



Part A. PERSONAL INFORMATION		CV date		15-10-2019
First and Family name	Alfonso Bahillo Martínez			
ID number	71926682R	Age	37	
	WoS Researcher ID	L-264	19-2014	
Researcher codes	SCOPUS Author ID	25921308800		
	ID (ORCID)	0000-0003-3370-3338		

A.1. Current position

Name of University	Universidad de Deusto				
Department	DeustoTech				
Address and Country	Avda. Universidades 24, 48007, Bilbao, Spain				
Phone number	658771972	E-mail	alfonso.bahillo@deusto.es		
Current position		Director		From	01-05-2017
Key words	Environmental intelligence and information sensor fusion				

A.2. Education

Grade	University	Year
MSc Telecommunication	Liniversidad de Valladelid (LIVa Spain)	2006
Engineer		2000
PhD Information	Liniversidad de Valladelid (LIVa Spain)	2010
Technologies		2010
Project Management	Project Management Institute (PMLLISA)	2014
Professional		2014

A.3. JCR articles, h Index, thesis supervised

812 citations received since 2008 (Scopus) Journal Publications in Q1: 17 Index h: 14 (Scopus) Thesis supervised: 5

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Dr. Alfonso Bahillo received the titles of Telecommunications Engineer and PhD in Information Technology and Telecommunications from the University of Valladolid in 2006 and 2010, respectively. In 2014 he was certified by the Project Management Institute of the USA in the figure of Project Management Professional. From 2006 to 2010 he worked at CEDETEL as an associate researcher. From 2006 to 2011 he worked at the University of Valladolid as a part-time associate professor. From 2010 to 2012 he worked at LUCE Innovative Technologies having obtained the Torres Quevedo scholarship for PhDs in Young Innovative Companies. From 2012 to 2013 he worked in the research group of the University of Valladolid WITACA as a post-doctoral researcher. From 2013 to 2017 he was hired by the University of Deusto as a post-doctoral researcher. He currently serves as Director of DeustoTech, the University of Deusto's research institute for the ICT, where he collaborates (and some of them lead) in regional, national and international research projects in the field of environmental intelligence and information fusion for positioning. He collaborates as a visiting professor in the Masters in Telecommunications of the Faculty of Electronics and Telecommunications of the Universidad del Cauca (Colombia) and the Faculty of Engineering of the University of Deusto. He has worked (leading some of them) in more than 30 projects and research contracts in all areas, regional, national and international. He is coauthor of 26 JCR articles, 9 book chapters, more than 35 papers at international conferences, and 4 national patents. His entire research career has focused on local positioning techniques, environmental intelligence, wireless networks, and numerical methods for modeling radioelectric propagation. In addition, he is a reviewer of important scientific journals such as IEEE Trans. on Signal Processing, IEEE Trans. on Wireless Communications, IEEE Trans. on Instrumentation and Measurement, EURASIP Journal on Wireless Communications and Networking, EURASIP Journal on Advances in Signal Processing, Elsevier Sensors and Actuators, IEEE Trans. on Vehicular Technology, and Wireless Personal Communications from Springer. He is also a reviewer of important



international conferences such as IEEE Global Communications Conference, IEEE Vehicular Technology Conference, IEEE Wireless Telecommunications Symposium, IEEE Indoor Positioning and Indoor Navigation Conference, and IEEE LATINCOM.

Part C. RELEVANT MERITS C.1. Publications

T. Otim, **A. Bahillo**, L.E. Díez, P. López, F. Falcone, FDTD and Empirical Exploration of Human Body and UWB Radiation Interaction on TOF Ranging, IEEE Antennas and Wireless Propagation Letters (Volume: 18, Issue: 6, June 2019, pp. 1119-1123). DOI: 10.1109/LAWP.2019.2910378

N. Rebernik, B. Goličnik Marušić, **A. Bahillo**, E. Osaba, A 4-dimensional Model and Combined Methodological Approach to Inclusive Urban Planning and Design for ALL, Elsevier Sustainable Cities and Society (Volume: 44, Issue: x, January 2019, pp. 195-214). DOI: 10.1016/j.scs.2018.10.001

L.E. Díez, **A. Bahillo**, J. Otegui, T. Otim, Step Length Estimation Methods Based on Inertial Sensors: A Review, IEEE Sensors Journal (Volume: 18, Issue: 17, 2018, pp. 6908 - 6926). DOI: 10.1109/JSEN.2018.2857502.

J. Otegui, **A. Bahillo**, I. Lopetegi, L.E. Díez, Evaluation of Experimental GNSS and 10-DOF MEMS IMU Measurements for Train Positioning, IEEE Trans. On Instrumentation & Measurements (Volume: x, Issue: x, May., 2018, pp. x - x). DOI: 10.1109/TIM.2018.2838799 L.E. Díez, **A. Bahillo**, J. Otegui, T. Otim, Suitability Analysis of Wrist-worn Sensors for Implementing Pedestrian Dead Reckoning Systems, IEEE Sensors Journal (Volume: 18, Issue: 2, June, 2018, pp. 5098 - 5114). DOI: 10.1109/JSEN.2018.2830809. Print ISSN: 1530-437X

J. Otegui, **A. Bahillo**, I. Lopetegi, L.E. Díez, A Survey of Train Positioning Solutions. IEEE Sensors Journal (Volume: 17, Issue: 20, Oct.15, 2017, pp. 6788 - 6797). DOI: 10.1109/JSEN.2017.2747137.

A. Bahillo, T. Aguilera, F.J. Álvarez, A. Perallos, WAY: Seamless Positioning Using a Smart Device. Wireless Personal Communications (2016), 94(4), 2949-2967. DOI: 10.1007/s11277-016-3759-x.

S. Bataineh, **A. Bahillo**, L.E. Díez, E. Onieva, I. Bataineh, Conditional Random Field-Based Offline Map Matching for Indoor Environments. Sensors 2016, 16(8), 1302. DOI: 10.3390/s16081302.

F. Zampella, **A. Bahillo**, J. Prieto, A.R. Jiménez, y F. Seco. Pedestrian navigation fusing inertial and RSS/TOF measurements with adaptive movement/measurement models: Experimental evaluation and theoretical limits. Sensors and Actuators: A. Physical (Elsevier). Vol. 203, pp. 249-260, Diciembre 2013. DOI: 10.1016/j.sna.2013.08.028.

A. Alonso, **A. Bahillo**, R. de la Rosa, A. Carrera, R.J. Durán, y P. Fernandez. Measurement Procedure to Assess Exposure to Extremely Low Frequency Fields: A Primary School Case-Study. Radiation Protection Dosimetry. Vol. 151 (3), pp. 426-436, Marzo 2012. DOI: 10.1093/rpd/ncs026

J. Prieto, S. Mazuelas, **A. Bahillo**, P. Fernandez, R.M. Lorenzo, y E.J. Abril, Adaptive Data Fusion for Wireless Localization in Harsh Environments, IEEE Transactions on Signal Processing, Vol. 60 (4), pp. 1585-1596, Enero 2012. DOI: 10.1109/TSP.2012.2183126

S. Mazuelas, R. M. Lorenzo, **A. Bahillo**, P. Fernandez, J. Prieto y E. J. Abril, Topology Assessment Provided by Weighted Barycentric Parameters in Harsh Environment Wireless Location Systems, IEEE Transactions on Signal Processing, Vol. 58 (7), pp.3842-3857, Julio 2010, DOI: 10.1109/TSP.2010.2047394

A. Bahillo, S. Mazuelas, R.M. Lorenzo, P. Fernández, J.Prieto, , R.J.Durán, y E.J.Abril, Hybrid RSS-RTT localization Scheme for Indoor Wireless Networks, EURASIP Journal on Advances in Signal Processing, Vol. 2010, Marzo 2010, DOI:10.1155/2010/126082

A. Bahillo, S. Mazuelas, R.M. Lorenzo, P. Fernández, J. Prieto, R.J. Durán, y E.J.Abril. Accurate and Integrated Localization System for Indoor Environments Based on IEEE 802.11 Round-Trip Time Measurements. EURASIP Journal on Wireless Communications and Networking. Vol. 2010, Febrero 2010. DOI:10.1155/2010/102095

J. Prieto, **A. Bahillo**, S. Mazuelas, R.M. Lorenzo, P. Fernandez, y E.J. Abril. Characterization and Mitigation of Range Estimation Errors for an Rtt-Based leee 802.11 Indoor Location



System. Progress In Electromagnetics Research B (PIERB). Vol. 15, pp. 217-244, 2009. DOI: 10.2528/PIERB0905050.

A. Bahillo, S. Mazuelas, J. Prieto, R.M. Lorenzo, P. Fernandez, y E.J. Abril. Indoor Location based on IEEE 802.11 Round-Trip Time measurements with two-step NLOS mitigation. Progress In Electromagnetics Research B (PIERB). Vol. 15, pp. 285-306, 2009. DOI: 10.2528/PIERB0905040

S. Mazuelas, **A. Bahillo**, R.M. Lorenzo, P. Fernandez, F.A. Lago, E. Garcia, J. Blas, y E.J. Abril. Robust Indoor Positioning Provided by Real-Time RSSI Values in Unmodified WLAN Networks. IEEE Journal of Selected Topics in Signal Processing, Special Issue on: Advanced Signal Processing for GNSS and Robust Navigation. Vol. 3 (5), pp. 821-831, Octubre 2009. DOI: 10.1109/JSTSP.2009.2029191

S. Mazuelas, F. A. Lago, J. Blas, **A. Bahillo**, P. Fernandez, R.M. Lorenzo, y E.J. Abril. Prior NLOS Measurements Correction for Positioning in Cellular Wireless Networks. IEEE Transactions on Vehicular Technology. Vol. 58 (5), pp. 2585-2591, Junio 2009. D.O.I: 10.1109/TVT.2008.2009305

S. Mazuelas, F.A. Lago, **A. Bahillo**, J. Blas, P. Fernandez, R.M. Lorenzo, y E.J. Abril, Ranking of TOA Measurements Based on the Estimate of the NLOS Propagation Contribution in a Wireless Location System, Wireless Personal Communications. Vol. 53 (1), pp. 35-52, Marzo 2010. D.O.I: 10.1007/s11277-009-9669-4

C.2. Research projects and grants

DEUSTO SMART MOBILITY – Financing entity: Department of Education of the Basque Government, Call 2016, Modality: Research groups of the Basque university system of type A. Participating entities: University of Deusto. Duration, from: January 2017 to: December 2021. Amount of the subsidy: Total 336.500 €. Researcher responsible: Asier Perallos. Full dedication.

BLUE – Enabling Ubiquitous Location-Based services, PI_2016_1_0010. Funding Entity: Department of Education of the Basque Government, Call 2016, Modality: Projects of Basic and Applied Research. Participating entities: University of Deusto. Duration, from: January 2017 to: December 2018. Amount of the grant: Total € 45.000. Responsible researcher: **Alfonso Bahillo**. Full dedication.

ESPHIA – Enabling Seamless Positioning for Inhabitants Anywhere, TIN2014-56042-JIN. Financing entity: Ministry of Economy and Competitiveness, 2014 Call, Modality: Project for Young Researchers of the National R + D + I Plan. Participating entities: University of Deusto. Duration, from: October 2015 to: October 2018. Amount of the subsidy: Total € 150.000. Responsible researcher: **Alfonso Bahillo**. Full dedication.

LOGISTAR - Enhanced data management techniques for real time logistics planning and scheduling, H2020 RIA, topic MG-5.2-2017: Innovative ICT solutions for future logistics operations, Grant Agreement No. 769142. Funding entity: European Commission of Science and Technology. Participating entities: University of Deusto and 14 other EU countries. Duration, from: July 2018 to: March 2021. Researcher in charge: Enrique Onieva. Shared dedication.

CYBERPARKS - Fostering knowledge about the relationship between Information and Communication Technologies and Public Spaces supported by strategies to improve their use and attractiveness, COST Action TU1306. Financing entity: European Commission of Ceincia and Technology. Participating entities: University of Deusto and 23 other EU countries. Duration, from: January 2014 to: December 2017. Researcher in charge: Carlos Smaniotto Costa. Shared dedication.

LORIS - Cooperative location systems for people and objects in diverse environments, TIN2012-38080-C04-03. Financing entity: Ministry of Economy and Competitiveness, Call 2012, Modality: Cooperation project of the National R + D + I Plan. Participating entities: University of Alcalá, University of Valladolid, CAR-CSIC and University of Extremadura. Duration, from: January 2013 to: December 2015. Amount of the grant: Total 9.940 €. Researcher in charge: Patricia Fernández Reguero. Full dedication.

LEMUR - Continuous localization in large environments unifying several techniques based on radiofrequency, TIN2009-14114-C04-02. Funding entity: Ministry of Economy and Competitiveness, Call 2009, Modality: Project in cooperation of the National R + D + I Plan. Participating entities: University of Alcalá, University of Valladolid, CAR-CSIC and University



of Extremadura. Duration, from: January 2010 to: December 2012. Amount of the grant: Total € 59.411. Researcher in charge: Rubén M. Lorenzo Toledo. Full dedication.

SHERLOC - Hybrid Remote Štress System and Personal Location, both Indoor and Outdoor, IPT-2011-1411-900000. Financing entity: Ministry of Economy and Competitiveness, Call 2011, Modality: Innpacto cooperation project. Participating entities: Indra Sistemas S.A., University of Valladolid, Polytechnic University of Madrid, Luce Innovative Technologies, Aitex. Duration, from: September 2011 to: September 2013. Amount of the subsidy: Total € 80.213. Researcher in charge: Patricia Fernández Reguero. Full dedication.

C.3. Contracts

STING – Sensory fusion for train navigation. It aims to integrate new sensors and develop data fusion algorithms with the aim of achieving a SIL4 integrity level in the positioning system of a train on the track. Duration, from: January 2017 to: December 2019. Contract Amount: Total € 152.499. Responsible researcher: **Alfonso Bahillo**. Full dedication.

SMARTKALEA – SMARTKALEA pilot using BLE specks - WIFI. Financing entity: Dinycon Sistemas, Participating entities: University of Deusto. Duration, from: January 2017 to: December 2017. Contract Amount: Total € 8.042. Researcher responsible: Alfonso Bahillo. VOYAGE – Airport management center based on cloud technology to improve control and optimization of processes, security and passenger experience at airports, ER-2013/014. Financing entity: Basque Government, Modality: Etorgai Program 2013. Participating entities: University of Deusto and other 10. Duration, from: January 2013 to: December 2015. Amount of the subsidy: Total 64.500 €. Responsible researcher: Alfonso Bahillo. Full dedication. EMERLOC – Hybrid location system for the Security and Emergency management sector. Financing entity: Thaumat. Participating entities: University of Deusto. Duration, from: January 2014 to: December 2016. Contract Amount: Total € 54.420. Researcher responsible: Alfonso Bahillo.

C.4. Patents

P1: L. Arjona, H. Landaluce, A. Perallos, E. Onieva and **A. Bahillo**, "Anti-collision procedure for identification of transponders in an RFID system". Application number: P-201531673. Patent number: ES-2613268. Publication date: 05/23/2017. Country of priority: Spain. Entity holder: Deusto Foundation

P2: J. Prieto, **A. Bahillo**, R.M. Lorenzo, P. Fernández, I. Aboy, E.J. April, "Procedure for the determination of the position by merging the information of the power levels and the propagation time delay of the received signals". Application number: P-201100870. Patent number: ES-2397388. Publication date: 03/06/2013. Country of priority: Spain. Entity holder: University of Valladolid

P3: S. Mazuelas, **A. Bahillo**, R.M. Lorenzo, P. Fernandez, J. Blas, E.J. April, "Procedure and system for locating a mobile device from the time delay of propagation of the signals in a wireless network mitigating the lack of direct vision between devices and without the need for on-site calibration". Application number: P- 200803212. Patent number: ES-2372512. Date of publication: 01/23/2012. Country of priority: Spain. Entity holder: University of Valladolid

P4: S. Mazuelas, **A. Bahillo**, R.M. Lorenzo, P. Fernandez, J. Blas, E.J. April, "Procedure and Location System in wireless networks that determine distances between devices based on power levels received". Application number: P-200801314. Patent number: ES-2345698. Publication date: 09/29/2010. Country of priority: Spain. Entity holder: University of Valladolid Company that is operating: Indra Sistemas S.A.

C.5 Other

Since May 2017 Director of the Research Institute of the University of Deusto on ICT.

Two Six-year of research recognized by the AEI.

Accredited as "Profesor Titular" since 2014 by ANECA.

Evaluator of different project calls such as EU COST Actions, Icelandic Research Fund, Irish Research Council, Retos Investigación 206-2018, Torres Qievedo, AEESD, Tráfico Movilidad Seguridad Vial.