



Marta Freire López-Fando

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Marta Freire López-Fando

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Current professional situation

Employing entity: Consejo Superior de Investigaciones Científicas
Type of entity: State agency
Department: Instituto de Instrumentacion para Imagen Molecular
Professional category: Licenciado - Grupo 1
Start date: 10/10/2024
Type of contract: Grant-assisted student (pre or post-doctoral, others)
Dedication regime: Full time

Previous positions and activities

	Employing entity	Professional category	Start date
1	Full Body Insight	Licenciado - Grupo 1	13/12/2023
2	Universidad Politécnica de Valencia	Tecnico Superior	12/12/2022
3	Consejo Superior de Investigaciones Científicas (CSIC)	TIT. SUP. ACTIV. TECN. Y PROFESIONALES	09/09/2019
4	Centro Superior de Investigaciones Científicas (CSIC)	TIT. SUP. ACTIV. TECN. Y PROFESIONALES	01/01/2019
5	Centro Nacional de Aceleradores (CNA)	Contrato de prácticas	05/02/2018
6	Hospital Hotel Dieu de Nantes (Francia)	Contrato de prácticas	22/04/2016



- 1** **Employing entity:** Full Body Insight
Professional category: Licenciado - Grupo 1
Start-End date: 13/12/2023 - 10/10/2024
- 2** **Employing entity:** Universidad Politécnica de Valencia
Department: Institute of Instrumentation for Molecular Imaging (i3M)
Professional category: Tecnico Superior
Start-End date: 12/12/2022 - 11/12/2023
Type of entity: University
- 3** **Employing entity:** Consejo Superior de Investigaciones Científicas (CSIC)
Department: DMIL, Instituto de Instrumentación para Imagen Molecular (i3M)
City employing entity: Valencia,
Professional category: TIT. SUP. ACTIV. TECN. Y PROFESIONALES
Start-End date: 09/09/2019 - 30/11/2022
Duration: 3 years - 3 months
Type of contract: Grant-assisted student (pre or post-doctoral, others)
- 4** **Employing entity:** Centro Superior de Investigaciones Científicas (CSIC)
Department: Instituto de Instrumentación para Imagen Molecular
Professional category: TIT. SUP. ACTIV. TECN. Y PROFESIONALES
Start-End date: 01/01/2019 - 31/08/2019
Duration: 7 months
- 5** **Employing entity:** Centro Nacional de Aceleradores (CNA)
Professional category: Contrato de prácticas
Start-End date: 05/02/2018 - 02/07/2018
Duration: 1 year
Type of entity: University Centres and Structures and Associated Bodies
- 6** **Employing entity:** Hospital Hotel Dieu de Nantes (Francia)
Department: Departamento de Medicina Nuclear
City employing entity: Nantes, France
Professional category: Contrato de prácticas
Start-End date: 22/04/2016 - 15/06/2016



Education

University education

1st and 2nd cycle studies and pre-Bologna degrees

- 1** **Name of qualification:** Máster Universitario en Física Médica
Degree awarding entity: Universitat de València **Type of entity:** University
Date of qualification: 20/07/2018
- 2** **Name of qualification:** Trabajo Fin de Máster: Método alternativo de calibración de bloques detectores PET basados en cristales monolíticos y SiPM
Degree awarding entity: Universitat de València **Type of entity:** University
Date of qualification: 20/07/2018
Average mark: Excellent
- 3** **Name of qualification:** Graduado o Graduada en Física
Degree awarding entity: Universidad de Sevilla **Type of entity:** University
Date of qualification: 20/07/2017
- 4** **Name of qualification:** Graduado o Graduada en Ingeniería de Materiales
Degree awarding entity: Universidad de Sevilla **Type of entity:** University
Date of qualification: 20/07/2017
- 5** **Name of qualification:** Trabajo Fin de Grado: Estudio de adquisición y reconstrucción de imágenes PET/CT con gating respiratorio
Degree awarding entity: Universidad de Sevilla **Type of entity:** University
Date of qualification: 14/07/2017

Doctorates

Doctorate programme: Programa Oficial de Doctorado en Tecnologías para la Salud y el Bienestar
Degree awarding entity: Universidad Politécnica de Valencia **Type of entity:** University
Date of degree: 14/07/2023
Thesis title: Implementation of new algorithms for an accurate gamma-ray impact determination in scintillation monolithic blocks for PET applications
Obtained qualification: Cum Laude

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

- 1 Training title:** 2nd COMCHA School
Awarding entity: Universitat de València
End date: 02/12/2021
Type of entity: University
Duration in hours: 56 hours
- 2 Training title:** Artificial intelligence for medical image analysis and processing
Awarding entity: IEEE Nuclear and Plasma Sciences Society
End date: 29/10/2019
Type of entity: Technical Professional Organization
Duration in hours: 4 hours
- 3 Training title:** Deep Learning aplicado al análisis de señales e imágenes médicas
Awarding entity: Universidad Politécnica de Valencia
End date: 23/02/2019
Type of entity: University

Language skills

Language	Listening skills	Reading skills	Spoken interaction	Speaking skills	Writing skills
English	B2	B2	B2	B2	B2
French	C1	C1	C1	C1	C1

Teaching experience

Experience supervising doctoral thesis and/or final year projects

- 1 Project title:** Trabajo Fin de Máster: Simulaciones de detectores PET basados en cristales monolíticos para la obtención de datos de entrenamiento para el uso de técnicas de Machine Learning
Entity: Universitat de València
Student: Paula Femenia
Date of reading: 11/07/2022
Type of entity: University
- 2 Project title:** High performance PET detectors using novel slab configuration
Entity: Universidad Politécnica de Valencia
Student: Neus Cucarella
Type of entity: University

Courses and seminars given

- 1 Type of event:** Course
Name of the event: Practical Season Medical Physics Degree
Organising entity: University of Valencia
Teaching date: 19/05/2025
Theme: Otra Temática
Type of entity: University



- 2** **Type of event:** Course
Name of the event: Practical Season Medical Physics Degree
Organising entity: University of Valencia **Type of entity:** University
Teaching date: 24/05/2024
Theme: Otra Temática

Scientific and technological experience

Scientific or technological activities

R&D non-competitive contracts, agreements or projects with public or private entities

- 1** **Name of the project:** INSPIRE
Degree of contribution: Managing coordinator
Name principal investigator (PI, Co-PI....): Antonio Javier Gonzalez
Funding entity or bodies:
Agencia Valenciana de la Innovacion
Start date: 01/01/2024 **Duration:** 3 years
Total amount: 249.945,88 €
- 2** **Name of the project:** FUS-PET-MRI scanner for small animals
Participating entity/entities: Universidad Politécnica de Valencia
Funding entity or bodies:
University of Virginia **Type of entity:** University
City funding entity: United States of America
Start date: 30/09/2022 **Duration:** 1 year
Total amount: 185.580 €
- 3** **Name of the project:** Collaboration agreement i3m-Bruker
Participating entity/entities: Universidad Politécnica de Valencia
Funding entity or bodies:
Bruker Española, S.A. **Type of entity:** Business
Start date: 01/01/2022 **Duration:** 4 years
Total amount: 75.000 €
- 4** **Name of the project:** Diseño, desarrollo y caracterización de sistemas PET basados en cristal continuo LXe, así como su integración en un sistema de cuerpo completo
Participating entity/entities: Universidad Politécnica de Valencia
Funding entity or bodies:
Full Body Insight **Type of entity:** Business
Start date: 2021
Total amount: 260.016 €
- 5** **Name of the project:** Fabrication and Testing of a Novel PET insert for Simultaneous PET/MRI
Type of project: Research and development, including transfer
Degree of contribution: Researcher



Name principal investigator (PI, Co-PI....): Antonio J. Gonzalez

Funding entity or bodies:

National Institute of Health (NIH)

Type of entity: Healthcare Institutions

Start date: 05/10/2020

Duration: 5 years

- 6** **Name of the project:** Desarrollo del Hardware para un sistema PET de cristal continuo aplicado al cáncer de mama

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Antonio J. Gonzalez; Filomeno Sanchez

Funding entity or bodies:

Ministerio de Ciencia e Innovación. Universidades

Type of entity: Agencia Estatal de Investigación

Start date: 07/09/2020

Duration: 3 years

- 7** **Name of the project:** 4D-PET

Type of project: Research and development, including transfer

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Jose Maria Benlloch

Funding entity or bodies:

Comisión Europea

Type of entity: European Research Council (ERC)

Name of the programme: European Research Council (ERC) Advanced (Horizon2020)

Start date: 01/01/2017

Duration: 5 years

- 8** **Name of the project:** Molecular imaging system for heart diagnostic under stress condition. TEC2016-79884-C2-2-R

Type of project: Research and development, including transfer

Degree of contribution: Researcher

Name principal investigator (PI, Co-PI....): Maria José Rodríguez; Filomeno Sanchez; Antonio J. Gonzalez

Funding entity or bodies:

Unión Europea a través del Fondo Europeo de Desarrollo Regional

Name of the programme: RETOS-COLABORACION

Start date: 01/01/2017

Duration: 4 months

- 9** **Name of the project:** Diagnostico de ratas y ratones con radiofármacos por método establecido microPET/TAC

Degree of contribution: Personal participante bajo supervisión de persona competente

Nº of researchers: 5

Funding entity or bodies:

Comité Ético de Experimentación Animal de la Universidad de Sevilla

Type of entity: University

City funding entity: Sevilla, Andalusia, Spain

Junta de Andalucía

Type of entity: Consejería de Agricultura, Pesca y Desarrollo Rural

City funding entity: Sevilla, Andalusia, Spain

Results

Industrial and intellectual property

Title registered industrial property: METHOD AND SYSTEM FOR MEASURING AND/OR VERIFYING THE RADIATION DOSE RECEIVED BY A PATIENT AFTER PARTICLE THERAPY TREATMENT

Inventors/authors/obtainers: Marcin Balcerzyk; Antonio Javier Gonzalez; Marta Freire

Entity holder of rights: ADMINISTRACIÓN GENERAL DE LA COMUNIDAD AUTÓNOMA DE EUSKADI, UNIVERSITAT POLITÈCNICA DE VALÈNCIA, CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

Country of inscription: Spain

Date of register: 08/04/2025

Scientific and technological activities

Scientific production

Publications, scientific and technical documents

- 1** Andrea Gonzalez-Montoro; Santiago Jimenez-Serrano; Jorge Alamo; Julio Barbera; Alejandro Lucero; Neus Cucarella; Karel Diaz; Marta Freire; Antonio J Gonzalez; Laura Moliner; Alvaro Modejar; Constantino Morera-Ballester; John Prior; David Sanchez; Jose M Benlloch. First results of the 4D-PET brain system. IEEE Transactions on Radiation and Plasma Sciences. 2024.
Type of production: Scientific paper
Total no. authors: 15
- 2** John Barrio; Neus Cucarella; Marta Freire; Celia Valladares; Jose M. Benlloch; Antonio J. Gonzalez. Time and Energy Characterization of Semi-Monolithic Detectors with Different Treatments and SiPMs Suitable for Clinical Imaging. IEEE Transactions on Radiation and Plasma Medical Sciences. 2023.
Type of production: Scientific paper
Format: Journal
Corresponding author: No
- 3** Celia Valladares; John Barrio; Marta Freire; Neus Cucarella; Efthymios Lamprou; Robert S. Miyaoka; William C.J. Hunter; Robert Harrison; Antonio J. Gonzalez. Timing, Energy, and Spatial Characterization of Highly Sampled Monolithic PET Detectors with Different Thicknesses. IEEE Transactions on Radiation and Plasma Medical Sciences. 2023.
Type of production: Scientific paper
Format: Journal
Corresponding author: No
- 4** Andrea Gonzalez-Montoro; Julio Barbera; David Sanchez; Alvaro Mondejar; Marta Freire; Karel Diaz; Alejandro Lucero; Santiago Jimenez-Serrano; Jorge Alamo; Constantino Morera-Ballester; John Barrio; Neus Cucarella; Victor Ilisie; Laura Moliner; Celia Valladares; Antonio J. Gonzalez; John Prior; Jose M. Benlloch. A new brain dedicated PET scanner with 4D detector information. Bio-Algorithms and Med-Systems. 18 - 1, pp. 107 - 119. 2022.
Type of production: Scientific paper
Format: Journal
Corresponding author: No

- 5** Andrea Gonzalez-Montoro; Marta Freire; Julio Barbera; Gabriel Cañizares; Celia Valladares; Stuart S. Berr; Mark B. Williams; Carlos Correcher; Antonio J. Gonzalez. Design and pilot studies of the edgeless preclinical PET insert: ScintoTube II. 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC). 2022.
Type of production: Scientific paper
Total no. authors: 9
Corresponding author: No
- 6** Marta Freire; Sara Echegoyen; Koldo Vidal; Riccardo Latella; Jose F. Toledo; Andrea Gonzalez-Montoro; Filomeno Sanchez; Antonio J. Gonzalez. Hardware design of a dedicated breast PET based on curved LYSO crystals glued together. 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC). 2022.
Type of production: Scientific paper
Total no. authors: 8
Corresponding author: Yes
- 7** Marta Freire; Sara Echegoyen; Andrea Gonzalez-Montoro; Filomeno Sanchez; Antonio J. Gonzalez. Performance evaluation of side-by-side optically coupled monolithic LYSO crystals. Medical Physics. 49 - 9, pp. 5616 - 5626. 2022.
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
- 8** Marta Freire; John Barrio; Neus Cucarella; Celia Valladares; Andrea Gonzalez-Montoro; Carlos De Alfonso; J. Maria Benlloch; Antonio J. Gonzalez. Position estimation using neural networks in semi-monolithic PET detectors. Physics in Medicine & Biology. 67 - 24, pp. 245011. 2022.
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
- 9** Marta Freire; Gabriel Cañizares; Andrea Gonzalez-Montoro; Johan Nuyts; Stuart S. Berr; Mark B. Williams; Jose M. Benlloch; Antonio J. Gonzalez. Experimental validation of a rodent PET scanner based on a single LYSO crystal tube. IEEE Transactions on Radiation and Plasma Medical Sciences. 04/11/2021.
Type of production: Scientific paper
Corresponding author: Yes
- 10** Marta Freire; Gabriel Cañizares; Sara Echegoyen; Andrea Gonzalez-Montoro; Antonio J. Gonzalez. Reducing Calibration Time in PET Systems Based on Monolithic Crystals. Frontiers in Medicine. 2021.
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
- 11** Marta Freire; Sara Echegoyen; Luis F. Vidal; Celia Valladares; Andrea Gonzalez-Montoro; Marina Vergara; Jose F. Toledo; Maria J. Rodriguez-Alvarez; Filomeno Sanchez; Antonio J. Gonzalez. Using Neural Networks for Impact Position Estimation in Glued Monolithic Crystals. 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC). 2021.
Type of production: Scientific paper
Format: Journal
Corresponding author: Yes
- 12** Efthymios Lamprou 1; Celia Valladares; John Barrio; Neus Cucarella; Sergio Aguilar; Gabriel Cañizares; Marta Freire; Sara Echegoyen; Filomeno Sanchez; Liczandro Hernandez; Luis F. Vidal; Adrian Mascarell; Jose M. Benlloch; Antonio J. Gonzalez. Towards 100 ps PET Detectors Suitable for High-Resolution Brain Mouse Imaging. 2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC). pp. 1 - 3. IEEE, 15/09/2020.
Type of production: Scientific paper
Corresponding author: No
- 13** Marta Freire; Andrea Gonzalez-Montoro; Gabriel Cañizares; Stuart S. Berr; Luis F. Vidal; Liczandro Hernandez; Antonio J. Gonzalez. Calibration Methodology of an Edgeless PET System Prototype. 2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC). pp. 1 - 5. 2020.
Type of production: Scientific paper
Corresponding author: Yes



- 14** John Barrio; Neus Cucarella; Antonio Gonzalez; Marta Freire; Victor Ilisie; Jose M. Benlloch. Characterization of a High-Aspect Ratio Detector With Lateral Sides Readout for Compton PET. IEEE Transactions on Radiation and Plasma Medical Sciences. 4 - 5, 2020.
Type of production: Scientific paper **Format:** Journal
- 15** John Barrio; Neus Cucarella; Marta Freire; Efthymios Lamprou; Sergio Aguilar; Celia Valladares; Victor Illisie; Jose M. Benlloch; Antonio J. Gonzalez. PET Detector based on a Semi-Monolithic Crystal with DOI and TOF Capabilities. 2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC). pp. 1 - 3. IEEE, 2020.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 16** Antonio Gonzalez; Andrea Gonzalez-Montoro; Marta Freire; Luis Vidal; Liczandro Hernandez; Carlos Correcher; Ramiro Polo; Abel Orero; Gustavo Pastor; Vicente Carrilero; Thorsten Greeb; Sven Junge; Peter Bruyndonckx; Michael Heidenreich. Performance of a PET/MR Insert for Mice Based on Monolithic Crystals. Journal of Nuclear Medicine. 61, pp. 3123 - 3123. 2020.
Type of production: Scientific paper **Format:** Journal
Corresponding author: No
- 17** Gabriel Cañizares; Andrea Gonzalez-Montoro; Marta Freire; Efthymios Lamprou; John Barrio; Filomeno Sánchez; Jose Maria Benlloch; Liczandro Hernandez; Laura Moliner; Luis F. Vidal; Irene Torres; Pablo Sopena; Pilar Bello; Cesar D. Vera-Donoso; Julio Barbera; Antonio Gonzalez. Pilot performance of a dedicated prostate PET suitable for diagnosis and biopsy guidance. EJNMMI Physics. 7, pp. 1 - 7. 2020.
Type of production: Scientific paper **Format:** Journal
- 18** Marta Freire; Andrea Gonzalez-Montoro; Filomeno Sanchez; Jose M. Benlloch; Antonio Gonzalez. Calibration of Gamma Ray Impacts in Monolithic-Based Detectors Using Voronoi Diagrams. IEEE Transactions on Radiation and Plasma Medical Sciences. 4 - 3, 2019.
Type of production: Scientific paper **Format:** Journal
- 19** Marta Freire; Andrea González-Montoro; Antonio J. González. Calibration of PET Detectors Based on Monolithic Blocks Using Voronoi Diagrams. 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference Proceedings (NSS/MIC). pp. 1 - 3. 05/11/2018.
Type of production: Scientific paper **Format:** Journal
- 20** Efthymios Lamprou; Andrea González-Montoro; Gabriel Cañizares; Victor Ilisie; Filomeno Sánchez; Marta Freire; Liczandro Hernández; Luis F. Vidal; John Barrio; Antonio J. González; José M. Benlloch. TOF-PET Detectors Based on ASIC Technology and Analog SiPMs. 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference Proceedings (NSS/MIC). 05/11/2018.
Type of production: Scientific paper **Format:** Journal

Works submitted to national or international conferences

- 1** **Title of the work:** Commissioning a cost-effective TB-PET with TOF and DOI: the IMAS project
Name of the conference: 2023 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: No
City of event: Vancouver, Canada
Date of event: 05/11/2023
End date: 12/11/2022

Organising entity: IEEE

Antonio J. Gonzalez; Jorge Alamo; Julio Barbera; Gabriel Cañizares; Karel Diaz; Sara Echegoyen; Marta Freire; Andrea Gonzalez-Montoro; Santiago Jimenez-Serrano; Andrew Laing; Constantino Morera-Ballester; Alfonso Rios; David Sanchez; Alejandro Soler; Irene Torres; Luis F. Vidal; Jose M. Benlloch.

- 2 Title of the work:** Experimental Results of an Edgeless PET System for Breast Imaging: DeepBreast
Name of the conference: 2023 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: Participatory - oral communication

Corresponding author: Yes

City of event: Vancouver, Canada

Date of event: 05/11/2023

End date: 12/11/2022

Organising entity: IEEE

Marta Freire; Sara Echegoyen; Franciso Brandan; Julio Barberá; Jose F. Toledo; Koldo Vidal; Alejandro Soler; Carlos de Alfonso; Filomeno Sanchez; M. Jose Rodriguez; Antonio J. González.

- 3 Title of the work:** First Results of the 4D-PET Brain System
Name of the conference: 2023 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: Participatory - oral communication

Corresponding author: No

City of event: Vancouver, Canada

Date of event: 05/11/2023

End date: 12/11/2022

Organising entity: IEEE

Andrea Gonzalez Montoro; Julio Barbera; Alejandro Lucero; Alvaro Mondejar; Karel Diaz; Santiago Jimenez-Serrano; David Sanchez; Andrew Laing; Constantino Morera-Ballester; Jorge Alamo; Laura Moliner; Victor Illisie; Antonio J. Gonzalez; John Prior; Jose M. Benlloch.

- 4 Title of the work:** Performance Comparison of two Machine Learning Methods for Positioning in Analog and Digitally Read-out Slab-detectors

Name of the conference: 2023 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: Participatory - poster

Corresponding author: No

City of event: Vancouver, Canada

Date of event: 05/11/2023

End date: 12/11/2022

Organising entity: IEEE

Florian Mueller; Andrea Gonzalez Montoro; Marta Freire; Stephan Naunheim; Volkmar Schulz; Antonio J. Gonzalez.

- 5 Title of the work:** Preclinical PET scanner with timing and 3D capabilities based on semi-monolithic crystals
Name of the conference: 2023 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: Participatory - oral communication

Corresponding author: No

City of event: Vancouver, Canada

Date of event: 05/11/2023

End date: 12/11/2022

Organising entity: IEEE

Neus Cucarella; Marta Freire; Celia Valladares; John Barrio; Antonio J. Gonzalez; Peter Bruyndonckx; Carlos Correcher; Jose M. Benlloch.

6 Title of the work: Reducing Edge Effects in Semi-monolithic PET detectors using Optical Barriers: a Simulation Study

Name of the conference: 2023 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: 'Participatory - poster

Corresponding author: No

City of event: Vancouver, Canada

Date of event: 05/11/2023

End date: 12/11/2022

Organising entity: IEEE

Gabriel Cañizares; Marta Freire; Andrea Gonzalez-Montoro; Hamid Sabet; Peter Bruyndonckx; Antonio J. Gonzalez.

7 Title of the work: DeepBreast: a dedicated breast PET system based on curved LYSO crystals glued together

Name of the conference: 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: Participatory - oral communication

Corresponding author: Yes

City of event: Milan, Italy

Date of event: 05/11/2022

End date: 12/11/2022

Organising entity: IEEE

Marta Freire; Sara Echegoyen; Koldo Vidal; Riccardo Latella; Jose F. Toledo; Andrea Gonzalez-Montoro; Filomeno Sanchez; Antonio J. Gonzalez.

8 Title of the work: Design and pilot studies of the edgeless preclinical PET insert: ScintoTube II

Name of the conference: 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: 'Participatory - poster

Corresponding author: No

City of event: Milan, Italy

Date of event: 05/11/2022

End date: 12/11/2022

Organising entity: IEEE

Marta Freire; Andrea Gonzalez-Montoro; Julio Barbera; Gabriel Cañizares; Celia Valladares; Stuart S. Berr; Mark B. William; Carlos Correcher; Antonio J. Gonzalez.

9 Title of the work: Highly Sampled Timing and Spatial Characterization of Monolithic Detectors with Different Thicknesses

Name of the conference: 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: 'Participatory - poster

Corresponding author: No

City of event: Milan, Italy

Date of event: 05/11/2022

End date: 12/11/2022

Organising entity: IEEE

Celia Valladares; John Barrio; Marta Freire; Neus Cucarella; Robert S. Miyaoka; William Pierce; Robert Harrison; Antonio J. Gonzalez.

10 Title of the work: Performance evaluation of semi-monolithic detectors for TB-PET systems

Name of the conference: 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: 'Participatory - poster

Corresponding author: No

City of event: Milan, Italy

Date of event: 05/11/2022

End date: 12/11/2022

Organising entity: IEEE

Marta Freire; John Barrio; Neus Cucarella; Celia Valladares; Jose M. Benlloch; Antonio J. Gonzalez.

11 Title of the work: High Sensitivity Molecular Imaging: a Total-Body PET with TOF and DOI capabilities

Name of the conference: 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: 'Participatory - poster

Corresponding author: No

City of event: Milan, Italy

Date of event: 05/10/2022

End date: 12/10/2022

Organising entity: IEEE

Antonio J. Gonzalez; Andrea Gonzalez-Montoro; Marta Freire; David Sanchez; John Barrio; Neus Cucarella; Gabriel Cañizares; Santiago Jimenez-Serrano; Luis F. Vidal; Julio Barbera; Karel Diaz; Jorge Alamo; Constantino Morera; Jose M. Benlloch.

12 Title of the work: Prior Simulation Test of a Total Body PET Scanner with multiple configurationsody PET with TOF and DOI capabilities

Name of the conference: 2022 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of event: Conference

Type of participation: 'Participatory - poster

Corresponding author: No

City of event: Milan, Italy

Date of event: 05/10/2022

End date: 12/10/2022

Organising entity: IEEE

Gabriel Cañizares; Santiago Jimenez-Serrano; John Barrio; Marta Freire; David Sanchez; Andrea Gonzalez-Montoro; Jose M. Benlloch; Alejandro ucero; Antonio J. Gonzalez.

- 13** **Title of the work:** High Sensitivity Molecular Imaging: a Total-Body PET with TOF and DOI capabilities
Name of the conference: TB PET Conference
Type of event: Conference
Corresponding author: No
City of event: Edinburgh, United Kingdom
Date of event: 22/09/2022
End date: 24/09/2022
Andrea Gonzalez-Montoro; Marta Freire; David Sanchez; John Barrio; Neus Cucarella; Gabriel Cañizares; Santiago Jimenez-Serrano; Luis F. Vidal; Julio Barbera; Karel Diaz; Constantino Morera-Ballester; Jorge Alamo; Jose M. Benlloch; Antonio J. Gonzalez.
- 14** **Title of the work:** Characterization of different semi-monolithic detectors with DOI and TOF capabilities suitable for TB-PET
Name of the conference: NDIP Conference in New Developments in Photodetection
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Troyes, France
Date of event: 04/07/2022
End date: 08/07/2022
John Barrio; Neus Cucarella; Marta Freire; Celia Valladares; Jose M. Benlloch; Antonio J. Gonzalez.
- 15** **Title of the work:** Performance evaluation of semi-monolithic detectors for TB-PET systems
Name of the conference: PSMR-TBP 2022 9th Conference on PET/MR and SPECT/MR & Total-body PET workshop
Type of event: Conference
Type of participation: Participatory - oral communication
Corresponding author: Yes
City of event: Elba, Italy
Date of event: 28/05/2022
End date: 01/06/2022
Marta Freire; John Barrio; Neus Cucarella; Celia Valladares; Jose M. Benlloch; Antonio J. Gonzalez.
- 16** **Title of the work:** ScintoTube: An Edgeless preclinical PET insert
Name of the conference: PSMR-TBP 2022 9th Conference on PET/MR and SPECT/MR & Total-body PET workshop
Type of event: Conference
Type of participation: 'Participatory - poster
Corresponding author: No
City of event: Elba, Italy
Date of event: 28/05/2022
End date: 01/06/2022
Marta Freire; Andrea Gonzalez-Montoro; Gabriel Cañizares; Celia Valladares; Stuart S. Berr; Mark B. William; Carlos Correcher; Antonio J. Gonzalez.
- 17** **Title of the work:** Addressing Light Distribution Truncation and 3D Impact Positioning in PET: Edgeless Approach
Name of the conference: 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference
Type of participation: 'Participatory - poster
Corresponding author: Yes
City of event: Japan
Date of event: 16/10/2021
End date: 23/10/2021

**Organising entity:** IEEE

Marta Freire; Gabriel Cañizares; Andrea Gonzalez-Montoro; Stuart Berr; Mark Williams; Antonio J. Gonzalez.

- 18 Title of the work:** Evaluation of Crystal Arrays for Accurate Positioning and Timing PET Detectors
Name of the conference: 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of participation: 'Participatory - poster

Reasons for participation: Review before acceptance

Corresponding author: No

City of event: Yokohama, Japan

Date of event: 16/10/2021

End date: 23/10/2021

Organising entity: IEEE

Celia Valladares; Efthymios Lamprou; Antonio J. Gonzalez; John Barrio; Neus Cucarella; Marta Freire; Luis F. Vidal; J. Maria Benlloch. "Evaluation of Crystal Arrays for Accurate Positioning and Timing PET Detectors".

- 19 Title of the work:** Neural Networks for Position Estimation in Monolithic Crystals: Comparison of Experimental and Simulated Training
Name of the conference: 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Type of participation: 'Participatory - poster

Reasons for participation: Review before acceptance

Corresponding author: Yes

City of event: Japan

Date of event: 16/10/2021

End date: 23/10/2021

Organising entity: IEEE

Marta Freire; Peter Bruyndonckx; Thibaut Merlin; Dimitris Visvikis; Andrea Gonzalez-Monotor; Antonio J. Gonzalez.

- 20 Title of the work:** Pilot Results of Detectors Enhancing TOF and DOI Capabilities, Suitable for TB-PET
Name of the conference: 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)

Corresponding author: No

City of event: Yokohama, Japan

Date of event: 16/10/2021

End date: 23/10/2021

Organising entity: IEEE

"Pilot Results of Detectors Enhancing TOF and DOI Capabilities, Suitable for TB-PET".

- 21 Title of the work:** Using Neural Networks for Impact Position Estimation in Glued Monolithic Crystals
Name of the conference: 2021 IEEE Nuclear Science Symposium and Medical Imaging Conference
Type of participation: Participatory - oral communication

Reasons for participation: Review before acceptance

Corresponding author: Yes

City of event: Japan

Date of event: 16/10/2021

End date: 23/10/2021

Organising entity: IEEE



Marta Freire; Sara Echegoyen; Koldo Vidal; Andrea Gonzalez-Montoro; Filomeno Sanchez; Antonio J. Gonzalez.

- 22** **Title of the work:** Calibration Techniques for Monolithic Crystals Detectors Based on Neural Networks
Name of the conference: Total Body PET Conference
Corresponding author: Yes
City of event: Edinburgh, United Kingdom
Date of event: 23/09/2021
Organising entity: European Society for Molecular Imaging
Marta Freire; Sara Echegoyen; Peter Bruyndonckx; Andrea Gonzalez-Montoro; Antonio J. Gonzalez.
- 23** **Title of the work:** Reducing Calibration Times in Total Body PET Designs Based on Monolithic Crystals
Name of the conference: Total-Body PET Conference
Corresponding author: Yes
City of event: Edinburgh, United Kingdom
Date of event: 23/09/2021
Organising entity: European Society for Molecular Imaging
- 24** **Title of the work:** Performance Evaluation of an Edgeless PET Insert for Small Animal Imaging.
Name of the conference: 2020 IEEE Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Boston, United States of America
Date of event: 03/11/2020
End date: 07/11/2020
Organising entity: IEEE
Reasons for participation: Review before acceptance
Type of entity: Innovation and Technology Centres
"Calibration Methodology of an Edgeless PET System Prototype".
- 25** **Title of the work:** Reducing Calibration Time in PET Systems Based on Monolithic Crystals
Name of the conference: 2020 IEEE Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC)
Type of event: Conference
Type of participation: 'Participatory - poster
City of event: Boston, United States of America
Date of event: 03/11/2020
End date: 07/11/2020
Organising entity: IEEE
Reasons for participation: Review before acceptance
Type of entity: Innovation and Technology Centres
Marta Freire Lopez-Fando; Andrea Gonzalez-Montoro; Antonio Gonzalez. "Reducing Calibration Time in PET Systems Based on Monolithic Crystals".
- 26** **Title of the work:** PET Detector based on a Semi-Monolithic Crystal with DOI and TOF Capabilities
Name of the conference: 2020 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)
Corresponding author: No
City of event: Boston, United States of America
Date of event: 31/10/2020
End date: 07/11/2020
Organising entity: IEEE



John Barrio; Neus Cucarella; Marta Freire; Efthymios Lamprou; Sergio Aguilar; Celia Valladares; Victor Ilisie; Jose M. Benlloch; Antonio J. Gonzalez. "PET Detector based on a Semi-Monolithic Crystal with DOI and TOF Capabilities".

- 27** **Title of the work:** Pilot Results of an Edgeless Small Animal PET Insert
Name of the conference: 2019 IEEE Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC)
Type of event: Conference
Type of participation: Participatory - oral communication
City of event: Manchester, United Kingdom
Date of event: 01/11/2019
Organising entity: IEEE
Reasons for participation: Review before acceptance
- 28** **Title of the work:** Monolithic crystals in PET developments @ i3M
Name of the conference: Total Body PET Workshop
City of event: Bruselas, Belgium
Date of event: 12/09/2019
End date: 13/09/2019
"Monolithic crystals in PET developments @ i3M".
- 29** **Title of the work:** PET system based on a single LYSO tube
Name of the conference: MEDAMI, Mediterranean Thematic Workshop in Advanced Molecular Imaging
City of event: Valencia, Spain
Date of event: 15/05/2019
End date: 17/05/2019
Organising entity: Instituto de Instrumentación para Imagen Molecular (i3M)
City organizing entity: Valencia, Spain
- 30** **Title of the work:** Calibration of PET Dectectors Based on Monolithic Blocks using Voronoi Diagrams
Name of the conference: PSMR-8th Conference on PET/MR and SPECT/MR
Type of event: Conference
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
Corresponding author: Yes
City of event: Munich, Germany
Date of event: 15/04/2019
End date: 17/04/2019
Organising entity: IEEE
City organizing entity: Munich, Germany
"Calibration of PET Dectectors Based on Monolithic Blocks using Voronoi Diagrams".
- 31** **Title of the work:** Calibration of PET Detectors Based on Monolithic Blocks Using Voronoi Diagrams
Name of the conference: 2018 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC)
Type of event: Conference
Type of participation: 'Participatory - poster
Reasons for participation: Review before acceptance
City of event: Sydney, Australia
Date of event: 10/11/2018
Organising entity: IEEE
"Calibration of PET Detectors Based on Monolithic Blocks Using Voronoi Diagrams".

Other achievements

Stays in public or private R&D centres

Entity: Laboratory of Medical Imaging Information Processing

Type of entity: R&D Centre

Faculty, institute or centre: University of Brest

City of entity: Brest, France

Start-End date: 20/02/2020 - 20/05/2021

Duration: 3 months

Goals of the stay: Guest

Provable tasks: Implementation of Neural Networks for the impact determination in PET based on monolithic crystals

Obtained grants and scholarships

- 1** **Name of the grant:** Subvenciones para la contratación de personal investigador de carácter postdoctoral
Aims: Post-doctoral
Awarding entity: Generalitat Valenciana
Conferral date: 10/10/2024
End date: 09/10/2026
Type of entity: Conselleria de Educación, Investigación, Cultura y Deporte
Duration: 2 years
- 2** **Name of the grant:** Subvenciones para la contratación de personal investigador de carácter predoctoral
Aims: Pre-doctoral
Awarding entity: Generalitat Valenciana
Conferral date: 01/09/2019
End date: 31/08/2022
Type of entity: Conselleria de Educación, Investigación, Cultura y Deporte
Duration: 3 years
- 3** **Name of the grant:** Subvenciones para estancias de contratados predoctorales en centros de investigación fuera de la Comunitat Valenciana
Aims: Pre-doctoral
Awarding entity: Generalitat Valenciana
Conferral date: 20/02/2021
End date: 20/06/2021
Entity where activity was carried out: University of Washington
Type of entity: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
- 4** **Name of the grant:** Subvenciones para estancias de contratados predoctorales en centros de investigación fuera de la Comunitat Valenciana
Aims: Pre-doctoral
Awarding entity: Generalitat Valenciana
Conferral date: 20/02/2020
End date: 20/05/2021
Entity where activity was carried out: Brest (Francia)
Type of entity: Conselleria de Innovación, Universidades, Ciencia y Sociedad Digital
Duration: 3 months



- 5** **Name of the grant:** Beca Erasmus+
Aims: Erasmus
Awarding entity: Ministerio de Educación, Política Social y Deporte
Conferral date: 27/05/2015
End date: 30/06/2016
Entity where activity was carried out: Université de Nantes
Faculty, institute or centre: UFR Sciences et Techniques
Type of entity: State agency
Duration: 1 year
- 6** **Name of the grant:** 2023 Valentin T. Jordanov Radiation Instrumentation Travel Grant
Aims: Travel Grant
Awarding entity: IEEE
Conferral date: 2023
- 7** **Name of the grant:** FY21 Research Week Winner
Aims: Pre-doctoral
Awarding entity: University of Virginia
Conferral date: 05/02/2021
Type of entity: University
- 8** **Name of the grant:** 2020 IEEE NSS MIC Student Paper Award
Aims: Student Paper Award
Awarding entity: IEEE Nuclear Sciences Symposium (NSS) and Medical Imaging Conference (MIC)
Conferral date: 07/11/2020
- 9** **Name of the grant:** 2022 Best Oral Presentation. 9th Conference on PET/MR and SPECT/MR & Total-body PET workshop
Awarding entity: PSMR-TBP 2022