

**A. Personal Statement**

At the Institute of Biophysics and Biomedical Engineering (IBEB), Faculty of Sciences of the University of Lisbon (FCUL), me and my collaborators are strongly dedicated to developing tools for researching biomarkers for neuropsychiatric disorders and for analyzing and visualizing complex brain data, namely derived from magnetic resonance imaging, positron emission tomography, and electroencephalography. Additionally, we are also developing and applying physiological and affective computing tools, including brain-computer interfaces, to both the medical and non-medical fields. (Please see also <http://hatdferreira.wixsite.com/brainconnectivity> and <http://bioexmachina.com>).

**B1. Education and Training**

START	END	DEGREE	INSTITUTION	MENTOR	DISCIPLINE
May 2009	Dec 2011	<b>Post-Doctoral Fellowship</b>	Institute of Biophysics and Biomedical Engineering, Faculty of Sciences, University of Lisbon, Portugal	Prof. Alexandre Andrade	Neuroimaging, Brain Connectivity, Epilepsy
Sep 2004	Jul 2012	<b>Medicine</b>	Faculty of Medicine, University of Lisbon, Portugal	Prof. Mamede de Carvalho	Brain Computer Interfaces, Amyotrophic Lateral Sclerosis Grade: <b>16/20</b> .
Jan 2002	Jun 2006 (issued Jul 2007)	<b>PhD Physics</b>	Instituto Superior Tecnico, University of Lisbon, Portugal INESC-Microsystemns and Nanotechnologies, Lisbon, Portugal	Prof. Paulo Peixeiro de Freitas Prof. Joaquim Sampaio Cabral	Nanotechnologies, Biochips and Biosensors, Spintronics
Sep 1996	Oct 2001	<b>BSc+MSc Technological Physics Eng</b>	Instituto Superior Tecnico, University of Lisbon, Portugal	Prof. Paulo Peixeiro de Freitas	Nanotechnologies, Biochips and Biosensors, Spintronics Grade: <b>17/20</b> .

**B2. Professional Positions**

START	END	POSITION	DEPARTMENT	INSTITUTION
Mai 2017	-	<b>Founder and CEO</b>	-	NeuroPsyCAD (startup neuropsychiatric diagnosis)
Oct 2016	-	<b>Member</b>	Rede Valor	University of Lisbon, Portugal
Sep 2016	-	<b>Coordinator</b>	Masters in Biomedical Engineering and Biophysics	Faculty of Sciences, University of Lisbon, Portugal
Feb 2015	-	<b>Focal Point</b>	EIT Health@ULisboa/Rede Saúde	Faculty of Sciences, University of Lisbon, Portugal
Dec 2011	-	<b>Assistant Prof</b>	Physics	Faculty of Sciences, University of Lisbon, Portugal
Dec 2011	-	<b>Researcher</b>	Institute of Biophysics and Biomedical Engineering, Faculty of Sciences, University of Lisbon, Portugal	Faculty of Sciences, University of Lisbon, Portugal
Sep 2010	Dec 2011	<b>Invited Assist Prof</b>	Physics	Faculty of Sciences, University of Lisbon, Portugal
Jan 2013	Dec 2015	<b>Clinical consultant</b>	Neuroradiology (MRI surgical planning)	Hospital Sao Jose, Centro Hospitalar Lisboa Central
May 2010	-	<b>Invited Adjunct Prof</b>	Exact Sciences (Masters in Magnetic Resonance)	Escola Superior Tecnologias da Saude de Lisboa, Instituto Politecnico de Lisboa, Portugal
Jan 2007	Apr 2009	<b>Clinical Education Specialist</b>	Healthcare (Magnetic Resonance Imaging and Computed Tomography)	Siemens, Portugal
Jan 2006	Jan 2007	<b>Founder and CEO</b>	.	Haloris Nanotechnologies (biosensor's startup)
Sep 2000	Ago 2003	<b>Teaching Assist</b>	Physics	Instituto Superior Tecnico, University of Lisbon, Portugal

**B3. Awards and Honors**

DATE	DISTINCTION	INSTITUTION
2017	StartUp Voucher (Projeto EmotAI)	IAPMEI
2017	StartUP Voucher (Projeto NeuroPsyCAD)	IAPMEI
2016	Startup idea pre-selected in Cohitec 2016 competition	Technology Commercialization Accelerator, COTEC, Portugal
2016	'InovPortugal New Ideas B2B' award to Startup idea (among >13000 competitors)	Acredita Portugal, Portugal
2015	Best Technical Poster Prize (MIBCA, Alzheimer's Disease)	EANM2015
2015	Certificate of Merit for Software Application (DKI)	ESMRMB2015
2015	Research Contract for "Brain Tumour Connectivity using Multimodal Imaging", financed by (principal investigator)	Medical Imaging Physics - Institute of Neuroscience and Medicine, Forschungszentrum Juelich,
2014	Research Contract for "Development of Physiological Computing Applications for the	iLIDH – Instituto Luso-Ilirio para o Desenvolvimento Humano

	Museum of Universal Values"	
2014	Magna Cum Laude Poster (MIBCA)	ISMRM2014
2014	Passaporte para o Empreendedorismo (Projeto EscutaME)	IAPMEI
2013	Passaporte para o Empreendedorismo (Projeto bioM)	IAPMEI
2013	Premio BES Inovacao (Projeto bioM)	BES
2013	Vodafone Mobile Data Challenge (Projeto bioM)	Vodafone
2010	National Project PTDC/SAU-ENB/120718/2010: "Comprehensive multi-parametric analysis of the limbic system connectivity in post-traumatic epilepsy patients" (principal investigator) € 95 959,00 (2012-2015)	Foundation for Science and Technology (FCT), Portugal
2010	Bursary Award	Comission of European Affairs – International League Against Epilepsy
2009	Travel award	Fundação Calouste Gulbenkian
2009	Post-Doc Fellowship Award & Grant (SFRH/BPD/44806/2008)	Foundation for Science and Technology (FCT), Portugal
2006	NEST certificate for new technology-based start-ups	Agência da Inovação (ADI)
2006	NEOTEC	Agência da Inovação (ADI).
2005	1st Prize in the Concurso Bioempreendedor 2005	Associação Portuguesa de BioIndústrias, of ICEP Portugal (Instituto das Empresas para os Mercados Externos) and Infarmed.
2005	Finalist in the Concurso Nacional de Inovação BES, Project "MagBiosense"	BES
2005	Student travel award	MMM2005
2005	Finalist in the Concurso Nacional de Empreendedorismo 2005, Project "MagBiosense"	Caixa Geral de Depósitos and Universidade Nova de Lisboa
2005	1st Prize in the Concurso de Ideias do Programa Avançado em Empreendedorismo e Gestão da Inovação (PAEGI)	Catolica Business School
2005	Student travel award	IEEE2005
2005	Technology round of the Berkeley Nano-Opportunity Challenge 2005 – business ideas for the nano generation	Berkeley Nanotechnology Club
2004	3rd Prize in the Great Lakes Entrepreneurs Quest 2004 Fall Edition in the category of New Business Idea at the North/West Michigan region	Great Lakes Entrepreneurs Quest
2004	1st Prize at the Business Plan competition in the entrepreneurship course VECTORE – Valorização Económica de Ciência e Tecnologia: Organização e Planeamento de Negócios para Novas Empresas, 2004 edition.	Initiative of the Green-Wheel program, Centro de Estudos em Inovação, Tecnologia e Políticas de Desenvolvimento, IN+, Instituto Superior Técnico.
2003	Prémio 3M à Inovação 2003 – Área das Ciências da Vida	3M Portugal and Universidade Técnica de Lisboa
2003	Programa Gulbenkian de Estímulo à Investigação 2003 – Área das Nanotecnologias	Fundação Calouste Gulbenkian
2003	Best poster prize "A biochip based on the magnetoresistive effect: Detection of hybridisation of cystic fibrosis related oligonucleotide sequences" at the "Bioeng'2003 – 7th Portuguese Conference on Biomedical Engineering"	Instituto de Biofísica e Engenharia Biomédica, Sociedade Portuguesa de Engenharia Biomédica and Faculdade de Ciências da Universidade de Lisboa.
2002	Prémio Professor Luís Vidigal 2000/2001	Departamento de Engenharia Electrotécnica e de Computadores of Instituto Superior Técnico, the Departamento de Engenharia Informática of IST and Instituto de Engenharia de Sistemas e Computadores
2002	Prémio Professor Luís Vidigal 2000/2001	Universidade Técnica de Lisboa
2001	PhD Fellowship Award & Grant (SFRH/BD/5031/2001)	Foundation for Science and Technology (FCT), Portugal

**C. Selected Publications** (all internationally peer-reviewed and indexed; see also <http://hatdferreira.wixsite.com/brainconnectivity> and <http://bioexmachina.com/>)

- J. P. Santos, M. Martins, H. A. Ferreira, J. Ramalho, D. Seixas, "Neural Imprints of National Brands versus Own-label Brands", Journal of Product & Brand Management, vol. 25(2), pp. 184-196, 2016
- A. S. Ribeiro, L. M. Lacerda, and H. A. Ferreira, "Multimodal Imaging Brain Connectivity Analysis (MIBCA) toolbox", PeerJ, vol. 3, pp. e1078, 2015. (JIF 2.112) (**Digital Cover PeerJ**)
- A. S. Ribeiro, L. Miguel Lacerda, N. A. da Silva, and H. A. Ferreira, "Multimodal imaging of brain connectivity using the MIBCA toolbox: preliminary application to Alzheimer's Disease", IEEE Trans. Nucl. Sci., vol. 62(3), pp. 604-611, 2015. (JIF 1.283)
- R. Henriques, M. M. Correia, R. G. Nunes, and H. A. Ferreira, "Exploring the 3d geometry of the diffusion kurtosis tensor—Impact on the development of robust tractography procedures and novel biomarkers", NeuroImage, vol. 111, pp. 85–99, 2015. (JIF 6.357)

- J. Soeiro, A. P. Cláudio, M. B. Carmo, H. A. Ferreira, "Visualizing the brain on a mixed reality smartphone application", Proceedings of the 37th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 25-29 August 2015, Milan, Italy, pp. 5090-5093. (peer-reviewed)

#### **D. Research Support (See also B5).**

TITLE	FUNDING ENTITY	PERIOD	TOTAL FUNDING	FUNDING	ROLE
MEDPERSYST – Redes sinápticas e abordagens compreensivas de medicina personalizada em doenças neurocomportamentais ao longo da vida	FEDER	2017-2020	2 500 000€	215 000€	Team member
CAMELOT: C2 Advanced multi-domain environment and live operation technologies	H2020	2017-2020	9 927 053,75€	168 172€	PI@IBEB
Stress in the training of Commando soldiers	CINAMIL	2017-2020	7 731€	7 731€	PI@IBEB
NeuroPsyCAD: early and accurate diagnosis of neuropsychiatric disorders	Caixa Capital	2017-	100 000€	100 000€	CEO
Resting-state functional magnetic resonance for surgical planning of epilepsy patients: optimization and clinical implementation	TECNIFAR SA	2017	7 500€	7 500€	Team Member
Consulting in Physiological Computing	iLIDH	2015-2017	12 054€	12 054€	PI@IBEB
Brain tumor Connectivity using Multimodal Imaging	Forschungszentrum Jülich	2015-2017	18 795€	18 795€	PI@IBEB

#### **E. Bibliometric indicators.**

(2 patents+1 provisional; 3 theses; 8 book chapters; 31 papers in international peer-reviewed journals; >50 papers in conference proceedings, of which 17 peer-reviewed; >10 invited talks in scientific meetings; >50 regular talks in international scientific meetings; >100 poster presentations and exhibits in international scientific meetings; see full CV at <https://www.dropbox.com/sh/tv8xr3skhmzw65k/AABULgpXvCTq1D4zGQOtuxwQa?dl=0>)

1. Total number of citations: 1108 in Web of Science Researcher ID (1968 in Google Scholar)
2. H factor: 14 in Web of Science Researcher ID (19 in Google Scholar)
3. Number and impact of papers as corresponding or last author during the last 5 years: 12 peer-reviewed papers (for citations of each article please see Web of Science Research ID <http://www.researcherid.com/rid/I-8538-2015>, Google Scholar profile <https://scholar.google.pt/citations?user=92ilVdsAAAAJ&hl=en&oi=sra>, and ORCID <http://orcid.org/0000-0002-4323-3942> )