UNIVERSIDAD DE GRANADA

RESEARCHING GROUP ON "CIRCUITS AND SYSTEMS FOR INFORMATION PROCESSING"
(CASIP TIC-117)
DEPARTMENT OF COMPUTER ARCHITECTURE AND COMPUTER TECHNOLOGY

1. Introduction

The group CASIP is officially recognized as researching group by the Regional Government (Junta de Andalucía) with reference TIC-117, and is one of the groups included in the Researching Thematic Unit on Advanced Computing Architectures and Smart Embedded Systems (ACASES) of the Research Center for Information and Communications Technologies of the University of Granada (CITIC-UGR, http://citic.ugr.es/). The group, led by Dr. Miguel Damas Hermoso, is composed by members of the Department of Computer Architecture and Computer Technology (https://atc.ugr.es) teaching subjects related with Computer Technology and Architecture, High Performance Computing, Application Specific Integrated Circuits and Systems, Control Systems, Operating Systems and Programming on the Graduate studies of Computer Engineering, Electronics Engineering, Telecommunications Engineering, Physics and Chemistry, and some university master's degrees.

The group CASIP is composed by 45 members (of which 34 are PhD) and collaborators. Among the members, there are 9 full professors and 17 associate professors. Ten members have received the Graduate Extraordinary Prize, and nine have received the Doctorate Extraordinary Prize. Some bibliometric results of the group:

- Results found: 952
- Times cited: 9020
- Mean cites per paper: 11,2
- H-index (Web of Science): 48

The mission of the group CASIP is to develop high quality researching, developing and innovation activities in areas of Information and Communication Technologies (ICT) for the advancement of scientific and technological knowledge, and to improve the quality of life of the citizens and the competitiveness of companies in our socio-economic environment. The areas of interest of CASIP are the following ones:

- High Performance Architectures and Distributed Systems.
  - Advanced implementation of network interfaces and distributed file systems.
  - High performance computing (HPC) and novel architectures and algorithms in bioengineering, biomedicine and bioinformatics.
  - Application-Specific embedded systems for smart vision sensors, robotics and instrumentation.
  - Safety embedded systems for avionics, automotive or industry.
  - Mobile and Cloud computing infrastructure.
- Neural Engineering.
  - Computational Neuroscience.
  - Brain simulation.
  - Brain Computer Interface (BCI) technologies and applications.
  - Neuromorphicengineering.
- Advanced Monitoring and Control Systems.
  - Embedded systems for control of distributed networks.
  - Online self-organizing adaptive smart embedded controllers.
  - Inference behaviour in sensor networks for monitoring in smart spaces.

- Control and monitoring of large scientific infrastructures.
- Remote monitoring and control of environmental parameters for energy efficient buildings and risk prevention.

The target applications of CASIP belong to the following areas:

- e-Health and well-being.
- Computer-aided medical diagnosis.
- Scientific Instrumentation
- e-Monitoring and control
- Smart spaces and ubiquitous systems
- Systems for people with special needs

According to the HORIZON 2020 Framework Programme for Research and Innovation (http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020) of the European Commission and the "Plan Estatal de Investigación Científica y Técnica y de Innovación, 2013-2016" (National Programme for Scientific and Technological Researching and Innovation, 2013-2016) of the Spanish Government, the most relevant Societal Challenges addressed by CASIP are:

- Health and wellbeing
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies

Moreover, considering the six main activity lines indentified in the ICT Leadership in Enablig and Industrial Technologies of the Horizon 2020 Programme (http://ec.europa.eu/programmes/horizon2020/en/h2020-section/information-and-communication-technologies):

a) A new generation of components and systems: Engineering of advanced and smart embedded components and systems;
b) Next generation computing: Advanced computing systems and technologies;
c) Future Internet: Infrastructures, technologies and services;
d) Content technologies and information management: ICT for digital content and creativity;
e) Advanced interfaces and robots: Robotics and smart spaces;
f) Micro- and nanoelectronics and photonics: Key enabling technologies related to micro- and nanoelectronics and to photonics.

The activities of group CASIP clearly deal with activities in lines a), b), c) and e).

Papers on the different researching lines of the group have been published in some of the best International Journals of their corresponding areas, as it can be seen from its ISI impact factor. The formative capability of the group is demonstrated by the high number of Doctoral dissertations advised by its members. One of the members of the group (professor Eduardo Ros) has received the Award for Young Researchers of Andalusia in its edition of 2002 and the group CASIP won the University of Granada's Social Council Award for Knowledge transference (2003 edition).

The main companies that have signed R+D+I contracts with members of the group CASIP are:

- AQUAPLAN
- Atico7,
- Automation Consultants, S.L.,
- BOA COR S.A.,
- CATÓN Sistemas Alternativos
- CIATESA,
- Civista,
- Control in Situ, S.L.,
- Data General,
- EMASAGRA,
- ETC Media, S.L.,

- Fujitsu Spain S.A.,
- HEFAGRA Informática, S.L,
- ICR (Ingeniería y Control Remoto S.A.),
- INFOTEL (Información y Telecomunicaciones S.A.),
- INISEL,
- Intecna Solutions,
- Sadiel,
- SEDIPYME,
- Southern Star,
- Telefónica I+D.
- Telvent Energía y Medio Ambiente, S.A.,
- Telvent Interactiva,
- TQM Asesores
- Viajes Genil, S.A.
- University of Twente
- Nazaríes IT S.L.
- On Granada
- Celtiberial Solutions S.L

Many of those contracts are included in national or regional programmes to promote relationships between public researching organizations and companies (CEDIT, PROFIT, TRACTOR, Technological Corporation of Andalusia, etc.). Moreover, several spin-off companies have been incorporated by members of our group:

- **Ingeniería y Control Remoto (ICR)**
  - Founded by Gonzalo Olivares and Francisco Gómez Mula in 1991.
  - http://www.icr-sa.com/

- **Seven Solutions**
  - Incorporated in 2006, and founded by Eduardo Ros, Javier Díaz, Eva M. Ortigosa, Rodrigo Agís, Richard Carrillo and Rafael Rodríguez.
  - http://www.sevensols.com/

- **Naranjo Intelligent Solutions**
  - Founded by Carlos García Puntonet.
  - http://www.naranjoisolutions.com/

- **Mi refugio infantil S.L. (Tutakaboo)**
  - Founded in 2014 by Alberto Guillén Perales and other professors UGR.
  - https://www.tutakaboo.com/

2. Members

The members of the research group are summarized in the following table. It has been obtained from the SICA (System of Information on Science of Andalusia) database.

N	Nombre	Titulación	Entidad
1	ABADÍA TERCEDOR, IGNACIO	Máster	Universidad de Granada. Arquitectura y Tecnología de Computadores
2	ANGUITA LOPEZ, MANCIA	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
3	BAILÓN ROMACHO, CARLOS	Máster	Universidad de Granada. Arquitectura y Tecnología de Computadores
4	BAÑOS LEGRÁN, ORESTI	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
5	BARRANCO EXPÓSITO, FRANCISCO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
6	BERNIER VILLAMOR, JOSE LUIS	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
7	CANO DELGADO, ABEL MIGUEL	Master	Universidad de Granada. Arquitectura y Tecnología de Computadores

8	CAÑAS VARGAS, ANTONIO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
9	CARRILLO SANCHEZ, RICHARD R	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
10	CASTILLO SECILLA, DANIEL	Titulado superior	Universidad de Granada. Arquitectura y Tecnología de Computadores
11	DAMAS HERMOSO, MIGUEL	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
12	DEL PINO PRIETO, MARIA BEGOÑA	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
13	DÍAZ ALONSO, ANTONIO JAVIER	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
14	DIAZ GARCIA, ANTONIO FRANCISCO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
15	ESCOBAR PÉREZ, JUAN JOSÉ	Máster	Universidad de Granada. Arquitectura y Tecnología de Computadores
16	FERNANDEZ BALDOMERO, FRANCISCO JAVIER	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
17	GARCIA PUNTONET, CARLOS	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
18	GARRIDO ALCÁZAR, JESÚS ALBERTO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
19	GÓMEZ LÓPEZ, JUAN CARLOS	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
20	GÓMEZ MULA, FRANCISCO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
21	GONZÁLEZ PEÑALVER, JESÚS	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
22	GUILLÉN PERALES, ALBERTO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
23	GUTIÉRREZ RIVAS, JOSÉ LUIS	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
24	HERNÁNDEZ PALACIOS, RAÚL	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
25	HERRERA MALDONADO, LUIS JAVIER	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
26	LUQUE SOLA, NICETO RAFAEL	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
27	MARTIN SMITH, PEDRO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
28	MARTÍNEZ ORTIGOSA, EVA	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
29	MORENO GUTIÉRREZ, SALVADOR	Máster	Universidad de Granada. Arquitectura y Tecnología de Computadores
30	MORILLAS GUTIÉRREZ, CHRISTIAN AGUSTÍN	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
31	NAVEROS ARRABAL, FRANCISCO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
32	OLIVARES RUIZ, GONZALO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
33	ORTEGA LOPERA, JULIO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
34	PALOMAR SAEZ, DAVID	Titulado superior	Universidad de Granada. Arquitectura y Tecnología de Computadores
35	PELAYO VALLE, FRANCISCO JOSE	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
36	POMARES CINTAS, HÉCTOR	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
37	PRIETO CAMPOS, BEATRIZ	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
38	PRIETO ESPINOSA, ALBERTO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
39	RODRIGUEZ ALVAREZ, MANUEL	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
40	RODRÍGUEZ QUINTANA, CRISTINA	Máster	Universidad de Granada. E.T.S.I. Informática y de Telecomunicación
41	ROJAS RUIZ, FERNANDO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
42	ROJAS RUIZ, IGNACIO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
43	ROMERO CÁCERES, ADRIÁN	Master	Universidad de Granada. Arquitectura y Tecnología de Computadores
44	ROMERO GARCÍA, SAMUEL FRANCISCO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores
45	ROS VIDAL, EDUARDO	Doctor	Universidad de Granada. Arquitectura y Tecnología de Computadores

3. Funded projects (competitive programmes):

In 2020, there are 11 active projects funded through competitive programmes (contracts and projects with companies not included). In what follows, the projects funded in competitive programmes in the last six years (from 2014) are listed:

European projects:

1. **Title:** Clock Network Services - Design Study (CLONETS-DS)
   Reference: 951886
   Responsible researcher: Javier Díaz Alonso
   Funded by: 2020-INFRADEV-2019-3
   Participants: 18 international centers and more than 40 researchers (3 at the University of Granada)
   Dates: 01/05/2020 - 1/06/2022
   Budget: 109.375 €

2. **Title:** WPENS: Work Package Early Neutron Source-Demo Oriented Neutron Source
   Reference: 633053
   Responsible researcher: Javier Díaz (UGR), Ángel Ibarra (CIEMAT)
   Funded by: EUROFUSION
   Participants: 40+ international centers (3 researchers at the University of Granada)
   Dates: 2020

3. **Title:** FITOPTIVIS- From the cloud to the edge - smart IntegraTion and OPtimization Technologies for highly efficient Image and VIdeo processing Systems
   Reference: H2020-JTIECSEL-2017-783162 y PCI2018-093184
   Responsible researcher: Eduardo Ros Vidal
   Funded by: Unión Europea y Ministerio de Ciencia, Innovación y Universidades.
   Participants: University of Granada (Spain), and 29 researching institutions
   Dates: 01/06/2018 - 31/05/2021
   Budget: 405.875 € (126.000 € nacional)

4. **Title:** HBP: Human Brain Project. Future Neuroscience WP
   Reference: FP7 Flagship Project 604102
   Responsible researcher: Eduardo Ros Vidal
   Funded by: European Union (VII Framework Programme for Research and Innovation). Programme FET. Flagship Project.
   Participants: University of Granada (Spain), and 264 researching institutions
   Dates: 1-10-2013 to 30-09-2023
   Budget: 150.000 €
   Researchers: 14 in UGR

5. **Title:** Teal-Time ASoC
   Reference: PIOF-GA-2012-332081
   Responsible researcher: Eduardo Ros Vidal
   Funded by: European Union (VII Framework Programme for Research and Innovation). Programme Marie Curie (IOF: International Outgoing Fellowships)
   Participants: University of Granada (Spain) and University of Maryland (USA)
   Dates: 7-05-2013 to 6-05-2016
   Budget: 254.925,90 €
   Researchers: 3

6. **Title:** ASTERICS: Astronomy ESFRI and Research Infrastructure Cluster
   Reference: H2020-INFRADEV-1-2014-1
   Responsible researcher: Javier Díaz Alonso
   Funded by: European Union, Project ID: 653477
   Participants: University of Granada (Spain)
   Dates: 1/05/2015 to 30/04/2019
   Budget: 191.100 €

Researchers: 5

7. **Title:** CEREBSENSING: Cerebellar distributed plasticity towards active sensing and motor control
   Reference: H2020 Marie-Sklodowska Curie IF 2014 - 653019
   Researchers: Eduardo Ros Vidal, Jesús Garrido Alcázar
   Funded by: Unión Europea (UE, H2020 Programa Marco). Programa Marie-Sklodowska Curie 2014
   Participants: University of Granada (Spain)

8. **Title:** TOMSY: TOpology based Motion SYnthesis for dexterous manipulation.
   Reference: FP7-270436
   Responsible researcher: Eduardo Ros Vidal
   Funded by: European Union (UE, IST, VII Framework Programme)
   Date: 01/04/2011 – 31/03/2014
   Budget: UGR 434.000 Euros. Total: 3.000.000 Euros
   Researchers: 14

9. **Title**: REALNET: Realistic Real-time Networks: computation dynamics in the cerebellum.
   Reference: FP7-270434
   Responsible researcher: Eduardo Ros Vidal
   Funded by: Unión Europea (UE, IST, VII Programa Marco)
   Date: 01/02/2011 - 31/01/2014
   Budget: UGR 255.070 Euros. Total: 2.387.950 Euros
   Researchers: 18

10. **Title**: FASTDEFORM: Real-time understanding of dexterous deformable object manipulation with bio-inspired architectures.
    Reference: PIEF-GA-2011-301144.
    Responsible researcher: Eduardo Ros Vidal
    Funded by: European Union (UE, IST, VII Framework Programme). Marie Curie Programme (IEF: International European Fellowships)
    Date: desde 15-07-2012 hasta 14-07-2014
    Budget: 168.896,40 €
    Researchers: 2

National projects:

1. **Title:** Nuevos paradigmas de cómputo y arquitecturas heterogéneas paralelas para la mejora en velocidad y energía de tareas de optimización y clasificación en aplicaciones biomedicas
   Reference: PGC2018-098813-B-C31
   Responsible researcher: Jesús González Peñalver y Miguel Damas Hermoso
   Funded by: Ministerio de Ciencia, Innovación y Universidades
   Dates: 01/01/2019 - 31/12/2022
   Budget: 244.420 euros
   Researchers: 12

2. **Title:** AMIGA7: Entornos extremos de galaxias con los precursores de SKA - Desde el diseño del flujo de datos hacia su construcción - Transporte de datos y señales
   Reference: RTI2018-096228-B-C32
   Responsible researcher: Antonio Javier Díaz Alonso, Manuel Rodríguez Álvarez
   Funded by: Ministerio de Ciencia, Innovación y Universidades
   Dates: 01/01/2019 - 31/12/2021
   Budget: 72.600,00 euros

3. **Title:** Arquitecturas de cómputo y soluciones basadas en aprendizaje máquina avanzadas para problemas complejos en Bioinformática, Biotecnología y Biomedicinas
   Reference: RTI2018-101674-B-I00
   Responsible researcher: Ignacio Rojas Ruiz, Luis Javier Herrera Maldonado
   Funded by: Ministerio de Ciencia, Innovación y Universidades

Dates: 01/01/2019 - 31/03/2021
Budget: 134.310,00 euros

4. **Title:** Física fundamental y astronomía multi-mensajero con telescopios de neutrinos en la UGR
Reference: PGC2018-096663-B-C44
Responsible researcher: Antonio Francisco Díaz García, Sergio Navas Concha (Física Teórica)
Funded by: Ministerio de Ciencia, Innovación y Universidades
Dates: 01/01/2019 - 31/12/2021
Budget: 338.800,00 euros

5. **Title:** De la nube a los puntos finales tecnologías de integración inteligente y optimización para sistemas eficientes de procesamiento de imágenes y video
Reference: PCI2018-093184
Responsible researcher: Eduardo Ros Vidal
Funded by: Ministerio de Ciencia, Innovación y Universidades
Dates: 01/06/2018 - 1/06/2021

6. **Title:** Estudio de las propiedades de los rayos cósmicos y de los neutrinos en la UGR
Reference: FPA2017-85197-P
Responsible researcher: Alberto Guillén Perales, Antonio Bueno Villar (Física Teórica)
Funded by: Ministerio de Economía, Industria y Competitividad
Dates: 01/01/2018 - 30/09/2020
Budget: 96.800 euros

7. **Title:** Nuevos modelos de cómputo Bioinspirado para entornos masivamente complejos
Reference: TIN2017-85727-C4-2-P
Responsible researcher: Juan Julián Merelo Guervós, Pedro A. Castillo Valdivieso
Funded by: Ministerio de Economía, Industria y Competitividad
Dates: 01/01/2018 - 31/12/2020
Budget: 70.906 euros

8. **Title:** Laboratorio de distribución de tiempo y frecuencia (LABTIF)
Reference: EQC2018-005214-P
Responsible researcher: Javier Díaz Alonso
Funded by: Ministerio de Ciencia, Innovación y Universidades. Ayudas para la adquisición de equipamiento científico-técnico. Subprograma estatal de Infraestructuras de Investigación y equipamiento científico-técnico
Dates: 01/01/2018 – 31/12/2019
Budget: 790.898 euros
Researchers: 7

9. **Title:** CEREBROT: Cerebelo Adaptativo de Integración sensori-motora y su aplicación en Robótica
Reference: TIN2016-81041-R
Responsible researcher: Eduardo Ros Vidal y Mancia Anguita López
Funded by: Ministerio de Economía y Competitividad y Fondos FEDER
Dates: 1/1/2017 - 31/12/2019
Budget: 82.328,40 euros (78.408,00€, 3.920,40€)
Researchers: 8

10. **Title:** Optimización Multi-Objetivo de Altas Prestaciones y Energéticamente Eficiente en Arquitecturas de Computador Heterogéneas. Aplicaciones en Ingeniería Biomédica (ehpMOBE)
Reference: TIN2015-67020-P
Responsible researchers: Julio Ortega Lopera and Jesús González Peñalver
Funded by: Ministerio de Economía y Competitividad and FEDER funds
Dates: 1/1/2016 - 31/12/2018
Budget: 94.864,00 € (79.306,30 is 2016; 3.225,38 in 2017; 12.332,32 in 2018)
Researchers: 14

11. **Title:** Participación de la UGR en ANTARES, KM3NET-ARCA/ORCA y PDG
Reference: FPA2015-65150-C3-3- P
Responsible researchers: Sergio Navas Concha / Antonio F. Díaz García
Funded by: Ministerio de Economía y Competitividad
Dates: 1/1/2016 - 31/12/2018
Budget: 55.000,00 €

12. **Title:** Amiga-6: Gas en el interior y en el entorno de las galaxias. Preparación científica para SKA y contribución al diseño de flujo de datos. Transmisión de Datos y Señales (SaDT).
Reference: AYA2015-65973-C3-2-R
Responsible researcher: Manuel Rodríguez Álvarez.
Funded by: Ministerio de Economía y Competitividad and FEDER-RETOS funds.
Dates: 1/1/2016 - 31/12/2018
Budget: 100.000,00 € (82.600,00 in 2016; 3.400,00 in 2017; 14.000,00 in 2018)
Researchers: 6

13. **Title:** Avances en arquitecturas de cómputo para aprendizaje automático utilizando fuentes heterogéneas: aplicaciones en salud y bienestar
Reference: TIN2015-71873-R
Responsible researcher: Luis Javier Herrera Maldonado e Ignacio Rojas Ruiz
Funded by: Ministerio de Economía y Competitividad and FEDER funds
Dates: 1/1/2016 - 31/12/2018
Budget: 97.100 €
Researchers: 13 (7 of UGR)

14. **Title:** Neurociencia Computacional en ciclos cerrados de percepción-acción (NEUROPACT)
Reference: TIN2013-47069-P
Responsible researcher: Eduardo Ros Vidal
Funded by: Ministerio de Economía y Competitividad
Dates: 1/1/2014 - 31/12/2016
Budget: 112.500 Euros

15. **Title:** Participación de la Universidad de Granada en el experimento AUGER y su futura mejora AUGERPRIME
Reference: FPA2015-70420-C2-2-R
Responsible researcher: Antonio Bueno Villar and Alberto Guillén Perales
Funded by: Ministerio de Economía y Competitividad and FEDER- RETOS funds.
Dates: 1/1/2016 - 31/12/2018
Budget: 140.000 €
Researchers: 4

16. **Title:** INDOTAC: Mini-UAV para uso táctico y en interiores Indoor and Tactical Purpose (Mini UAV).
Reference: COINCIDENTEDN8644-INDOTAC Programme COINCIDENTE (Cooperación en Investigación Científica y Desarrollo en Tecnologías Estratégicas)
Responsible researcher: Samuel Francisco Romero García
Funded by: Advisor(s) General de Armamento y Material
Dates: 1/10/2015 - 30/09/2017
Budget: 315.114,47 euros (UGR)

17. **Title:** Optimización Multiobjetivo de Altas Prestaciones y Aplicaciones en Neuroingeniería y Técnicas para Rehabilitación
Reference: TIN2012-32039
Responsible researcher: Julio Ortega Lopera
Funded by: Ministerio de Economía y Competitividad
Date: 1/1/2013 - 31/12/2015
Budget: 33.631 (2013), 3.771 (2014), 3.501 (2015) euros

18. **Title:** AbFS: Sistema de Almacenamiento Paralelo y Muy Masivo para HPC & Cloud Computing
Reference: IPT-2011:1728-430000
Responsible researcher: Antonio F. Díaz García
Funded by: Ministerio de Ciencia e Innovación.
Date: 1/10/2011 - 31/12/2014
Budget: 628.431 euros (UGR: 174.438 euros)

Regional and local (CEI BIOTIC) projects:

1. **Title:** Plat-EEG: Plataforma de altas prestaciones para la adquisición, extracción y procesamiento inteligente de señales EEG
Reference: TIC-7983
Responsible researcher: Francisco J. Pelayo Valle
Funded by: Junta de Andalucía
Dates: 27/06/2013 - 26/06/2017
Budget: 100.639,38 €

2. **Title:** Visión tridimensional para videoanálisis interactivo y realidad aumentada (VITVIR)
Reference: P11-TIC-8120
Responsible researcher: Antonio Javier Díaz Alonso
Funded by: Junta de Andalucía
Dates: 27/06/2013 al 26/06/2016
Budget: 37.881,00 €

3. **Title:** UAVs: soluciones técnicas aplicadas al empleo táctico
Reference: PIN 14/2014
Responsible researcher: Samuel F. Romero García and David A. Pelta Mochkovsky
Funded by: Centro Mixto UGR/MADOC – Banco Santander
Dates: 15/11/2014 al 16/5/2016
Budget: 10.000 €
Researchers: 16

4. **Title:** Sistemas de cómputo avanzados en aplicaciones del ámbito de biotecnología y bioinformática
Reference: P12-TIC-2082
Responsible researcher: Ignacio Rojas Ruiz
Funded by: Proyectos Motrices y de Innovación- Junta de Andalucía
Dates: 01/01/2013- 31/12/2016
Budget: 212.990 €
Researchers: 9

5. **Title**: Programa de Fortalecimiento Grupos de Investigación
Reference: TIC-117
Responsible researcher: Julio Ortega Lopera
Funded by: Junta de Andalucía and FEDER funds
Dates: 1/01/2015 – 30/06/2015
Budget: 25.000,00 €

6. **Title:** Proyecto de Iniciación a la Investigación e Innovación en Secundaria en Andalucía: PIIISA (proyecto individual “Iniciación a la investigación en redes sociales”)
Reference: FCT-13-6018
Responsible researcher: Ana Isabel García López
Funded by: Junta de Andalucía, UGR, FECYT and CSIC
Budget: 56900 €
Date: 01/09/2013 - 30/08/2014
Participants: 450 students, 177 researchers, 31 coordinators IES

7. **Title:** Motion-based Vision Systems for UAVs

Reference: PYR-2014-4
Responsible researcher: Francisco Barranco Expósito
Funded by: CEI BioTic GRANADA
Entidades participantes: University of granada, University of Maryland (EEUU)
Date: 01/04/2014 – 31/12/2014
Budget: 3000 €
Número de Researchers: 1

4. Papers in international journals (Q1 and Q2 in JCR impact factor)

The papers published by members of the group, since 2010, in international journals with JCR impact factor, and included in Q1 and Q2 quartiles, are listed below. Among the corresponding 192 papers, 126 papers are Q1 while 66 are Q2, demonstrate the relevance of the researching work accomplished by the group.

1. Baños, R.; Gil, C.; Reca, J.; Ortega, J.:"A Pareto-based Memetic Algorithm for Optimization of Looped Water Distribution Systems". GENO: Engineering Optimization, Vol. 42, No.3, pp.223-240. March, 2010. (Q2)
2. Ortiz, A.; Ortega, J.; Díaz, A.F.; Prieto, A.:"Network Interfaces for Programmable NICs and Multicore Platforms". Computer Networks, 54, pp.357-376, 2010. (Q2)
3. Urquiza, J.M.; Rojas, I.; Pomares, H.; Herrera, L.J.; Ortega, J.; Prieto, A.:"Method for prediction of protein-protein interactions in yeast using genomics/proteomics information and feature selection". Neurocomputing, 74, pp. 2683-2690. 2011. (Q2)
4. Calvo, J.C.; Ortega, J.; Anguita, M.: PITAGORAS-PSP: Including domain knowledge in a multi-objective approach for protein structure prediction". Neurocomputing 74, pp.2675-2682, doi:10.1016/j.neucom.2011.04.003, 2011. (Q2)
5. Díaz, A.F.; Anguita, M.; Camacho, H.E.; Nieto, E.; Ortega, J.: "Two-level Hash/Table approach for metadata management in distributed file systems". The Journal of Supercomputing, Vol. 64, 1, pp. 144-155, April 2013 (DOI: 10.1007/s11227-012-0801-y). (Q2)
6. Baños, R.; Ortega, J.; Gil, C.; Fernández, A.; Toro, F. de: "A Simulated Annealing-based parallel multi-objective approach to vehicle routing problems with time Windows". Expert Systems with Applications, Vol. 40, Issue 5, Pages 1696-1707, April 2013. (DOI: 10.1016/j.eswa.2012.09.012). (Q1)
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8. Ortiz, A.; Ortega, J.; Díaz, A.F.; Anguita, M.: "Leveraging bandwidth improvements to Web servers through enhanced network interfaces". The Journal of Supercomputing, Vol. 65, Issue 3, pp.1020-1036. September, 2013 (D.O.I.: 10.1007/s11227-012-0841-3). (Q2)
9. Hoz, E. de la; Hoz, E. de la; Ortiz, A.; Ortega, J.; Martínez-Álvarez, A.: "Feature selection by multi-objective optimization:application to network anomaly detection by hierarchical self-organizing maps". Knowledge-Based Systems, Vol.71, pp.322-338, 2014. (Q1)
10. Hoz, E. M. de la; Hoz, E. de la; Ortiz, A.; Ortega, J.; Prieto, B.:"PCA filtering and Probabilistic SOM for Network Intrusion Detection". Neurocomputing, 2014. (Q2)
11. Kimovski, D.; Ortega, J.; Ortiz, A.; Baños, R.: "Parallel alternatives for evolutionary multi-objective optimization in unsupervised feature selection". Expert Systems with Applications Vol.42 (9), pp.4239-4252, 2015. (Q1)
12. Baños, R.; Ortega, J.; Gil, C.; Montoya, M.D.G.: "Analysis of OpenMP and MPI implementations of Meta-heuristics for Vehicle Routing Problems". Applied Soft Computing, 43, pp.262-275, 2016. (Q1)
13. Prieto, A.; Prieto, B.; Martinez-Ortigosa, E.; Ros, E.; Pelayo, F.J.; Ortega, J.; Rojas, I.: "Neural networks: An overview of early research, current frameworks and new challenges". Neurocomputing, 2016. (Q1)
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5. PhD Dissertations presented (since 2006)

In what follows, the 79 PhD dissertations presented and/or advised by members of the group are listed:

1. Title: Integration of heterogeneous gene expression sources in human cancer pathologies, employing high performance computing and machine learning techniques
   Author: Daniel Castillo Secilla
   Department: Arquitectura y Tecnología de Computadores (UGR)
   Presentation date: 2020-03-2
   Advisor(s): Ignacio Rojas Ruiz, Luis Javier Herrera Maldonado
   International mention

2. Title: Developing advanced computing techniques in bioinformatics and biomedical engineering
   Author: Juan Manuel Gálvez Gómez
   Department: Arquitectura y Tecnología de Computadores (UGR)
   Presentation date: 2019-06-26
   Advisor(s): Ignacio Rojas Ruiz, Francisco Manuel Ortuño Guzmán
   International mention

3. Title: Aceleración y Optimización del Consumo Energético de Clasificadores en Cascada para la Detección de Rostros sobre Arquitecturas Asimétricas
   Author: Jesús Alberto Corpas Novo
   Department: Arquitectura y Tecnología de Computadores (UGR)
   Presentation date: 2019-07-15
   Advisor(s): Manuel Rodríguez Álvarez, Guillermo Botella Juan

4. Title: Extracción evolutiva de parámetros en modelos compactos de transistores orgánicos de lámina delgada
   Author: Adrián Romero Cáceres
   Department: Arquitectura y Tecnología de Computadores (UGR), Electrónica y Tecnología de Computadores (UGR)
   Presentation date: 2019-11-11
   Advisor(s): Jesús González Peñalver, Juan Antonio Jiménez Tejada

5. Title: Desarrollo de Una Plataforma de Seguridad Preventiva (Hw/Sw) para Valorar la Aptitud Psicofísica del Operador en Tiempo Real e Intentar Reducir la Accidentalidad
   Author: José Miguel Morales Fernández
   Department: Arquitectura y Tecnología de Computadores (UGR)
   Presentation date: 2019-12-13
   Advisor(s): Samuel Francisco Romero García, Leandro Luigi Di Stasi

6. Title: Distributed control systems based on high accurate timing synchronization

Author: Miguel Jiménez López
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2019-02-11
Advisor(s): Antonio Javier Díaz Alonso

7. Title: Mobile Brain-Computer Interface for the Cloud-Computing of Neurophysiological Responses
   Author: Jesús Minguillón Campos
   Department: Arquitectura y Tecnología de Computadores (UGR),
   Presentation date: 2018-11-22
   Advisor(s): Francisco José Pelayo Valle, Miguel Ángel López Gordo

8. Title: Dependable systems over synchronous networks
   Author: José Luis Gutiérrez Rivas
   Department: Arquitectura y Tecnología de Computadores (UGR),
   Presentation date: 2018-12-04
   Advisor(s): Antonio Javier Díaz Alonso, Eduardo Ros Vidal
   International mention

9. Title: Desarrollo de Sistemas Software Industriales Dirigido por Modelos: Aplicación a OPC UA y IEC 61131-3
   Author: José Miguel Gutiérrez Guerrero
   Department: Lenguajes y Sistemas Informáticos (UGR) / Arquitectura y Tecnología de Computadores (UGR),
   Presentation date: 2018-11-16
   Advisor(s): Juan Antonio Holgado Terriza, Miguel Damas Hermoso

10. Title: Futuros sistemas embebidos en SmartGrid. Nuevas aportaciones en unidades terminales remotas
    Author: Francisco Javier Ramos Peñuela
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2018-10-30
    Advisor(s): Miguel Damas Hermoso, Héctor Emilio Pomares Cintas

11. Title: Simulation models and tools of the early stages of the visual system
    Author: Pablo Martínez Cañada
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2018-07-20
    Advisor(s): Francisco José Pelayo Valle, Christian Agustín Morillas Gutiérrez
    International mention

12. Title: Extending the Concepts of Type-2 Fuzzy Logic and Systems
    Author: Gonzalo Ruiz García
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2017-09-14
    Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas
    International mention

13. Title: Simulation of nervous centres in closed-loop of perception-action
    Author: Francisco Naveros Arrabal
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2017-06-06
    Advisor(s): Eduardo Ros Vidal, Niceto Rafael Luque Sola, Jesús Alberto Garrido Alcázar
    International mention

14. Title: Ontology Engineering and Reasoning to Support Real World Human Behavior Recognition
    Author: Claudia Villalonga Palliser
    Department: Arquitectura y Tecnología de Computadores (UGR)
    Presentation date: 2016-12-16
    Advisor(s): Héctor Emilio Pomares Cintas, Oresti Baños Legrán

International mention

15. Title: Análisis y Optimización de la Interfaz de Comunicación en Sistemas de Ficheros en Red
    Author: Raúl Hernández Palacios
    Department: Arquitectura y Tecnología de Computadores (UGR)
    Presentation date: 2016-07-18
    Advisor(s): Antonio Francisco Díaz García, Mancia Anguita López

16. Title: High-Performance Scientific Computing on FPGA aboard the Solar Orbiter PHI Instrument
    Author: Juan Pedro Cobos Carrascosa
    Department: Arquitectura y Tecnología de Computadores (UGR) / Instituto Andaluz de Astrofísica (CSIC)
    Presentation date: 2016-02-05
    Advisor(s): Antonio C. López Jiménez and Christian A. Morillas Gutiérrez

17. Title: Portabilidad de Aplicaciones en Astrofísica a la Infraestructura de Computación Grid
    Author: José Ramón Rodón Ortiz
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2016-01-15
    Advisor(s): Juan Carlos Suárez Yanes, Julio Ortega Lopera

18. Title: Sistemas de Detección de Intrusos con Mapas Authorganizativos Probabilísticos y Optimización Multiobjetivo
    Author: Emiro de la Hoz Franco
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2016-02-09
    Advisor(s): Andrés Ortiz García, Julio Ortega Lopera

19. Title: DARP: A new routing algorithm for large communication infrastructures
    Author: Francisco José Estévez Ortiz
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2016-06-20
    Advisor(s): Jesús González Peñalver, Peter Glösekötter

20. Title: Mapas Auto-organizativos probabilísticos y análisis en componentes de conexiones para la detección de anomalías en redes de computadores
    Author: Eduardo Miguel de la Hoz Correa
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2016-06-23
    Advisor(s): Andrés Ortiz García, Julio Ortega Lopera

21. Title: Implementation of models for image processing applications with real-time constraints
    Author: Pablo Guzmán Sánchez
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2015-04-14
    Advisor(s): Eduardo Ros Vidal, Antonio Javier Díaz Alonso
    International mention

22. Title: Optimización de modelos hidrodinámicos 3D del transporte y mezcla aplicados al conocimiento y predicción de masas de agua continental
    Author: Mario César Acosta Cobos
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2015-05-28
    Advisor(s): Francisco José Rueda Valdivia, Mancia Anguita López
    International mention

23. Title: Desarrollo de nuevos índices de blancura: aplicaciones en biomateriales dentales
    Author: María José Rivas Bravo
    Department: Departamento de Óptica (UGR) / Arquitectura y Tecnología de Computadores (UGR)

Presentation date: 2014-07-25
Advisor(s): Luis Javier Herrera Maldonado, María del Mar Pérez Gómez

24. Title: Development of Advanced Computational Systems for Multiple Sequence Alignments by using Heterogeneous Biological Information
Author: Francisco Manuel Ortuño Guzmán
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2014-07-28
Advisor(s): Ignacio Rojas Ruiz
International mention

25. Title: Sistemas de visión para el seguimiento de poses 3-D de objetos en tiempo real
Author: Leonardo Rubio Navarro
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2014-03-24
Advisor(s): Mancia Anguita López, Antonio Javier Díaz Alonso, Eduardo Ros Vidal
International mention

26. Title: Robust Expert Systems for more Flexible Real-World Activity Recognition
Author: Oresti Baños Legrán
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2014-04-25
Advisor(s): Miguel Damas Hermoso, Héctor Emilio Pomares Cintas, Ignacio Rojas Ruiz
International mention

27. Title: Service Oriented Architecture For Adaptive Evolutionary Algorithms: Implementation and Applications
Author: Pablo García Sánchez
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2014-06-16
Advisor(s): Juan Julián Merelo Guervós, Jesús González Peñalver, Alberto Prieto Espinosa
International mention

28. Title: Signal processing of magnetic and inertial sensor's signals applied to human body motion monitoring
Author: Alberto Olivares Vicente
Department: Arquitectura y Tecnología de Computadores (UGR) / Teoría de la Señal, Telemática y Comunicaciones (UGR)
Presentation date: 2013-01-30
Advisor(s): Juan Manuel Górriz Sáez, Gonzalo Olivares Ruiz, Javier Ramírez Pérez de Inestrosa
International mention

29. Title: Esquemas de control robótico bio-inspirados utilizando estructuras neuronales biológicamente plausibles
Author: Niceto Rafael Luque Sola
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2013-05-16
Advisor(s): Eduardo Ros Vidal, Richard R. Carrillo Sánchez
International mention

30. Title: Estado emocional y funcionalidad visual de personas con Retinosis Pigmentaria. Repercusión en el entorno familiar
Authora: Helena Chacón López
Department: Psicología Evolutiva y de la Educación (UGR),
Presentation date: 2013-05-27
Advisor(s): Mª Dolores López Justicia, Francisco J. Pelayo Valle

31. Title: Modelos de visión para tareas de videovigilancia en sistemas empotrados
Author: Enrique Jaime Fernández Sánchez

Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2013-06-28
Advisor(s): Eduardo Ros Vidal, Antonio Javier Díaz Alonso
International mention

32. Title: Applying Real-Time Calculus and HDL Simulation for Network Interfaces Evaluation.
Author: Godofredo Ramón Garay Álvarez
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-06-01
Advisor(s): Julio Ortega Lopera, Antonio Francisco Díaz García, Luis Corrales Barrios

33. Title: Estudio estadístico de algoritmos de control inteligente en tiempo real. Aplicación en una plataforma hardware de control de temperatura.
Author: Rafik Lasri
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-05-04
Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas, Olga Valenzuela Cansinos

34. Title: Análisis Estadístico de distintas técnicas de Inteligencia Artificial en detección de intrusos.
Author: Hind Tribak
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-02-06
Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas, Olga Valenzuela Cansinos

35. Title: Incremento de la localidad de datos en sistemas de ficheros
Author: Hugo Eduardo Camacho Cruz
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-07-18
Advisor(s): Mancia Anguita López, Antonio Francisco Díaz García

36. Title: Bio-inspired motor learning models for robot control.
Author: Silvia Tolu
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-03-20
Advisor(s): Eduardo Ros Vidal, Jo-anne Ting , Antonio Cañas Vargas
European mention

37. Title: New Methodologies for the Design of Evolving Fuzzy Systems for Online Intelligent Control
Author: Ana Belén Cara Carmona
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-03-27
Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas, Miguel Damas Hermoso
European mention

38. Title: A parallel multi-objective optimization procedure for protein structure prediction
Author: José Carlos Calvo Tudela
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-10-15
Advisor(s): Julio Ortega Lopera, Mancia Anguita López

39. Title: Specific-purpose processing architectures for dynamic artificial vision systems
Author: Francisco Barranco Expósito
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-10-09
Advisor(s): Eduardo Ros Vidal, Antonio Javier Díaz Alonso, María Begoña del Pino Prieto
International mention

40. Title: Sistema para Separación de Señales en Tiempo Real basado en DSP
Author: Juan Carlos Moreno Comba

Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-10-26
Advisor(s): Carlos García Puntonet, Antonio Francisco Díaz García

41. Title: Arquitectura eficiente de condensación de información visual dirigida por procesos atencionales
Author: María Sara Granados Cabeza
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2012-12-11
Advisor(s): Antonio Javier Díaz Alonso, María Sonia Mota Fernández, Alberto Prieto Espinosa
International mention

42. Title: Simulation of biological neuronal structures. Design and functional study of the cerebellum
Author: Jesus Alberto Garrido Alcázar
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2011-11-17
Advisor(s): Eduardo Ros Vidal, Richard R. Carrillo Sánchez

43. Title: Intelligent systems for function approximation and the integration of heterogeneous biological data
Author: Javier Pérez Florido
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2011-10-10
Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas
European mention

44. Title: Fusion and Regularisation of Image Information in Variational Correspondence Methods
Author: Jarno Ralli
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2011-12-19
Advisor(s): Eduardo Ros Vidal, Antonio Javier Díaz Alonso
European mention

45. Title: Nuevos métodos de predicción de Interacción de Proteína-Proteína utilizando Sistemas Inteligentes en Bases de Datos de Proteómica
Author: José Miguel Urquiza Ortiz
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2011-10-14
Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas, Luis Javier Herrera Maldonado
European mention

46. Title: Análisis, evaluación de prestaciones y mejora de interfaces de red mediante modelos HDL
Author: Haider, Waseem M.
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2011-10-27
Advisor(s): Antonio Díaz García, Julio Ortega Lopera

47. Title: Extracción Eficiente de la Estructura de Escenas Naturales
Author: José Manuel Palomares Muñoz
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2011-02-25
Advisor(s): Jesús González Peñalver, Eduardo Ros Vidal

48. Title: Blanqueamiento dental: Estudio clínico para el desarrollo de métodos estadísticos e inteligentes para la predicción del cambio cromático
Author: Janiley Santana Díaz
Department: Departamento de Estomatología (UGR) / Arquitectura y Tecnología de Computadores (UGR)
Presentation date: 2010-02-05

Advisor(s): Rosa María Pulgar Encinas, María del Mar Pérez Gómez, Luis Javier Herrera Maldonado

49. Title: Modelos Avanzados de Inteligencia Computacional para Aproximación Funcional y Predicción de Series Temporales en Arquitecturas Paralelas
    Author: Ginés Rubio Flores
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-07-05
    Advisor(s): Héctor Emilio Pomares Cintas, Ignacio Rojas Ruiz, Alberto Guillén Perales

50. Title: Análisis en Componentes de Imágenes Funcionales para la Ayuda al Diagnóstico de la Enfermedad del Alzheimer
    Author: Ignacio Álvarez Illán
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-07-10
    Advisor(s): Juan Manuel Górriz Sáez, Javier Ramírez Pérez de Inestrosa, Carlos García Puntonet

51. Title: Pyramidal Architecture For Stereo Vision and Motion Estimation In Real-Time Fpga-Based devices
    Author: Matteo Tomasi
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-06-15
    Advisor(s): Eduardo Ros Vidal, Antonio Javier Díaz Alonso

52. Title: Procesamiento de Registros Oculares Sacádicos en Pacientes de Ataxia Sca2. Aplicación del Análisis de Componentes Independientes
    Author: Rodolfo Valentín García Bermúdez
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-12-16
    Advisor(s): Fernando José Rojas Ruiz, Jesús González Peñalver, Luis Velázquez Pérez

53. Title: Improving Communications By Using Network Processors
    Author: Pablo Guillermo Cascón Katchadourian
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-02-17
    Advisor(s): Julio Ortega Lopera, Antonio F Díaz
    European mention

54. Title: Arquitectura Basada en Tecnología Fpga para la Estimación y Análisis de Información de Flujo Óptico en Tiempo Real
    Author: Mauricio de Jesús Vanegas Hernández
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-07-19
    Advisor(s): Eduardo Ros Vidal, Antonio Javier Díaz Alonso

55. Title: Optimización multiobjetivo dinámica y procesamiento paralelo
    Author: Mario Cámara Sola
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2010-06-22
    Advisor(s): Julio Ortega Lopera, Francisco Jesús del Toro Negro
    European mention

56. Title: Desarrollo de un modelo bioinformático como herramienta predictiva del comportamiento y trazabilidad de células madre para la diferenciación miocárdica en base a factores de inducción exógenos
    Author: Pablo Juan Álvarez Aránega
    Department: Arquitectura y Tecnología de Computadores (UGR) / Anatomía y Embriología Humana (UGR)
    Presentation date: 2009-07-24
    Advisor(s): Alberto Prieto Espinosa, Fernando Rodríguez Serrano, José Carlos Prados

57. Title: Simulación Eficiente de Estructuras Neuronales Basadas en el Sistema Nervioso
    Author: Richard R. Carrillo Sánchez
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2009-07-20
    Advisor(s): Eduardo Ros Vidal, Eva Martínez Ortigosa, Francisco José Pelayo Valle
    European mention

58. Title: Nuevos algoritmos de detección de señales basados en un modelo de distribución gaussiana conjunta
    Author: Óscar Pernía Fernández
    Department: Arquitectura y Tecnología de Computadores (UGR) / Teoría de la Señal, Telemática y Comunicaciones (UGR) / Ingeniería Informática (Universidad de Cádiz)
    Presentation date: 2009
    Advisor(s): Juan Manuel Górriz Sáez, Ignacio José Turias Domínguez, Carlos García Puntonet

59. Title: Interfaz Bci de altas Prestaciones Basada en la Detección y Procesamiento de la Actividad Cerebral
    Author: Miguel Ángel López Gordo
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2009-03-26
    Advisor(s): Alberto Prieto Espinosa, Francisco José Pelayo Valle

60. Title: Alternativas de Externalización para la Interfaz de Red. Análisis y Optimización Mediante Simulación de Sistema Completo. (Doctorado con Mención Europea)
    Author: Andrés Ortiz García
    Department: Arquitectura y Tecnología de Computadores (UGR), Universidad de Málaga
    Presentation date: 2008-11-11
    Advisor(s): Julio Ortega Lopera, Alberto Prieto Espinosa
    European mention

61. Title: Aproximación Funcional Mediante Redes de Funciones de Base Radial, Una alternativa para la Predicción en el Proceso de Reducción de Mineral de la Tecnología Caron de Producción de Níquel
    Author: Francisco Fernández Periche
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2008-01-25
    Advisor(s): Julio Ortega Lopera, Ignacio Rojas Ruiz

62. Title: Estudio Comparativo de la Técnica de Análisis de Componentes Independientes (ICA) Aplicado al Procesamiento Digital de Imágenes Con Ruido.
    Author: Salua Esther Nassabay Pardo
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2007-03-02
    Advisor(s): Carlos García Puntonet, Rubén Martín Clemente

63. Title: Diseño de Sistemas Inteligentes en Plataformas de Cómputo Paralelas
    Author: Alberto Guillén Perales
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2007-07-05
    Advisor(s): Ignacio Rojas Ruiz, Jesús González Peñalver, Héctor Emilio Pomares Cintas

64. Title: Sistemas Inteligentes Adaptativos para Aproximación y Predicción Utilizando Arquitecturas Avanzadas
    Author: Luis Javier Herrera Maldonado
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2007-07-06
    Advisor(s): Ignacio Rojas Ruiz, Héctor Emilio Pomares Cintas

65. Title: Arquitecturas para el Procesamiento de Sistemas Neuronales para el Control de Robots Bioinspirados
    Author: Rodrigo C. Agís Melero
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2007-10-08
    Advisor(s): Eduardo Ros Vidal, Francisco José Pelayo Valle, Eva Martínez Ortigosa

66. Title: Circuitos Bio-Inspirados para la Evaluación de Movimiento en Tiempo Real y Sus Aplicaciones
    Author: María Sonia Mota Fernández
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2007-03-09
    Advisor(s): Eduardo Ros Vidal, Francisco José Pelayo Valle

67. Title: Implementación en Hardware Reconfigurable de un Modelo de Flujo Óptico Robusto
    Author: Guillermo Botella Juan
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2007-07-13
    Advisor(s): Eduardo Ros Vidal, Manuel Rodríguez Álvarez, Antonio García Ríos

68. Title: Desarrollo y Evaluación de Ayudas Optoelectrónicas para Pacientes de Baja Visión
    Author: María Dolores Peláez Coca
    Department: Arquitectura y Tecnología de Computadores (UGR) / Universidad de Murcia
    Presentation date: 2007-07-16
    Advisor(s): Fernando Vargas Martín, Eduardo Ros Vidal

69. Title: Development Of a High Accuracy Analogue-To-Digital Converter System: Application In Data Logging Units For Formula-1 Vehicles
    Author: Carlos Castro Serrato
    Department: Arquitectura y Tecnología de Computadores (UGR) / Infineon Technologies Ag, Munich
    Presentation date: 2006-05-02
    Advisor(s): Ignacio Rojas Ruiz, Pedro Ángel Castillo Valdivieso, Alberto Prieto Espinosa

70. Title: Automatic Generation Of Bioinspired Vision Systems Using Reconfigurable Hardware
    Author: Antonio Martínez Álvarez
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2006-05-03
    Advisor(s): Francisco José Pelayo Valle, Leonardo Reyneri

71. Title: Hardware/Software Environment For Visual Prosthetics Research
    Author: Samuel Francisco Romero García
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2006-11-03
    Advisor(s): Francisco José Pelayo Valle, Eduardo Fernández Jover

72. Title: Study and Characterization With Scanning Probe Methods Of Employable Nano-Materials In New Architectures For Molecular Memories
    Author: Manuela Alba Bueno
    Department: Arquitectura y Tecnología de Computadores (UGR) / Infineon Technologies Ag, Munich
    Presentation date: 2006-05-05
    Advisor(s): Karl Goser , Ignacio Rojas Ruiz, Alberto Prieto Espinosa

73. Title: Desarrollo de Sistemas Inteligentes para Clasificación y Diagnóstico de Problemas en Medicina
    Author: Suhail Odeh
    Department: Arquitectura y Tecnología de Computadores (UGR),
    Presentation date: 2006-07-07
    Advisor(s): Eduardo Ros Vidal, Ignacio Rojas Ruiz

74. Title: Nuevos Avances en detección de Actividad de Voz Mediante Estadísticos de Alto Orden y Estrategias de Optimización

Author: Juan Manuel Górriz Sáez
Department: Arquitectura y Tecnología de Computadores (UGR) / Teoría de la Señal, Telemática y Comunicaciones (UGR),
Presentation date: 2006-07-13
Advisor(s): Carlos García Puntonet, Javier Ramírez Pérez de Inestrosa

75. Title: ICA Incompleto paralelo: Una Nueva Herramienta para el Análisis de Datos Fmri
Author: Ingo Rudolf Keck
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2006-07-13
Advisor(s): Carlos García Puntonet

76. Title: Aplicación de la Factorización Matricial al Análisis de Datos ExperimentAles Con Microarrays
Author: Kurt Stadlthanner
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2006-07-14
Advisor(s): Carlos García Puntonet

77. Title: Sistema de Visión Bio-Inspirado Multi-Modal. Arquitectura de Procesamiento de Movimiento y Visión Estéreo de altas Prestaciones.
Author: Antonio Javier Díaz Alonso
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2006-07-21
Advisor(s): Eduardo Ros Vidal, Alberto Prieto Espinosa

78. Title: Modelos y Herramientas para Sistemas de Rehabilitación Visual
Author: Christian Agustín Morillas Gutiérrez
Department: Arquitectura y Tecnología de Computadores (UGR),
Presentation date: 2006-09-28
Advisor(s): Francisco José Pelayo Valle, Alberto Prieto Espinosa

6. Patents and contracts:

The list of patents obtained by members of the group are provided in the link:
https://atc.ugr.es/investigacion/grupos/casip/patentes

In the link http://investigacion.ugr.es/ugrinvestiga/static/Buscador/*/grupos/ficha/TIC117 it can be found more information related with the group CASIP.