

**The Faculty of Medicine of Harvard University
Curriculum Vitae**

Date Prepared: Nov/27/2023
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Education:

1995 – 2000	Engineering Degree	Telecommunication Engineering	University of Zaragoza (Spain)
1999 – 2000	Masters degree	Automatic, Production, and Signal and Image Processing	University of Bordeaux 1 (France)
2000 – 2004	Ph.D. (très honorable)	Signal and Image Processing (Advisor: Prof. Philippe Marchegay and Prof. Yannick Berthoumieu)	University of Bordeaux 1 (France)

Postdoctoral Training:

01/05 – 12/09	Research Associate	Cardiovascular and Brain PET imaging (PI: Prof. Peter Weissberg and Dr. Tim D. Fryer)	University of Cambridge (UK)
01/10 – 11/12	Research Fellow	PET/MR imaging (PI: Prof. Zahi A. Fayad and Prof. Jagat Narula)	Mount Sinai Hospital (NY)
11/12 – 11/14	Research Fellow	Radiology Department – PET/MR imaging (Dr. Ciprian Catana)	Massachusetts General Hospital (Boston)

Faculty Academic Appointments:

11/14 – 8/19	Instructor	Radiology Department	Harvard Medical School
9/19 – present	Assistant Professor	Radiology Department	Harvard Medical School
3/20 – present	Member of the Harvard-MIT HST Faculty	Health, Science and Technology (HST) Department	Massachusetts Institute of Technology
01/23 – present	Distinguished (Visiting) Professor	Bioengineering Department	Universidad Carlos III Madrid (UC3M)

Appointments at Hospitals/Affiliated Institutions:

01/05 – 12/09	Research Associate	Department of Clinical Neurosciences	Addenbrookes Hospital (Cambridge, UK)
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01/10 – 11/12	Research Fellow	Radiology Department	Mount Sinai School of Medicine
11/12 – 11/14	Research Fellow	Athinoula A. Martinos Center for Biomedical Imaging	Harvard Medical School
11/14 – present	Assistant in Biomedical Engineering	Radiology Department	Massachusetts General Hospital

Faculty Membership in Harvard Initiatives, Programs, Centers, and Institutes

Other Professional Positions:

2007 – 2014	Executive and Scientific Advisory Board	Nexociencia (not-for-profit Spanish organization to communicate science to general public)
2021-2022	Consultant	Collagen Medical LLC
2022 - 2023	Board of Directors: Director of R&D	Evestel Iberia, an AI-based start-up with the goal of using image-based AI technology to improve driving safety and comfort.

Major Administrative Leadership Positions:

Local

2005 – 2009	Co-organizer of “Physics at Work” conferences cycles for school children	University of Cambridge (UK) – Departments: Wolfson Brain Imaging Centre and Cavendish Department.
2007 – 2009	Course instructor and co-organizer	University of Cambridge (UK). Department: Wolfson Brain Imaging Centre
2016	Co-organizer of Open House Seminar: Imaging Inside the Body	Real Colegio Complutense, RCC / Harvard University
2021	Co-organizer of MGH Youth Scholar Program (10th grade)	Radiology Diversity, Equity and Inclusion Committee at MGH

International

2007 – 2014	International Scientific and Humanistic Essay Award - Organizer	Nexociencia (not-for-profit Spanish organization to communicate science to general public)
2016	Conference Organization Committee	Neuro-Receptor Mapping (NRM), 14th-16th July 2016 (Boston)

2019 – 2020	Chair of Cardiology section at World Molecular Imaging Conference (WMIC)	World Molecular Imaging Society
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Committee Service:

Local

2010 – 2012	Radiation Safety Committee	Mount Sinai Hospital
	2010 – 2012	Member
2017 – 2019	BrainMap Seminar Series organization committee	Athinoula A. Martinos Center (MGH/Harvard Medical School)
	2017 – 2019	Organizer
2018 – 2021	Molecular Imaging Initiative Committee	Athinoula A. Martinos Center (MGH/Harvard Medical School)
	2018 – 2021	Organizer
2019 – Present	Diversity, Equity and Inclusion Committee	Radiology Department – Massachusetts General Hospital
	2019 – Present	Co-Chair of Research Taskforce

International

2016	Thesis Committee Angel Torrado Carvajal	Universidad Rey Juan Carlos (URJC), Spain
	July 8 th 2016	Committee Member
2021	Thesis Committee Ober Van Gomez Lopes	Universidad Complutense Madrid, Spain
	January 28th 2021	External evaluator and Committee Member

Professional Societies:

2001 – 2004	GdR ISIS (Research Group for Information, Signal, Images and Vision, France)	
	2001 – 2004	Member
2011	ISMRM (The International Society for Magnetic Resonance in Medicine) (Montreal)	
	May 2011	Panel Chair and Moderator (on behalf of Prof. Zahi A. Fayad)
2013	Medicon (Mediterranean Conference on Medical and Biological Engineering and Computing) (Spain)	
	2013	Abstract Selection Committee
2014 – 2015	IEEE (Institute of Electrical and Electronics Engineers)	
	2014 - 2015	Member

2017	ISMIRM - SNMMI Joint PET/MRI Workshop Oct. 26 – 29 2017, Chicago;	Panel Chair and Moderator.
2005 – present	ESMI (European Society for Molecular Imaging) 2005 - 2010, 2020 - present	Member
2006 – present	WMIS (World Molecular Imaging Society) 2006, 2012 - present	Member, Abstract Selection Committee, Panel Chair and Moderator. Poster Judge on Machine Learning (2019), Poster Judge on Computational and Data Science (2021) Chair of Cardiology section
2011 – Present	ISMIRM (The International Society for Magnetic Resonance in Medicine) 2011, 2014, 2017, 2019 – Present	Member
2012 – Present	AAAS (American Association for the Advancement of Science) 2012 – present	Member

Grant Review Activities:

2015	MITACS – Accelerate Proposal Application June 2015	MITACS, Canada Ad Hoc Reviewer
2016 – 2018	Surgical Sciences, Biomedical Imaging, and Bioengineering IRG [SBIB] 2016 – 2018	NIH Ad hoc Reviewer
2020	AES – Applied and Engineering Sciences Dec 2020	NOW (Dutch Research Council) Ad hoc Reviewer
2022 - Present	NOVA-FRQNT-NSERC Committee Dec 2022 – Dec 2023	Fonds du Research du Quebec - Canada Research Ad hoc Reviewer

Editorial Activities:

- **Ad hoc Reviewer**

Medical Physics

Scandinavian Journal of Rheumatology

Intensive Care Medicine

Kidney International

IEEE Transactions on Nuclear Science

European Journal of Nuclear Medicine and Molecular Imaging (EJNMMI)

European Journal of Nuclear Medicine and Molecular Imaging, Physics (EJNMMI Physics)

Physics in Medicine and Biology (PMB)

Journal of Nuclear Medicine (JNM)

PLOS ONE

IEEE TRPMS

IEEE Journal of Biomedical and Health Informatics

IEEE Transactions of Nuclear Science

Molecular Imaging and Biology

IEEE Journal of Biomedical and Health Informatics

NeuroImage

International Journal of Cardiovascular Imaging

Medical Image Analysis

Frontiers in Human Neuroscience

• **Other Editorial Roles**

2020 - Present	Review Editor, on Editorial Board of Brain Imaging and Stimulation	Frontiers in Human Neurosciences
2021 - Present	Associate Editor, on Editorial Board of PET and SPECT	Frontiers in Nuclear Medicine

Honors and Prizes:

1999-2000	Erasmus fellowship	EU	European Union (EU) fellowship for studying abroad
2000-2004	ACI-Ville fellowship	French Ministry of Research and Technology	Ph.D. fellowship
2003	Collaborative grant COST 276	EU COST 276	Travel grant for collaborative stay in Czech Republic
2003-2004	ATER (teaching and research special position)	University of Bordeaux 1, France	

2004	Très Honorable	University of Bordeaux 1, France	PhD dissertation
2008-2009	Bye-Fellow	Downing College, University of Cambridge, UK	Fellowship position at Downing College, University of Cambridge
2019	Best Oral presentation	ISMRM - SNMMI Joint PET/MRI Workshop NYC (26- 28 Oct. 2019)	Best Oral presentation
2019	Special Award	Annual Research Day. Radiology Department. MGH (Nov. 11 th 2019)	Presentation award
2022	Maria Zambrano Fellowship National Award (Spain)	Spanish Ministry of Research	National competition Fellowship award to engage International Talent into Spain

Report of Funded and Unfunded Projects

Past

2005 – 2009	Non-invasive detection techniques for inflamed plaques of atherosclerosis and other cardiovascular-related diseases British Heart Foundation FG/03/013 Co-Investigator (PI: Peter Weissberg and Elizabeth Warburton) Objective: to detect in vivo and non-invasively the inflamed atherosclerotic plaques, prone to rupture and therefore a risk of a life-threatening cardiovascular event using PET and MRI.
2009	Combination, evaluation and comparison of MR versus PET molecular imaging of atherosclerotic plaques in animal models of atherosclerosis Cooperative agreement from European Network DiMI (Diagnostics in Molecular Imaging), FP6. Project Co-PI Objective: to combine PET and MR for imaging atherosclerosis in an animal model in order to obtain better quantification and characterization of the plaque content.
2009	Simultaneous PET/MR imaging of a rodent model to improve brain kinetic analysis Cooperative agreement from European Network DiMI (Diagnostics in Molecular Imaging), FP6. Project Co-PI Objective: To use MR-based partial volume correction on simultaneous microPET/MR to improve pharmacokinetic analysis of PET images.
2011 – 2012	In Vivo Molecular MRI of Atherothrombotic Lesions R01 grant: NIH/NHLBI HL071021 Co-Investigator (PI: Zahi Fayad and Venkatesh Mani) Objective: To use combined PET and MRI information to improve PET image quantification of atherosclerotic plaques in vivo.
2013 - 2016	MR-assisted PET data optimization for neuroimaging studies R01 grant: NIH/NIBIB 1 R01 EB014894-01A1 Co-Investigator (PI: Ciprian Catana)

- Objective: to validate methods that benefit from the simultaneous MR and PET data acquisition and to explore the potential of this new technology for neurological applications focusing on Alzheimer's disease
- 2016 - 2019 PET Imaging of Pulmonary Fibrosis
R01 grant: NIH/NIBIB 1 R01 HL131907-01
Co-Investigator (PI: Peter Caravan)
Objective: to take a positron emitting imaging probe that we have shown can detect fibrosis in animal models, and use it to detect fibrosis in human patients and predict their prognosis
- 2018 - 2022 Imaging Histone Deacetylase in the Heart and Bone Marrow
R01 grant: NIH/NHLBI 1 R01 HL141563-01
Co-Investigator (PI: David Sosnivik)
Objective: Fibrosis, or scarring, of the heart muscle plays a major role in many cardiac diseases but is poorly understood. In addition, no medication has been developed to cause fibrosis in the heart to regress. Here we aim to develop a technique to image an enzyme in the heart known as histone deacetylase (HDAC), which could allow the progression and regression of fibrosis in the heart to be followed non-invasively.
- 2017 - 2021 PET Imaging of Thrombus
R01 grant: NIH/NHLBI 2 R01 HL109448-05
Co-Investigator (PI: Peter Caravan/David Sosnivik)
Objective: The goal of this renewal proposal is to develop a fibrin-specific positron emission tomography (PET) probe for direct imaging of thrombus.

Current

- 2022 - 2026 PET Imaging of Thrombus
R01 grant: NIH/NHLBI 2 R01 HL109448-09
Co-Investigator (PI: Peter Caravan)
Objective: To detect thrombus in the heart, veins, and arteries in the context of stroke in patients with DVT.
- 2018 - 2024 Multimodal MR-PET Machine Learning Approaches for primary prostate cancer characterization
R01 grant: NIH/NCI 1 R01 CA218187-01A1
Co-Investigator (PI: Ciprian Catana)
Objective: to provide innovative machine learning methods based on radiomics and deep learning to characterize tumor aggressiveness based on the imaging data of combined PET and MRI.
- 2020 - 2025 Development of the Human Dynamic Neurochemical Connectome Scanner
U01 grant: NIH 5U01EB029826-02
Co-Investigator (PI: Ciprian Catana)
Objective: to provide innovative machine learning methods based on radiomics and deep learning to characterize tumor aggressiveness based on the imaging data of combined PET and MRI.
- 2021 - 2026 PET-MR Imaging of pulmonary fibrosis
R01 grant: NIH/NHLBI 1R01HL153606-01A1
Co-Investigator (PI: Peter Caravan)
Objective: This proposal aims to apply PET-MR imaging to quantify molecular abnormalities in the lungs of IPF patients and determine if such measures can predict the pace of disease progression and determine whether the patient is responding to anti-fibrotic therapy.

2023 - 2024 Evaluation of endothelial dysfunction and thrombosis in PASC patients via Fibrin PET/MR imaging/peripheral blood analysis
 PolyBio Research Foundation
 PI (\$474,260 Total Direct Costs).
 Objective: To use our probe FBP8-PET to detect (amyloid) microclots originated after the infection with the SARS-Cov-2 virus, as a potential source linked to the symptoms in Post-Acute Sequelae of SARS-CoV-2 infection (PASC) patients.

Projects Submitted for Funding

Training Grants and Mentored Trainee Grants

2015 - 2016 Improving in vivo molecular imaging with simultaneous PET/MRI using an extended motion-corrected pseudo-CT method for whole-body: applications to cardiovascular clinical research
 Real Colegio Complutense RCC / Harvard University
 Mentor of Angel Torrado Carvajal
 Objective: To develop extended MR-based attenuation correction methods for simultaneous WholeBody PET/MRI

Unfunded Current Projects

Report of Local Teaching and Training

Teaching of Students in Courses:

2000 – 2001	Signal Processing 3 rd year physics students	Technological University Institute for Physical Measurements (University of Bordeaux 1, France) 32h total: 4h per week for 8 weeks
2000 – 2003	Introduction to automatic control processes via Labview 1 st year technical engineering students	Polytechnical Institute for Aeronautic Maintenance (University of Bordeaux 1, France) 96h total: 4h per week for 8 weeks during 3 years
2001 – 2003	Signal Processing 3 rd year technical engineering students	Polytechnical Institute for Aeronautic Maintenance (University of Bordeaux 1, France) 64h total: 4h per week for 8 weeks during 2 years
2001 – 2003	Automatic test bench via Labview	Polytechnical Institute for Aeronautic Maintenance (University of Bordeaux 1, France)

	3 rd year technical engineering students	54h total: 3h per week for 9 weeks during 2 years
2002 – 2004	Introduction to Digital Signal and Image Programming	National Engineering School of Informatics and Radiocommunications of Bordeaux (University of Bordeaux 1, France)
	1 st year engineering students	40h total: 4h per week for 5 weeks during 2 years
2003 – 2004	Signal and Image Digital Processing	National Engineering School of Informatics and Radiocommunications of Bordeaux (University of Bordeaux 1, France)
	2 nd year engineering students	55h total: 5h per week for 11 weeks
2003 – 2004	Imaging pre-projects	National Engineering School of Informatics and Radiocommunications of Bordeaux (University of Bordeaux 1, France)
	3 rd year engineering students	25h
2005 – 2009	Linear Systems and Controls and Signal and Data Analysis	Downing College, Department of Engineering (University of Cambridge, UK)
	1 st year engineering students	189h
2017	Imaging biophysics and clinical applications Undergraduate and graduate students	MIT (HST 563) Course planning (2h/week) and Lecturer (2h)
2015 – present	Biomedical Signal and Image Processing: Image Registration Graduate Students	MIT (HST 6.555J) 3h Lecture and 8h Lab (16h from 2020)
2021	BIOE 5235 (Biomedical Imaging) Graduate Students	Northeastern University Guest Lecture (2h)
2023	BioSignals and BioImages Graduate Students (Master)	Universidad Carlos III Madrid (Spain), Master in Machine Learning in Health 40.5 h
2023	Introduction to BioSignals and BioImages Graduate Students (Master)	Universidad Carlos III Madrid (Spain), Master in Machine Learning in Health 27 h

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs):

2010 – 2012	PET and PET Quality Control Cardiology Fellows	Mount Sinai Hospital, NY, USA 4h
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2012	PET/MR vs. PET/CT: Are we close enough? Nuclear Medicine Department Fellows and Faculty Board	Mount Sinai Hospital, NY, USA 1h
2016	Introduction to PET and PET/MRI: applications to Brain Tumors Neuro-Oncology Fellow	MGH, Boston, USA 1h
2018	Improving PET image quantification using PET/MRI International Kong Summer Course	MGH, Boston, USA 1h
2019	PET/MRI Research on Cardiovascular Diseases: from animal models to human studies International Winter and Summer Research Enrichment Program, Kong Course	MGH, Boston, USA 2h
2020	PET/MRI Research on Cardiovascular Diseases: from animal models to human studies. Talk and Panel Discussion International Summer and Fall Research Enrichment Programs, Kong Course	MGH, Boston, USA 4h
2021-2022	Scientific Paper Submission / Peer Review Defense. A How-To Brief Intro International Spring and Fall Clinical Research Enrichment Program, Kong Course	MGH, Boston, USA 6h
2021-2022	Mentoring 2 last year Residency (in Neurology and Radiology) international MDs, Postdoctoral mentoring for 6 months of two Residency MDs, as short-term scholars	MGH, Boston, USA 4h per week for 6 months

Research Supervisory and Training Responsibilities:

2001 – 2003	Supervisor of 3 student projects on signal and image processing / ENSEIRB - University of Bordeaux 1 (France)	Daily for 6 months, twice a week for 2 months and daily for 3 months respectively
2000 – 2004	Supervisor of 2 Final degree thesis and 3 Master's degree thesis / ENSEIRB - University of Bordeaux 1 (France)	Daily for 6 months during 4 years.
2005 – 2009	Supervisor of 5 Final thesis degree of Part III Physics students (Cavendish Laboratory) / Univ. of Cambridge, UK	Daily for 6 months during 4 years.
2014	Supervisor of Harvard Catalyst SCTR student and a Northeastern Univ. student projects / Athinoula A. Martinos Center for Biomedical Imaging (MGH-HMS)	Daily for 6 months and twice a week for 7 months respectively
2014 - 2017	Supervision of 2 postdoctoral fellows/ Athinoula A. Martinos Center for Biomedical Imaging (MGH-HMS)	1h lab meeting per week and 2h per week on 1:1

2015 – 2018	Supervisor of 3 CaNCURE projects on “Motion correction and data analysis using PET/MR on new Temozolomide PET radiotracer”, “Pelvic MR based Attenuation Correction in PET/MR integrated scanners” and “Simulation Study to Assess the Accuracy of a Novel MR-based Pelvis Attenuation Correction Method” / Athinoula A. Martinos Center for Biomedical Imaging (MGH-HMS).	Twice a week for 6 months during 3 years
	CaNCURE was created in 2015 to provide Northeastern University undergrads with experiential training in cancer nanomedicine	
2018 - 2020	Supervisor of 2 International Collaboration Students on “Use of DeepLearning CNN approaches for PET reconstruction and Scatter Correction” and “Motion correction of cardiac PET images for Perfusion study” / Athinoula A. Martinos Center for Biomedical Imaging (MGH-HMS)	Daily 1h for 6 months during 2 years
2020 - 2022	Mentoring 1 local undergraduate student from “Ignite the Spark” MGH program.	Once a week for 1 month
2020 - 2022	Mentoring 1 international undergraduate student from the “Sagrado-MIT Neuroscience Pre-College Program” (SNPP)	Once a month for 1 year

Formally Mentored Harvard Students (Medical, Dental, Graduate, and Undergraduate):

2014	Stephanie Vu, Harvard Catalyst SCTR Mentor on “rTMS brain stimulation” project for Summer Clinical and Translational Research Internship Program, Harvard Catalyst. Oral Presentation at Harvard Catalyst.
2014 - Present	Mike Levine, Harvard Biophysics PhD program Mentor for PhD program in Biophysics (1h per week). One co-authored paper and another one currently under submission.
2014 - 2017	Kevin T. Chen, MIT – HST PhD program / Postdoc at Stanford University (California) Mentoring for PhD HST program (Harvard / MIT). Five co-authored papers and several conference posters.
2015 - 2016	Angel Torrado Carvajal, RCC - Harvard / Postdoc at Pain Group in MGH-HMS

Mentor for international PhD visiting scholar. Joint organization of RCC seminar. One co-authored paper.

2016 - 2021 Manuel A. Morales, MIT – HST PhD program

Mentor for PhD HST program, Harvard / MIT (2h per week). Poster presentation on HST annual program. Member of Thesis committee. One co-authored paper.

2022 Wilton Chukwuemeka Fidelis, MGH SRTP program

Co-Mentor of Summer Research Trainee Program (SRTP). 8-week duration. Trainee Oral presentation in front of SRTP Evaluation Committee.

Other Mentored Trainees and Faculty:

2000 – 2001 T. Shouthivo. ENSEIRB-Univ. of Bordeaux (France). Final degree thesis

Daily supervision for 6 months to achieve Master's degree

2001 – 2003 A. Mekaouar. ENSEIRB-Univ. of Bordeaux (France). Final degree thesis (2001-2002) and Master's degree in Signal and Image Processing (2002-2003)

Daily supervision for 6 months to achieve Final degree thesis and Master's degree

2001 – 2003 N. Gaillard, B. Tourne, C. Bosselut and L. Banâtre, K. Nikiema, M. Matteoli, P. Maury and D. Fermet. ENSEIRB-Univ. of Bordeaux (France).

Supervisor of signal and image processing projects of engineering students at ENSEIRB – Univ. of Bordeaux I (France).

2003 – 2004 K. Nikiema. ENSEIRB-Univ. of Bordeaux (France). Master's degree in Signal and Image

Daily supervision for 6 months to achieve Master's degree

2003 – 2004 S. Olijnyk. ENSEIRB-Univ. of Bordeaux (France). Master's degree in Signal and Image

Daily supervision for 6 months to achieve Master's degree

2005 – 2006 W.K. Hau. Part III Physics. Cavendish Laboratory. Univ. of Cambridge (UK). Final degree thesis

Daily supervision for 6 months to achieve Final degree thesis working on partial volume effect correction for PET images.

2005 – 2006 D.P.E. Morgan. Part III Physics. Cavendish Laboratory. Univ. of Cambridge (UK). Final degree thesis

Daily supervision for 6 months to achieve Final degree thesis working on an Expectation-Maximization (EM) approach for partial volume correction of PET images.

2006 – 2007 J.E.A. Lewis. Part III Physics. Cavendish Laboratory. Univ. of Cambridge (UK). Final degree thesis

Daily supervision for 6 months to achieve Final degree thesis working on Coregistration of MR and PET images for atherosclerosis applications.

2007 – 2008 V. Ramesh. Part III Physics. Cavendish Laboratory. Univ. of Cambridge (UK). Final degree thesis

- Daily supervision for 6 months to achieve Final degree thesis working on a-trous wavelet decomposition for partial volume effect correction of PET images.
- 2007 – 2008 F.A. Riera-Muniesa. Part III Physics. Cavendish Laboratory. Univ. of Cambridge (UK). Final degree thesis
- Daily supervision for 6 months to achieve Final degree thesis working on automatic segmentation of MR images and image coregistration.
- 2010 – 2012 J. Bini. Ph.D. / Ph.D. student at Mount Sinai School of Medicine (NY)
- Daily supervision for 2 years on attenuation correction for PET/MRI. Published 3 manuscripts with average impact factor (IF) of 4.98.
- 2014 J. Grammatikos / Northeastern University
- Supervisor twice a week for 7 months of student project on “MR-based attenuation correction for PET” in preparation of graduate school application.
- 2015 – 2018 Nicholas Martin, Connor Elkhill and Justin Margolin / [CaNCURE](#) program-Northeastern University.
- Supervisor twice a week for 6 months of CanCURE students project program from Northeastern University, to expose students to hands-on research and help students to get into graduate/medical school.
- 2018 – 2019 Javier Vera-Olmos and Andrea Monroy / International visiting Ph.D. students from URJC (Madrid, Spain) and UMCG (Groningen, Netherlands)
- Supervisor daily (1h) for 6 months of their last year Ph.D. degree.
- 2019 – 2022 Pablo Galve Lahoz. International Ph.D. student from Universidad Complutense Madrid (Spain).
- Ph.D. mentor. Daily supervision during 6 months stay at Martinos center and weekly supervision during the rest of Ph.D. program.

Formal Teaching of Peers (e.g., CME and other continuing education courses):

- No presentations below were sponsored by 3rd parties/outside entities*
- Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.*

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| 2007 – 2009 | Multimodal Imaging in Neurology, Neurosurgery, Inflammation and Cardiovascular Medicine | Single presentation |
| | DiMI (Diagnostics in Molecular Imaging) (Marco Program FP6, European Union) | Cambridge (UK) |
| 2021 | Cardiac & Cardiovascular Molecular Imaging using PET/MRI / Invited Talk | Single presentation |
| | Joint Program of Nuclear Medicine at Brigham and Women’s Hospital (MGB) | Boston |

Local Invited Presentations:

- No presentations below were sponsored by 3rd parties/outside entities*

☒ *Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.*

- 2014 Improving quantification in PET/MRI: attenuation correction / Power-Pitch Talk and Poster.
Hampton Symposium Seminar. Department of Radiology, Massachusetts General Hospital
- 2016 Improving In Vivo Molecular Imaging with Simultaneous PET/MRI / Talk
RCC / Harvard University Open House Seminar (Real Colegio Complutense / Harvard Univ.)
- 2016 Simultaneous PET/MRI: Expertise and Research Interests / Talk
Molecular Imaging Seminar, Athinoula A. Martinos Center for Biomedical Imaging
- 2016 In vivo visualization of HDACs with simultaneous PET/MRI / Talk
Thorathic Imaging Seminar, Athinoula A. Martinos Center for Biomedical Imaging
- 2017 When PET met MRI: a Heart and Brain connection story / Talk
BrainMap Seminar Series, Athinoula A. Martinos Center for Biomedical Imaging
- 2018 In vivo visualization of atherosclerotic plaque rupture using PET/MRI / Talk
Open House Seminar, Athinoula A. Martinos Center for Biomedical Imaging
- 2018 Cardiovascular Imaging using PET/MRI / Talk
Science on Tap, Athinoula A. Martinos Center for Biomedical Imaging
- 2018 Epigenetic Signatures of Human Myocardium and Brown Adipose Tissue Revealed with Simultaneous Positron Emission Tomography and Magnetic Resonance of Class I Histone Deacetylases / Power-PitchTalk and Poster
Cardiovascular Division Retreat – Mass. General Hospital / Harvard Medical School
- 2018 PET/MRI in Cardiovascular Imaging / Power-Pitch Talk and Poster
Athinoula A. Martinos Center Annual Retreat
- 2018 Consensus Nomenclature for Kinetic Analysis / Talk
Athinoula A. Martinos Center Kinetic Modeling Seminar Series
- 2018 Throwing some Light onto the Heart: A Simultaneous PET/MR vision of Cardiovascular Disease Imaging / Talk
RCC / Harvard University Seminar (Real Colegio Complutense / Harvard University)
- 2020 Star Wars, Magnetismo, Antimateria y PET/MRI / Talk
Sagrado-MIT Neuroscience Pre-College Program 2020 (SNPP)
- 2020 A brief history of PET/MRI cardiovascular imaging time / Talk
Super Group “PET/MRI” lunch seminar series, Martinos Center for Biomedical Imaging
- 2020 Introduction to PET / Talk
Why and How seminar series, Athinoula A. Martinos Center for Biomedical Imaging
- 2021 Fibrin Imaging for non-invasive detection of Blood clots in vivo using PET/MRI / Talk

- State of the Center, Athinoula A. Martinos Center for Biomedical Imaging
- 2021 Star Wars, Magnetismo, Antimateria y PET/MRI / Talk
Sagrado-MIT Neuroscience Pre-College Program 2021 (SNPP)
- 2021 Novel Applications for PET imaging using a simultaneous PET/MRI / Guest Lecture
Northeastern University Course BIOE 5235 – Spring course
- 2021 Novel Applications for PET imaging using a simultaneous PET/MRI / Guest Lecture
Northeastern University Course BIOE 5235 – Fall course

Report of Regional, National and International Invited Teaching and Presentations

- No presentations below were sponsored by 3rd parties/outside entities*
- Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.*

Regional

- 2002 Système automatique de vidéo surveillance de scènes autoroutières / Talk (abstract)
Conférence Internationale Francophone d'Automatique, Nantes, France
- 2003 Poursuite de Véhicules en Scènes Autoroutières / Talk (abstract)
Colloque GRETSI, Paris, France

National

- 2012 Improving PET image quantification with combined PET/MR imaging / Invited talk
Texas Children's Hospital, Houston, TX, USA
- 2014 New SPM8-based MRAC approach for simultaneous PET/MR brain images / Talk
Webinar, Siemens Educational Series (Siemens)

International

- 2003 Automatic surveillance system for real traffic video sequences / Talk (abstract)
Intelligent Transport Systems, Madrid, Spain
- 2003 Multi-descriptor segmentation for real traffic sequences / Talk (abstract)
Technological Innovation for Land Transportation, Lille, France
- 2003 Spatio-Temporal Segmentation for Real Rigid Object Tracking / Invited Talk
Workshop European Cooperation in Science and Technology, Bordeaux, France

- 2008 Reproducibility, partial volume correction and correlation between methods for magnetic resonance-guided [F18] Fluorodeoxyglucose positron emission tomography in human carotid arteries / Talk (abstract)
DiMI/EMIL Annual Meeting, Leuven, Belgium
- 2011 Introductory Talk on Session Multi Modal Imaging Including PET/MRI (on behalf of Prof. Zahi A. Fayad)
ISMIRM, Montreal, Canada
- 2011 FDG-PET imaging with first combined Whole-Body MR-PET vs. conventional PET/CT: qualitative and quantitative comparison of results / Talk (abstract)
ISMIRM, Montreal, Canada
- 2011 ICT research and experts: research topics, opportunities and experiences, potential collaborations and future trends / Round table
Logroño, Spain (Regional Government of La Rioja)
- 2012 Preclinical evaluation of MR-attenuation correction versus CT-attenuation correction on a sequential whole-body PET/MR scanner / Talk (abstract)
PSMR, Elba, Italy
- 2012 Amélioration de la quantification des images fonctionnelles avec l'imagerie multimodale pour le traitement des patients: PET-MR-CT / Invited Talk
Paris, France
- 2013 Amélioration de la quantification des images fonctionnelles avec l'imagerie multimodale : TEP-IRM-CT/ Invited Talk
Poitiers, France
- 2014 New SPM8-based MRAC method for simultaneous PET/MR brain images: comparison with state-of-the-art non-rigid registration methods / Talk (abstract)
PSMR, Kos, Greece
- 2014 New SPM8-based MRAC for simultaneous brain PET/MRI / Invited Talk
Rigshospitalet Hospital, Denmark, World PET MRAC Expert Seminar
- 2015 New SPM8-based MRAC for simultaneous brain PET/MRI / Invited Talk
King's College London, World PET MRAC Expert Seminar
- 2016 Cuando el PET encontró al MRI: Mejorando la visualización de los procesos moleculares in vivo / Invited Talk
Universidad Rey Juan Carlos, Spain
- 2019 Detection of Left Atrial appendage Thrombus with ⁶⁴Cu-FBP8 / Talk (abstract)
WMIC conference, Montreal, Canada
- 2019 Thromboembolism Death Sentence: Fibrin, Atrial Fibrillation and the LAA connection / Talk (abstract)
SNMMI-ISMIRM joint PET/MR Workshop (NYC)
- 2019 Technical Advances in Cardiac PET/MR: Current State of the Art on Cardiac Imaging / Invited Talk
SNMMI-ISMIRM joint PET/MR Workshop (NYC)
- 2019 & 2022 First and Second International Talent Round tables ("Encuentro de Talento") to discuss experiences and define the needs and future of the City of Logroño as a place to attract and retain international talent.

Invited by the City Council and City Major of Logroño (Spain).

2023 Improving PET Image Quantification using integrated PET/MRI: technical advances and novel imaging applications for neuro- and cardiovascular imaging
Invited Talk at Universidad Carlos III de Madrid (Spain)

Report of Teaching and Education Innovations

Report of Technological and Other Scientific Innovations

2014 - Present Development of Pseudo-CT software package for MR-based attenuation correction of PET data for its use on combined/integrated PET/MRI scanners
Local, national and international use of software across many centers and hospitals around the world.

Report of Education of Patients and Service to the Community

No presentations below were sponsored by 3rd parties/outside entities

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

Activities

2005 – 2009 Cavendish Laboratory - University of Cambridge, UK / Speaker

Speaker at the “Physics at Work” seminars. Approaching science to school children

2005 – 2009 University of Cambridge, UK / Speaker

Organizer and Speaker at the “Science Festival”. Approaching science to General Public

2007 – 2014 Nexociencia - Not-for-profit Spanish organization to communicate science to general public / Organizer

Organizer of International Scientific and Humanistic Essay Award “Teresa Pinillos”.

2017 – 2018 Richi Foundation (Cancer non-for-profit organization) / Organizer and Speaker

2020 MGH Youth Program “Careers in Radiology” / Speaker

Speaker at the MGH Youth Program “Careers in Radiology” to attract youth to STEM and clinical areas. Title: “Radiology Research: Cardiovascular Imaging”

2022 Organizer and Speaker at the Richi Foundation Innovation Camp.

Approaching cancer-related science to International High-School students.

2022 Inaugural Episode of new MGB Science popularization and spreading program “Break it Down for me”.

Interview to describe research on non-invasive blood clot imaging in humans.

Educational Material for Patients and the Lay Community:

Recognition:

2011	Interview Highlight of Personal Trajectory on Research on Newspaper	Diario La Rioja (Spain)
2015	Interview for Anocéf (published online)	Anocéf – Association des Neuro-Oncologues d'Expression Française (France)
2020	Interview Highlight of Career Trajectory on Research on Regional Newspaper	Diario La Rioja (Spain)

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

Full list of PubMed publications:

<https://www.ncbi.nlm.nih.gov/myncbi/david.izquierdo%20garcia.1/bibliography/public/>

*=co-first authorship

1- K.C. Probst, **D. Izquierdo**, J.L. Bird, L. Brichard, D. Franck, J.R. Davies, T.D. Fryer, H.K. Richards, J.C. Clark, A.P. Davenport, P.L. Weissberg, E.A. Warburton. *Strategy for improved [(11)C]DAA1106 radiosynthesis and in vivo peripheral benzodiazepine receptor imaging using microPET, evaluation of [(11)C]DAA1106*. **Nucl. Med. Biol.** **2007**. May. 34(4): 439-446. (IF: 2.517)

2- K.C. Probst, **D. Izquierdo**, J.R. Davies, J.L. Bird, T.D. Fryer, H.K. Richards, J.C. Clark, E.A. Warburton, P.L. Weissberg, F.I. Aigbirhio. *Synthesis and Evaluation of Fluorine-18 and Copper-64 labelled PBR Radioligands*. **J Label Compd Radiopharm.** **2007** May; 50(5-6): 561–562. (IF: 1.24)

3- R.R. Moustafa, **D. Izquierdo**, P.L. Weissberg, J.C. Baron, E.A. Warburton. *Identifying aortic plaque inflammation as a potential cause of stroke*. **J Neurol Neurosurg Psychiatry.** **2008** Feb. 79(2): 236. (IF: 4.924)

4- **D. Izquierdo-Garcia**, J.R. Davies, M.J. Graves, J.H. Rudd, J.H. Gillard, P.L. Weissberg, T. D. Fryer, E.A. Warburton. *Comparison of methods for magnetic resonance-guided [18-F]fluorodeoxyglucose positron emission tomography in human carotid arteries: reproducibility, partial volume correction, and correlation between methods*. **Stroke.** **2009**. Jan; 40(1):86-93. (IF: 6.158)

5- P. Clatworthy, S. Lewis, L. Brichard, Y. Hong, **D. Izquierdo**, L. Clark, R. Cools, F. Aigbirhio, J-C. Baron, T. Fryer, and T. Robbins. *Dopamine release in dissociable striatal subregions predicts the different effects of oral methylphenidate on reversal learning and spatial working memory*. **Journal of Neuroscience.** **2009**. April. 29(15):4690-6. (IF: 7.115)

6- J.R. Davies*, **D. Izquierdo-Garcia***, J.H. Rudd, N. Figg, H.K. Richards, J.L. Bird, F.I. Aigbirhio, A.P. Davenport, P.L. Weissberg, T.D. Fryer, E.A. Warburton. *FDG-PET can distinguish inflamed from non-inflamed plaque in an animal model of atherosclerosis*. **Int J Cardiovasc Imaging.** **2010**. Jan;26(1):41-8. (IF: 2.648).

7- J.L.E. Bird, **D. Izquierdo-Garcia**, J.R. Davies, J.H. Rudd, K.C. Probst, N. Figg, J.C. Clark, P.L. Weissberg, A.P. Davenport, E.A. Warburton. *Evaluation of PBR quantification by positron emission*

- tomography as a tool for assessing macrophage burden in human atheroma. **Atherosclerosis** 2010. Jun;210(2):388-91. (IF: 3.706)
- 8- R.R. Moustafa, **D. Izquierdo-Garcia**, P.S. Jones, M.J. Graves, T.D. Fryer, J.H. Gillard, E.A. Warburton, J.C. Baron. *Watershed infarcts in transient ischemic attack/minor stroke with > or = 50% carotid stenosis: hemodynamic or embolic?* **Stroke**. 2010. Jul;41(7):1410-6. (IF: 6.158)
- 9- R.R. Moustafa, **D. Izquierdo-Garcia**, T.D. Fryer, M.J. Graves, J.H. Rudd, J.H. Gillard, P.L. Weissberg, J.C. Baron, E.A. Warburton. *Carotid Plaque Inflammation Is Associated with Cerebral Microembolism in Patients with Recent TIA or Stroke: A Pilot Study.* **Circ Cardiovasc Imaging**. 2010. Sep 1;3(5):536-41. (IF: 5.795)
- 10- M. Mion, K. Patterson, J. Acosta-Cabronero, G. Pengas, **D. Izquierdo-Garcia**, Y.T. Hong, T.D. Fryer, G.B. Williams, J.R. Hodges, P.J. Nestor. *What the left and right anterior fusiform gyri tell us about semantic memory.* **Brain**. 2010. Nov;133(11):3256-68. (IF: 9.915)
- 11- N. del Campo, R.J. Tait, J. Acosta-Cabronero, Y.T. Hong, **D. Izquierdo-Garcia**, R. Smith, F.I. Aigbirhio, B.J. Sahakian, U. Müller, T.W. Robbins, T.D. Fryer. *Quantification of receptor-ligand binding potential in sub-striatal domains using probabilistic and template regions of interest.* **Neuroimage**. 2011. Mar 1;55(1):101-12. (IF: 6.252)
- 12- H. Zaidi, N. Ojha, M. Morich, J. Griesmer, Z. Hu, P. Maniawski, O. Ratib, **D. Izquierdo-Garcia**, Z.A. Fayad and L. Shao. *Design and performance evaluation of a whole-body Ingenuity TF PET-MRI system.* **Phys. Med. Biol.** 2011. May; 56(10):3091-106. (IF: 2.701)
- 13- N. Dikaios, **D. Izquierdo-Garcia**, V. Mani, Z.A. Fayad, T.D. Fryer. *MRI-based motion correction of torso PET scanning: Initial comparison of acquisition and processing methods.* **Eur Radiol**. 2012. Feb; 22(2):439-46. (IF: 3.548)
- 14- Y. Berker, J. Franke, H. Donker, F. M. Mottaghy, C. Kuhl, **D. Izquierdo-Garcia**, Z. A. Fayad, F. Kiessling, V. Schulz, *MRI-based attenuation correction for hybrid PET/MRI systems: A 4-class tissue segmentation technique using a combined ultrashort-echo-time/Dixon MRI sequence.* **JNM**. 2012. May; 53(5):796-804. (IF: 5.774)
- 15- G. Pengas, G.B. Williams, J. Acosta-Cabronero, T.W.J. Ash, Y.T. Hong, **D. Izquierdo-Garcia**, T.D. Fryer, J.R. Hodges, P.J. Nestor. *The relationship of topographical memory performance to regional neurodegeneration in Alzheimer's disease.* **Front Aging Neurosci**. 2012. Jul; 4:17. (IF: 5.2)
- 16- M.A. Garcia-Solache, **D. Izquierdo-Garcia**, C. Smith, A. Bergman and Arturo Casadevall. *Fungal Virulence in a Lepidopteran Model Is an Emergent Property with Deterministic Features.* **mBio**. 2013. Apr 30;4(3):e00100-13. (IF: 5.6)
- 17- J. Bini*, **D. Izquierdo-Garcia***, J. Mateo, J. Machac, J. Narula, V. Fuster and Z.A. Fayad. *Preclinical evaluation of MR-attenuation correction versus CT-attenuation correction on a sequential whole-body PET/MR scanner.* **Investigative Radiology**. 2013. May; 48(5):313-322. (IF: 5.460)
- 18- A. Millon, S. Dickson, A. Klink, **D. Izquierdo-Garcia**, J. Bini, E. Lancelot, S. Ballet, P. Robert, J. Mateo de Castro, C. Corot and Z.A. Fayad. *Monitoring statin therapy in atherosclerotic rabbits using an iron oxide (P904)-enhanced MRI and 18F-FDG using PET/MR.* **Atherosclerosis**. 2013. Jun;228(2):339-45. (IF: 3.706)
- 19- N. Del Campo, T.D. Fryer, R. Smith, L. Brichard, J. Acosta-Cabronero, S.R. Chamberlain, R. Tait, **D. Izquierdo**, R. Regenthal, J. Dowson, J. Suckling, J.C. Baron, F.I. Aigbirhio, T.W. Robbins, B.J. Sahakian, U. Muller. *A positron emission tomography study of nigro-striatal dopaminergic mechanisms underlying attention: implications for ADHD and its treatment.* **Brain**. 2013. Nov;136(Pt 11):3252-70. (IF: 9.915)

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- 24- C. Poynton, K.T. Chen, D.B. Chonde, **D. Izquierdo-Garcia**, R.L. Gollub, E. Gerstner, T. Batchelor, and C. Catana. *Probabilistic atlas-based segmentation of combined T1-weighted and DUTE MRI for calculation of head attenuation maps in integrated PET/MRI scanners.* **AJNMMI**. 2014. Mar. 4(2):160-171. (IF: 3.250).
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- 27- **D. Izquierdo-Garcia**, A.E. Hansen, S. Förster, D. Benoit, S. Schachoff, S. Fürst, K.T. Chen, D.B. Chonde, and C. Catana. *An SPM8-based Approach for Attenuation Correction Combining Segmentation and Non-rigid Template Formation: Application to Simultaneous PET/MR Brain Imaging.* **JNM**. 2014. Nov;55(11):1825-30. (IF: 5.774)
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- 30- M.L. Loggia, D.B. Chonde, O. Akeju, G. Arabasz, C. Catana, R.R. Edwards, E. Hill, S. Hsu, **D. Izquierdo-Garcia**, R.-R. Ji, M. Riley, A.D. Wasan, N.R. Zurcher, D.S. Albrecht, M.R. Vangel, B.R. Rosen, V. Napadow and J.M. Hooker. *Evidence of glial activation in chronic pain patients.* **Brain**. 2015. Mar.138(Pt 3):604-615. (IF: 9.915)

- 31- E. Evans, G. Buonincontri, **D. Izquierdo**, C. Methner, R.C. Hawkes, R.E. Ansorge, T. Krieg, T.A. Carpenter and S.J. Sawiak. *Combining MRI with PET for partial volume correction improves image-derived input functions in mice*. **IEEE TNS**. 2015. Jun. 62 (3Pt 1): 628:633.
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- 34- D.N. Greve, D.H. Salat, S.L. Bowen, **D. Izquierdo-Garcia**, A.P. Schultz, C. Catana, J.A. Becker, C. Svarer, G.M. Knudsen, R.A. Sperling, K.A. Johnson. *Different partial volume correction methods lead to different conclusions: An 18F-FDG PET Study of aging*. **NeuroImage**. 2016. May. 132 :334-343. (IF: 6.252).
- 35- E. Herranz, C. Gianni, C. Louapre, C.A. Treaba, S.T. Govindarajan, R. Ouellete, M.L. Loggia, J.A. Sloane, N. Madigan, **D. Izquierdo-Garcia**, N. Ward, G. Mangeat, T. Granberg, E.C. Klawiter, C. Catana, J.M. Hooker, N. Taylor, C. Ionete, R.P. Kinkel, C. Mainero. *Neuroinflammatory component of gray matter pathology in multiple sclerosis*. **Ann Neurol**. 2016. Nov. 80(5):776-790.
- 36- M.J. Alshikho, N.R. Zurcher, M.L. Loggia, P. Cernasov, D.B. Chonde, **D. Izquierdo-Garcia**, J.E. Yasek, O. Akeju, C. Catana, B.R. Rosen, M.E. Cudkowicz, J.M. Hooker, N. Atassi. *Glial activation colocalizes with structural abnormalities in amyotrophic lateral sclerosis*. **Neurology**. 2016. Dec. 87(24):2554-2561.
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- 2- **D. Izquierdo-Garcia**, C. Catana. *MR Imaging-guided Attenuation Correction of PET Data in PET/MR Imaging.* **PET Clinics.** **2016.** 11(2):129-149. Review
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- 1- “Quatre Ans de Recherche Urbaine 2001-2004. Volume 2”. Section VI. Management, gestion et systèmes techniques. Chapter: “Contribution à l’analyse de scènes autoroutières”. Ed. Presses universitaires François-Rabelais. Co-Author.

Case reports

Letters to the Editor

Other non-peer reviewed scholarship

Professional educational materials or reports, in print or other media:

Local/Unpublished Clinical Guidelines and Reports:

Thesis:

1- **David Izquierdo**. Contribution to the Development of a Generic Architecture Dedicated to Remote-Tracking: An Application to Vehicle and Face Tracking. Nov. **2004**. University of Bordeaux 1. France.

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Abstracts, Poster Presentations, and Exhibits Presented at Professional Meetings:

Narrative Report

General Guidelines

- Do not exceed two single-spaced pages; length is generally commensurate with rank (e.g. \leq 1-page for Instructors and Assistant Professors)
- Can be optionally organized with subheadings for different topics
- Write in the first person (use “I” statements)
- Avoid jargon; instead, write for a broad audience
- Avoid or limit personal details about your family or health
- Update periodically to account for career growth

Purpose of the Narrative

- Tell a cohesive story about the various aspects of your career
- Describe the impact of your work on the field, with an extension to how it benefits healthcare
- Demonstrate evidence of dissemination of your work
- Convey the ‘big picture’ relevance of your work to non-experts
- Give perspective about the importance of field-specific activities
- Explain events or accomplishments that don’t fit anywhere else
- Anticipate obvious questions about major career shifts or work gaps
- Emphasize your recent and future work, including work in progress

Include contributions to:

- Your Area of Excellence, if applicable (e.g., Clinical Expertise and Innovation; Investigation; Teaching and Educational Leadership).
- Teaching and mentorship (if not already described under your Area of Excellence).
- Any Significant Supporting Activities (Administration & Institutional Service; Clinical Expertise; Education of Patients & Service to the Community; Diversity, Equity & Inclusion; Investigation; Special Merit in Education).

I am an Assistant Professor in the Department of Radiology at Massachusetts General Hospital / Harvard Medical School, member of the Harvard-MIT HST faculty and Distinguished Professor at Universidad Carlos III de Madrid (Spain). I have a great interest in improving non-invasive molecular imaging quantification with combined PET/MRI scanners. In particular most of my research is applied to brain and cardiovascular imaging to provide useful diagnostic tools for early detection of cardiovascular disease and brain disorders. My commitment has been shared between my dedication to research (80%) and teaching (10%) while the remaining 10% is spread between administrative and other activities.

Achievements in Investigation

I started working on the medical imaging field in 2005 after a Ph.D. on computer vision. Since then, I have achieved major steps in improving PET image quantification, mostly using MR-based techniques. Among them, I implemented for the first time a partial volume effect correction method for cardiovascular imaging (pub#4). I have also focused on improving simultaneous PET/MR image quantification by applying MR-based attenuation correction (AC) for PET imaging. Our method (pub#27) achieves some of the most accurate results for AC as recently highlighted on an international collaboration (pub#37). Currently more than a dozen international groups have implemented our method for brain AC. A recent publication demonstrates its accuracy and reproducibility (pub#48).

I am currently involved in a novel line of research using artificial intelligence on cardiovascular applications, having co-mentored an HST PhD student (Manuel Morales, from MIT) to provide improved cardiac motion detection and quantification (pub#50 and pub#57). Additionally, I have become a key collaborator for numerous studies where my expertise has been required to design and perform the whole PET/MRI data analysis, from the study design and acquisition to the final data analysis. These efforts have resulted in a large number of publications as second author.

Teaching and Education

From my first steps in research, I have been heavily involved in teaching and supervising students (more than 600h. in total). Becoming a Bye-fellow of Downing College at the University of Cambridge (UK) was a confirmation of this dedication given to the students. Since I moved to Boston, I have been heavily involved in the Health-Sciences and Technology (HST) program of MIT (HST 6.555J and HST 563) where I am also a Lecturer and prepare part of the material for Labs and Quizzes. Finally, I have been also involved in teaching the medical residents during my time at Mount Sinai Hospital (NYC) teaching the Cardiology Fellows and here at MGH (teaching the neuro-oncology fellows) on PET/MRI.

Significant Supporting Activities

During the last years I have been committed to more administrative and organization tasks, becoming part of the organization committee of the successful *BrainMap* Seminar Series at the Martinos, as well leading and organizing a novel initiative, the *Innovations in Molecular Imaging* Seminar Series, motivated to congregate and help visualize at international level the research achievements of the molecular imaging community from the Martinos. I am currently co-Chair of the Research Taskforce subcommittee of the Radiology Diversity, Equity and Inclusion Committee at MGH.

As a recognition of my expertise and added value to the scientific community I became an NIH grant reviewer in 2016, and recently part of the Editorial Board for the *Frontiers in Neuroscience* and *Frontiers in Nuclear Medicine* journals.

In summary, I believe my contribution to the scientific research on PET/MRI has been key for the development of this young and growing field and my current research line is focused on continue expanding the field. I find collaborative work and communication skills essential for my future success in the field.