Advanced in Wavelet Theory and their applications in Biology and Geoscience  
Chapter 5: Improvement of shimmer parameter of oesophageal voices Using Wavelet Transform. pp. 139 - 160.  
Editorial:In-Tech (2012)  
ISBN: 978-953-51-0212-0
- Authors: Begoña García Zapirain, Ibon Oleagordia Ruiz, Amaia Méndez Zorrilla, Mikel Mendezona  
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Chapter 6: Oesophageal Voice, Objective Quality Assessment  
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- Authors: B. García, A. Méndez, I. Ruiz, J. Vicente, Agustín Pérez  
Title: La voz esofágica: Evaluación objetiva en procesos de diagnóstico, rehabilitación y aprendizaje  
Editor: Deusto (2009)  
ISBN: 84-9830-186-6
- Authors: B. García, I. Ruiz, A. Méndez,  
Title: Recent Advances in Signal Processing  
Chapter: Audio and Image Processing easy learning for engineering students using easyPAS Tool  
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ISBN: 978-953-307-002-5
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Title: Lecture Notes in Computer Science 2009  
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- Authors: Angulo Usategui, José María; García Zapirain, María Begoña; Vicente Sáez, Javier; Angulo Martínez, Ignacio;  
Title: Microcontroladores Avanzados dsPIC  
Editorial: Paraninfo (2006)  
ISBN: 84-9732-385-8

## Membership Professional Organisations

- of
- Representative of the University of Deusto in the European Joint Action Ja-Chrodis Addressing Chronic Diseases and Healthy Ageing across the life cycle
  - Member of IEEE (Institute of Electrical and Electronics Engineers)
  - Collaborator in the Thematic Network on Innovation for Age-Friendly Environments (AFE-INNOVNET, European Commission)
  - Collaborator in Territoires de Demain and Arenotech Networks
  - Collaborator in AgeinWell Network
  - Main Researcher of LS2TECH, in the Red de Espacios Sociales de Innovación ESdl.
  - Main Researcher of eVIDA research group, recognized by the Basque Government
  - Researcher at “Nuevas tecnologías en salud y servicios sociales de Kronikgune (Centro de excelencia internacional en investigación sobre cronicidad)”
  - Peer reviewer for Akredita Chile.
  - Organizing Committee Member of several International Conferences:  
Traitement et Analyse de l'Information Méthodes et Applications (TAIMA) 2007-2013; Flexible Automation and Intelligent Manufacturing (FAIM) 2005; 3RD Advanced Voice Function Assessment International Workshop (AVFA) 2009; International Symposium on Image/Video Communications (ISIVC) 2010; Jornadas de Accesibilidad y Nuevas Tecnologías (JANT) 2004
  - Scientific Committee Member of several International Conferences:  
International Symposium on Signal Processing and its Applications - ISSPA 2007 (IEEE Y EURASIP); IEEE Symposium on Signal Processing and Information Technology (ISSPIT) 2010-2011; Traitement et Analyse de l'Information Méthodes et Applications (TAIMA) 2007-2013; International Conference on Communications, Networking and Information Technology (MIC-CNIT) 2013, and others.
  - Reviewer of several international scientific journals:
  - Sensors (MDPI), JCR, 2012-2015; Journal of Medical Systems. Springer. JCR. 2010-2013; Biomedical Signal Processing and Control JCR; IEEE RITA. 2008-2011; Revista de Ingenieria. 2010-2011; EURASIP Journal on Advances in Signal Processing. 2009; CESEI-CTAE. 2009-2013; INT. Journal of Computer Systems, Science and Engineering. 2010; Journal of Sensor and Actuator Networks. 2012; Journal of Intelligent Games and Simulation. 2011-2013; BJASt; Future Generations; DYNA; International Journal of Biochemistry Research and Review, and others.
  - Evaluator of the Best PhD Dissertation and Best Final Year Project Awards at the Colegio Oficial de Ingenieros de Telecomunicación.
  - Member of the Management Committee of Asociación Europea de la Red de Living Labs y Espacios de Innovación de América latina y el caribe.

**Presentations  
seminars  
conferences**

**at  
and**

More than 160 referred papers in conferences such as ICIP, ICASSP, EUSIPCO, EMBC, Biomed, ISSPIT, IWAAL, ISSPA, EDUCON, IGIP, REHAB, GIC, ICBEB, ISAMI, INTERTECH, CGames, ISIVC, BIOSIGNAL, etc. Some of the most relevant are listed below:

- J. J. Lamas-Seco, P. M. Castro, A. Dapena, F. J. Vázquez-Araujo, B. Garcia-Zapirain, "SimSiVIDS: Modelling of an Inductive Sensor for Traffic Applications", UKSim-AMSS 9th European Modelling Symposium on Mathematical Modelling and Computer Simulation, October 6-8, 2015, Madrid, Spain.
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- Adel Elmaghraby, Amaia Mendez, Begoña Garcia Zapirain, Walaa Sheta, Saleh el Shehaby. Serious Games and Health Informatics: A Unified Framework. CGAMES 2012, Louisville, Kentucky, USA.
- Ishaq R., García Zapirain B., Adaptive Gain Equalizer for Improvement of Esophageal Speech. ISSPIT 2012. Ho Chi Minh City. Vietnam.
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- Francisco Javier Oliver Bernal; María Begoña García Zapirain. Students' Attitudes to Engineering Education. Educon 2012, Marrakech, Morocco.
- Begoña García Zapirain, Amaia Mendez Zorrilla, Gonzalo Eguluz, Javier Oliver. Videoconference Software for E-Learning of Communication Theory for Telecommunications Engineering Students. XII International Conference on Engineering and Technology Education (InterTech), Dili, East Timor, 2012.
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- Ishaq, Rizwan;Garcia Zapirain, Begoña. "Esophageal Speech Enhancement using Modified Voicing Source". ISSPIT 2013, Atenas, Greece.

## Honours and awards

- Mujer y Tecnología Award – Fundacion Orange 2016
- Accésit Research Award UD-Grupo Santander 2015
- Accesit: DonaTIC Award 12x12 2015
- Accesit: Ada Byron Award to the Technologist Woman 2015
- Finalist in "Social Innovation in Ageing – The European Award 2014"
- Best student of Executive MBA 2011
- Best Paper Award. CGAMES09
- Research Award: UD- Banco Santander. 2007
- Research Award: ONCE Euskadi-Solidarios. 2007