

Part A. PERSONAL INFORMATION

CV date

First and Family name	Ignacio Raúl Matías Maestro		
Researcher codes	WoS Researcher ID (*)	D-7483-2016	
	SCOPUS Author ID(*)	7003544367	
	Open Researcher and Contributor ID (ORCID) **	0000-0002-2229-6178	

(*) At least one of these is mandatory

(**) Mandatory

A.1. Current position

Name of University/Institution	Universidad Publica de Navarra/Institute of Smart Cities		
Department	Electrical, Electronic and Communications Engineering		
Address and Country	Campus Arrosadia, Edificio Los Tejos Pamplona, Spain		
Current position	Full Professor	From	21/10/2006
Key words	Sensors, photonics, optical fiber, optical devices		

A.2. Education

Degree	University	Year
PhD	Universidad Politécnica de Madrid	1996
Master	Universidad Politécnica de Madrid	1992

A.3. Indicators of Quality in Scientific Production (See the instructions)

Total Supervised Ph.D. thesis: **13**
H index: ISI web of science: **47**. Scopus: **46**. Google Academics: **53**
Total number of citations: ISI web of science: **7577**. Scopus: **7298**. Google Scholar: **9689**
International Books: **2**. International Book Chapters: **19**. National Books: **5**
Publications indexed in JCR: **Total / first quartil (Q1): 221 / 146**

Part B. Free Summary of CV (Max. of 3.500 characters, including spaces)

Ignacio R. Matias received the M.S. degree in Telecommunications Engineering and his Ph.D. degree in Telecommunications from the Polytechnic University of Madrid (UPM), Madrid, Spain, in 1992 and 1996, respectively. He is married with 4 children.

In July 1996 Ignacio R. Matias received the UPM extraordinary prize to the best doctoral thesis of the year 1996-97. In 1998 he became Lecture in the Department of Electrical and Electronics Engineering (IEE) at the Public University of Navarra (UPNA); and from October 2006 he is Professor of the Department of IEE at UPNA.

Ignacio R. Matias has participated in more than 100 research projects with both public and private funding. As a result of these works he has obtained 16 patents and 6 copyright. He has been founding partner of six spin-off companies obtaining four awards "Ideactiva" (1999, 2005, 2009 and 2011) and 2 "Crea EIBT" (2008 and 2011), granted by the European Business and Innovation Centre of Navarre; the ENISA 2007 award, as well as Iberus Campus Emprande Award in the category of business projects in 2014. Also, the "impulso emprendedor" and "Iberus emprande" entrepreneur awards.

Ignacio R. Matias, has published 221 papers in international research journals high impact. In addition, we have been accepted about 253 works at international conferences of prestige (15 of which were invited). He also is the author of 7 books and 19 international scientific chapters in different books.



Among the awards received, it is worth noting that in 2003 he was awarded the prize “Caja Navarra” on the modalities of Exact, Medical and Technological Sciences; in 2007 he was the Engineer of the Year in Navarra. In 2009 he was recipient of “Jerónimo de Ayanz” Program. He was awarded the Meritorious Service IEEE Sensors Council Award of the year 2013. As for academic positions he has had, mentioning that he has been Deputy Director from 1999 to 2006 and Director from 2009 to September 2014 to the School of “Industrial, Computer Sciences and Telecommunications Engineering” at the Public University of Navarra. From 2014 to 2017, he has been the Director of the Research Institute of the Public University of Navarra, Institute of Smart Cities (ISC). From 2017-2020 he was the TEC (electronic and communications technology) Coordinator of the AEI (Spanish Research Agency).

Part C. Relevant accomplishments

C.1. Publications (*The 10 most cited according to Google Scholar and 2 edited books*)

- 1.- Optimization of sensitivity in long period fiber gratings with overlay deposition, I Del Villar, IR Matías, FJ Arregui, P Lalanne, **Optics Express** 13 (1), 56-69. Cited by 369.
- 2.- Optical fiber humidity sensor based on a tapered fiber coated with agarose gel, C Barriain, IR Matías, FJ Arregui, M Lopez-Amo, **Sensors and Actuators B** (1-2), 127-131. Cited by 261.
- 3.- Optical fiber humidity sensor using a nano Fabry–Perot cavity formed by the ionic self-assembly method, FJ Arregui, IR Matias, Y Liu, RO Claus, **Sensors and Actuators B**: 59 (1), 54-59. Cited by 233.
- 4.- Volatile organic compound optical fiber sensors: A review, C Elosua, IR Matias, C Barriain, FJ Arregui, **Sensors** 6 (11), 1440-1465. Cited by 165.
- 5.- Lossy mode resonance generation with indium-tin-oxide-coated optical fibers for sensing applications, I Del Villar, CR Zamarreño, M Hernaez, FJ Arregui, IR Matias, **IEEE Journal of Lightwave Technology** 28 (1), 111-117. Cited by 163.
- 6.- Deposition of overlays by electrostatic self-assembly in long-period fiber gratings, I Del Villar, M Achaerandio, IR Matías, FJ Arregui, **Optics Letters** 30 (7), 720-722. Cited by 163.
- 7.- Design of humidity sensors based on tapered optical fibers, JM Corres, FJ Arregui, IR Matias, **IEEE Journal of Lightwave technology** 24 (11), 4329-4336. Cited by 151.
- 8.- Optical fiber pH sensor based on lossy-mode resonances by means of thin polymeric coatings, CR Zamarreño, M Hernández, I Del Villar, IR Matías, FJ Arregui, **Sensors and Actuators B** 155 (1), 290-297. Cited by 141.
- 9.- Sensitivity optimization of tapered optical fiber humidity sensors by means of tuning the thickness of nanostructured sensitive coatings, JM Corres, FJ Arregui, IR Matías, **Sensors and Actuators B** 122 (2), 442-449. Cited by 141.
- 10.- Simultaneous measurement of strain and temperature using a fiber Bragg grating and a thermochromic material, C Fernandez-Valdivielso, IR Matias, FJ Arregui, **Sensors and Actuators A** 101 (1-2), 107-116. Cited by 138.

Book 1: Fiber Optic Sensors - Current Status and Future Possibilities. Ignacio R. Matías, Satoshi Ikezawa, Jesús M. Corres,; **Springer**. ISBN: 978-3-319-42624-2. DOI: 10.1007/978-3-319-42625-9, 381 pages, 2017.

Book 2: Optical Fiber Sensors: Fundamentals for Development of Optimized Devices. Ignacio R. Matías, Ignacio del Villar; 381 pages, 2017. Springer. ISBN: 978-3-319-42624-2. DOI: 10.1007/978-3-319-42625-9, **Wiley-IEEE Press**. ISBN: 978-1-119-53476-1, 544 pages, 2021.



C.2. Research Projects and Grants (last 5 years as IP)

- 1.- “Extremely Sensitive nanoPhotonic Analytical Devices for bio-chemosensing Applications (ESPADA)”; **PID2019-106231RB-I00**, Agencia Estatal de Investigación. Ministerio de Ciencia e Innovación, 222.156 €, June 2020 - June 2023.
- 2.- “Holistic and integrated urban model for Smart cities: STARDUST”; **Horizon 2020-SCC-2017. FARO Project**. 350.000 € (Global: 17.941.009,88 €); 19 institutions. Oct. 2017- Oct. 2021
- 3.- “Sensores fotónicos ultrasensibles basados en nanorecubrimientos”; **TEC2016-78047-R**, Ministerio de Economía y Competitividad; 222.156 €; Jan 2017- Dec 2019
- 4.-“Tecnologías microelectrónicas y sensoricas aplicadas al mantenimiento predictivo de redes eléctricas (PMEL)”;IPT-2011-1212-920000 (**INNPACTO**). 210.945 € (Global: 3.057.841€); 6 institutions; Jan. 2012- Dec. 2014.
- 5.- “Sensores basados en nanopartículas, nanofibras y materiales nanoestructurados”; **TEC2013-43679-R**;197.700 €; Mar 2014- Dec. 2016

C.3. Contracts (last 5 as IP)

- 1.- “Calibration of gas measurement systems”; **EverSens, S.L.**; 4.891 €; Mar. 2018- Dec. 2019
- 2.- “Common Telecommunication Infrastructures”; **Ikusi Electrónica S.L.U.**; 1.170 €; Apr.- May, 2019
- 3.- “Safer and reconfigurable systems geared towards a more efficient aircraft by reducing pilot load”; **Orbital Sistemas Aeroespaciales**. SELENA Project; 60.000 €; Nov. 2015- Jul. 2018
- 4.- “Reduction of uncertainty in the estimation of the musical tempo "on line" for Tablet”; **NewMusicNow, S.L.**; 20.850 €; Oct. 2017- Jun. 2018
5. “Smart Building Model Study”, **Tracasa, S.A.** 18.150 €; Jul.-Dec. 2017

C.4. Patents and other IPR (only in exploitation)

- 1.- I. R. Matías, C. Bariáin, F. J. Arregui, y M. López-Amo; “Detector optoelectrónico de grietas en superficies metálicas en movimiento”; ES 2 156 093 B1; **Volkswagen Navarra, S.A.**
- 2.- Carlos Fernández-Valdivielso, Ignacio R. Matías, Miguel Achaerandio, Cándido Bariáin, Francisco. J. Arregui; “Sistema multimedia para el control remoto de dispositivos a través de mensajes cortos”; ES 2 184 631 B1; **Ingeniería Domótica, S.L.**
- 3.- F.J. Arregui, I. R. Matías, M. Achaerandio, C. Bariáin; “Equipo de control del hormigón en camiones-hormigonera”; ES 1 059 504 U; **Canteras de Echauri y Tiebas, S.A**
- 4.- J.M. Pérez Azpeitia, F.J. Arregui, M.A. Arangoa, L. Ruete, I.R. Matías; “Dispositivo de medida de la concentración de gases en aire exhalado y procedimiento de medida empleado”; ES 2 579 911 B2; **EverSens, S.L.**

C.5 Editorial Boards

Senior Editor and co-founder of the **IEEE Sensors Journal**. 2001 - 2016.

Associate Editor from the beginning of the Hindawi **Journal of Sensors**. 2007.

Associate Editor from the beginning of the International **Journal On Smart Sensing and Intelligent Systems**, 2008.



C.6 Academic Positions

1999-2002: Deputy Director of the School of Industrial, Informatic and Telecommunications Engineering (ETSIIyT).
2002-2003: Member of Evaluation Committee of the Telecommunications Engineering Degree at the Public University of Navarra.
2002-2006: Head of the Degree in Telecommunications Engineering at the ETSIIyT.
2003: Member of the Internal Evaluation Committee for the development of the Pilot Accreditation Plan for the Degree of Telecommunication Engineering at the Public University of Navarra, directed by the ANECA.
2004-2006: President of the Navarra Association of Telecommunication Engineers (ANIT) and Dean of the College of Telecommunications Engineers (COIT) in Navarra.
2007-2014: Vocal of the post-graduated Committee of the Public University of Navarra.
2009-2014: Director of the ETSIIyT of the Public University of Navarra.
2014-2017: Director of the Research Institute of the Public University of Navarra, Institute of Smart Cities - SCI.
2015-2017: Vocal member of the UNIBASQ agency for the Accrediation of degrees in the Bask Universities

2015-2017: President of the Accreditation Program for Technical Studies Academics at UNIBASQ
2017-2020: TEC (MNF + TCO) Coordinator, Agencia Estatal Investigación (AEI)
2017-present: Vocal of the ANECA Technical Committee

C.7 Spin-offs

1998: Ingeniería Domótica, S.L. Co-founder.
2005: Iden Carbohydrate Biotechnology S.L. Co-founder
2007: Enotic, S.L. Co-founder.
2008: Nanoresist, S.L. Co-founder.
2011: Nadetech, S.L. Co-founder. Spin-Off UPNA.
2015: EverSens, S.L. Co-founder. Spin-Off UPNA

C.8 Awards

1997: OUTSTANDING DOCTORATE Award given by Universidad Politécnica de Madrid
1999: IDEACTIVA'99 Award. Best Business Idea. Ingeniería Domótica, S.L., given by CEIN.
2003: CAJA NAVARRA Prize for Research of the year 2003 in the modalities of Exact, Medical and Technological Sciences.
2005: IDEACTIVA'05 Award. Best business project. IDEN, S.L., granted by CEIN/GN (European Centre for Innovation in Navarra / Government of Navarra)
2007: Engineer of the year in Navarra, given by ANIT/COIT
2007: ENISA Prize to IDEN, S.L. given by the Spanish Government; Ministry of Industry.
2008: Crea EIBT 2008 prize. "Nanodeposition systems", granted by the GN.
2008: Winner of the Research Activities Intensification Program. Public University of Navarra.
2009: IDEACTIVA'09 Award. Best Business Idea. NANORESIST, granted by CEIN/GN.
2011: IDEACTIVA'11 Award. Best Business Project. NADETECH, S.L. given by CEIN/GN.
2011: Crea EIBT 2011 prize. "TLabel" granted by GN.
2014: IEEE Sensors Council Meritorious Service Award of the year 2013, given by IEEE.
2015: Spirit entrepreneurial Award. EVERSENS, S.L. granted by CEIN/GN.
2015: Iberus Emprende prize. Optic Sensing, granted by the Iberus Institution.
2017: Research award for the best result of technology transfer/knowledge granted by UPNA.
2018: Prize for teaching excellence granted by UPNA.
2019: Recipient of the UPNA Research Intensificacion Program