

<b>Part A. PERSONAL INFORMATION</b>		<b>CV date</b>	15/06/2022
First and Family name	TOMÁS DE JESÚS MATEO SANGUINO		
Social Security, Passport, ID number	08868037L	Age	45
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0002-9387-3892	
	SCOPUS Author ID (*)	57190728979	
	WoS Researcher ID (*)	AAA-9254-2020	

(\*) *Optional*

(\*\*) *Mandatory*

### A.1. Current position

Name of University/Institution	University of Huelva		
Department	Electronics Engineering, Computer Systems and Automatics		
Address and Country	Av. de las Artes, s/n 21007, Huelva, Spain		
Phone number	959217665	E-mail	<a href="mailto:tomas.mateo@diesia.uhu.es">tomas.mateo@diesia.uhu.es</a>
Current position	Associate Professor (civil servant)	From	14/02/2020
Key words	Communications and networking, Robotics, Engineering teaching		

### A.2. Education

PhD	University of Huelva	2010
Master in University Teaching	University of Huelva	2008
Electronics Engineering	University of Granada	2001

### A.3. General indicators of quality of scientific production

Number of six-year periods: 4

Research: 2002-2007, 2008-2013, 2014-2019 / Transfer: 2001-2007

Total number of publications: Scopus = 57; JCR = 35 (Q1 = 15, Q2 = 5); JCR from 2010 = 28  
h-Index (Scopus) = 13; h-Index (ResearchGate) = 16; h-Index (Google Scholar) = 16

Total citations: 731 (Scopus); 949 (ResearchGate); 1265 (Google Scholar)

ResearchGate Score: 27.94 (> 85% of members)

### Part B. CV SUMMARY

Dr. Mateo Sanguino is an Industrial Technical Engineer (esp. Electronics), Electronic Engineer, Master's Degree in University Teaching and PhD in Systems Engineering and Automatics from the UHU. He has worked since 1998 as a research fellow and as a freelancer at the National Institute of Aerospace Technology (INTA). In 2003/04 he was hired for a specific project or service in the Higher Council for Scientific Research (CSIC). He was part of the research group "Robotic and High Energy Astrophysics" (TIC-189) of the Andalusian Research Plan (PAI) of the Andalusian Government. Since 2004 he has been hired as a teacher at the UHU, being deputy director of the Department of Electronic Engineering, Computer Systems and Automatics since 2014. He is currently part of the research group "Control and Robotics" (TEP-192). He has been a founder of a Spin-off called "OnuRobotics" between 2009/12, whose business project awarded two prizes: Ministry of Innovation and Science (CICE) of the Andalusian Government and "Creara" training plan (50K Companies).

He has completed four short pre-doctoral stays (3 international + 1 national), together with a postdoctoral stay at EPFL (Switzerland). He has published around 100 papers in different books, journals and conferences of which more than 50% are indexed in Scopus. He has been a reviewer of 42 working documents in international congresses and journals indexed in JCR, Scopus and the Andalusian Agency for Evaluation (AGAE), being guest editor of three special issues on sensors, transportation systems, mobile devices and intelligent applications for smart cities in *Sensors* (MDPI, Switzerland) and *Wireless Communications and Mobile Computing* (Hindawi).

He has led 1 international R&D project, 2 national knowledge transfer projects, 3 regional R&D projects and 18 teaching innovation projects, as well as he has obtained other several aids for



~150K€. He participated in the European COST action CA16222 “Wider Impacts and Scenario Evaluation of Autonomous and Connected Transport”. He has also participated in 8 national R&D projects and 3 regional R&D projects. He has three patents relevant to this proposal cited as “Horizontal Photoluminescent Road Signaling” (WO 2018/224716), “System and Autonomous Device for Road Signaling Detection” (WO 2018/050945) and “Device and System for the Recovery of Communication Equipment” (WO 2016/055682).

He has organized 17 events in the Spanish Week of Science and Technology with training talks, workshops and challenges. Among them, there is a scientific and business conference continued since 2017 entitled “ScienCity: Promotion of Scientific, Technological and Innovation Culture in Smart Cities”. He has recently completed 13 years of service as an instructor of the CISCO Certified Networking Association, receiving honors as an Advanced Level Instructor of Excellence in 2013 by imparting CCNA R&S, Data Center and Wireless professional certifications at the local DIESIA Networking Academy of the UHU. He has been the tutor of 37 final student projects and 1 Doctoral Thesis, being responsible for 2 Theses in the Doctoral Program in “Science, Industrial and Environmental Technology”.

## Part C. RELEVANT MERITS

### C.1. Publications

1. Lozano Domínguez, J.M., Mateo Sanguino, T.J., “Walking Secure. Safe Routing Planning Algorithm and Pedestrian’s Crossing Intention Detector Based on Fuzzy Logic App”. *Sensors*, vol. 21(2), 529, 2021. Impact factor (JCR 2021): 3.576, Cited by: 1, Category: Instruments & Instrumentation, Ranking: 14/64 (Q1)
2. Lozano Domínguez, J.M., Al-Tam, F., Mateo Sanguino, T.J., Correia, N., “Analysis of Machine Learning Techniques Applied to Sensory Detection of Vehicles in Intelligent Crosswalks”. *Sensors*, vol. 20(6019), pp. 1-17, 2020. Impact factor (JCR 2019): 3.275, Cited by: 1, Category: Instruments & Instrumentation, Ranking: 15/61 (Q1)
3. Lozano Domínguez, J.M., Mateo Sanguino, T.J., “Review on V2X, I2X & P2X Communications and Their Applications: Comprehensive Analysis over Time”. *Sensors*, 18(12), pp. 1-29, 2019. Impact factor (JCR): 3.275, Cited by: 17, Category: Instruments & Instrumentation, Ranking: 15/61 (Q1)
4. Lozano Domínguez, J.M., Mateo Sanguino, T.J., “Design, Modelling, and Implementation of a Fuzzy Controller for an Intelligent Road Signaling System”. *Complexity*, vol. 2018, article ID 1849527, 2018. Impact factor (JCR): 4.621, Cited by: 8, Category: Mathematics Interdisciplinary Appl., Ranking: 2/100 (Q1), Category: Multidisciplinary Sciences, Ranking: 9/64 (Q1)
5. Mateo Sanguino, T.J., Mendoza Betancourt, J.C., “Optimal Modeling of Wireless LANs: A Decision-Making Multiobjective Approach”. *Complexity*, vol. 2018, article ID 7560717, 2018. Indicios de Calidad: JCR Año: 2016, Impact factor (JCR): 4.621, Cited by: 1, Category: Mathematics Interdisciplinary Appl., Ranking: 2/100 (Q1), Category: Multidisciplinary Sciences, Ranking: 9/64 (Q1)
6. T.J. Mateo Sanguino, F. Ponce Gómez, “Toward Simple Strategy for Optimal Tracking and Localization of Robots with Adaptive Particle Filtering”. *IEEE/ASME Transactions on Mechatronics*, 21(6), pp. 2793-2804, 2016. Impact factor (JCR): 4.357, Cited by: 8, Category: Automation & Control Systems, Ranking: 6/60 (Q1), Category: Engineering, Electrical & Electronic, Ranking: 25/260 (Q1)
7. T.J. Mateo Sanguino, I. Fernández de Viana, D.A. López García, E. Cortés Ancos, “OpenGnSys: a Novel System toward Centralized Deployment and Management of Computer Laboratories”. *Computers & Education*, 75, pp. 30-43, 2014. Impact factor (JCR): 2.556, Cited by: 9, Category: Comp. Sc., Interdisciplinary App., Ranking: 16/102 (Q1)
8. T.J. Mateo Sanguino, F.A. Márquez Hernández, C. Serrano López, “Evaluating a Computer-based Simulation Program to Support Wireless Network Fundamentals”. *Computers & Education*, 70, pp. 233-244, 2014. Impact factor (JCR): 2.556, Cited by: 9, Category: Comp. Sc., Interdisciplinary App., Ranking: 16/102 (Q1)
9. T.J. Mateo Sanguino, C. Serrano López, F.A. Márquez Hernández, “WiFiSiM: An Educational Tool for the Study and Design of Wireless Networks”. *IEEE Transactions on Education*, 56(2), pp. 149-155, 2013. Impact factor (JCR): 1.221, Cited by: 21, Category: Engineering, Electrical & Electronic, Ranking: 123/247 (Q2)



10. T.J. Mateo Sanguino, J.E. González Ramos, "Smart Host Microcontroller for Optimal Battery Charging in a Solar-Powered Robotic Vehicle". *IEEE/ASME Transactions on Mechatronics*, 18(3), pp. 1039-1049, 2013. Impact factor (JCR): 3.652, Cited by: 19, Category: Automation & Control Systems, Ranking: 4/59 (Q1), Category: Engineering, Electrical & Electronic, Ranking: 18/247 (Q1)

## C.2. Research projects

1. Improving Road Safety Using Photoluminescent Signage and Fog Computing. Funding body: Junta de Andalucía - Programa de Ayudas a la I+D+i en el Ámbito del Plan Andaluz de Investigación, Desarrollo e Innovación (PAIDI 2020). Participating entities: Universidad de Huelva, Universidad de Algarve (Portugal), Instituto Politécnico de Beja (Portugal). Date: 30 meses. Principal investigator: T.J. Mateo Sanguino. Number of members: 5. Total amount: 122.981,55 €
2. Wider Impacts and Scenario Evaluation of Autonomous and Connected Transport (ref. CA16222). Funding body: European Cooperation in Science and Technology (COST). Scope: International. Date: 13/10/2017 – 12/10/2021. Principal investigator: N. Thomopoulos. Number of members: 142. Total amount: 1.6 M€
3. Improvement of Road Safety Through an Intelligent Service Platform for Pedestrians, Sensors and Environment. Funding body: Junta de Andalucía – Programa Operativo FEDER Andalucía 2014-2020 (ref. UHU-1260596). Scope: Regional. Participating entities: Universidad de Huelva, Universidad de Granada, Universidad de Algarve (Portugal), Instituto Politécnico de Beja (Portugal). Date: 01/01/2020 – 31/12/2021. Principal investigator: T.J. Mateo Sanguino. Number of members: 11. Total amount: 33.632,65 €
4. IV Jornadas ScienCity 2021- Fomento de la Cultura Científica, Tecnológica y de Innovación en Ciudades Inteligentes. Funding body: FECYT, Junta de Andalucía, Universidad de Huelva, Cátedra de Innovación Social de Aguas de Huelva, Cátedra de la Provincia. Participating entities: Universidad de Huelva. Date: 01/12/2020 – 30/06/2022. Principal investigator: T.J. Mateo Sanguino. Number of members: 9. Amount: 16.500 €
5. Industrialization of Autonomous System for Intelligent Pedestrian Crosswalk Signaling. Funding body: Junta de Andalucía – Ayudas a Actividades de Transferencia del Conocimiento entre los Agentes del Sistema Andaluz del Conocimiento y el Tejido Productivo Andaluz (ref. 1155452). Scope: Regional. Date: 01/01/2020 – 31/12/2020. Principal investigator: T.J. Mateo Sanguino. Number of members: 9. Total amount: 52.562,50 €
6. Reduction of Accidents in Pedestrian Crossings Using Low-Cost Smart Sensing Devices (Smart-CitySen). Funding body: Fundación MAPFRE - Ayudas a la Investigación "Ignacio H. de Larramendi" (ref. BIL/15/P3/047). Scope: National. Date: 03/02/2016 - 03/02/2017. Principal investigator: T.J. Mateo Sanguino. Number of members: 6. Total amount: 24.000 €
7. Detection and Early Warning System for the Violation of Urban Air Space by Drones of Civil Use. Funding body: Universidad de Huelva - Convocatoria de la Estrategia de Política Científica 2016-2017 (ref. TEC2015-71269-R). Scope: Regional. Date: 24/02/2017 - 24/02/2018. Investigador/a responsable: T.J. Mateo Sanguino. Number of members: 7. Total amount: 4.200 €
8. Integral System for the Optimization, Monitoring and Analysis of Faults in Panels, Arrays and Photovoltaic Installations. Funding body: Junta de Andalucía (ref. TEP-6124). Scope: Regional. Date: 06/07/2011 - 06/07/2014. Principal investigator: J.M. Andújar Márquez. Number of members: 8. Total amount: 174.745 €
9. Ecological Unit of Auxiliary Energy. Application to Large Refrigerated Transport Trucks. Funding body: Ministerio de Ciencia e Innovación (ref. DPI2010-17123). Scope: National. Date: 01/10/2010 - 01/10/2013. Principal investigator: J.M. Andújar Márquez. Number of members: 8. Total amount: 185.000 €
10. Robotic Polarimetry, Extension of the BOOTES Network and participation in the JANUS mission. Funding body: Ministerio de Ciencia e Innovación (ref. AYA 2009-14000-C03-01). Scope: National. Participating entities: Consejo Superior de Investigaciones Científicas, Universidad de Cádiz, Universidad de Huelva, European Space Astronomy Centre, Main Astronomical Observatory of National Academy of Sciences of Ukrainem, Space Research Institute of Russian Academy of Sciences, University College Dublin y Stanford University.



Date: 01/01/2010 - 31/12/2012. Principal investigator: A.J. Castro-Tirado. Number of members: 18. Total amount: 1.160.000 €

### **C.3. Contracts, technological or transfer merits**

1. Study and Development of a Technological Map of the Huelva Region. Cód.: 090720- 001. Funding body: Asociación Provincial de Empresas de Informática, Ofimática y Tecnologías de la Información de Huelva (ASEIN). Participating entities: OnuRobotics S.L. (Spin-Off). 01/04/2009. Date: 3 months. Principal investigator: T.J. Mateo Sanguino. Number of members: 3. Total amount: 5.626 €. Practical relevance: Technological and commercial analysis of communication infrastructures in the region of Huelva and guidelines for the modernization of SMEs
2. Implementation and programming of mechanics/software of a static bike for demonstration of energy consumption in the exhibition at the "Classroom of Renewable Energies" from British Petroleum (BP) in Alcalá de Henares (Madrid). Funding body: Forestam, Formación y Estudios Ambientales S.L. Participating entities: British Petroleum (BP). From: 04/11/2000 - 04/12/2000. Principal investigator: M. Gil Moulet. Number of members: 2. Total amount: 3.500 €
3. Provision of services for this institute entitled hardware and software development for BOOTES. Funding body: Instituto Nacional de Técnica Aeroespacial. Participating entities: Estación de Sondeos Atmosféricos (ESAt-INTA, El Arenosillo), Instituto de Astrofísica de Andalucía (IAA-CSIC), Estación Experimental La Mayora (EELM-CSIC), Laboratorio de Astrofísica Espacial y Física Fundamental (LAEFF-INTA), Instituto Astronómico de la Academia de Ciencias de la R.Checa (Ondrejov), Dpto. de Radioelectrónica de la Universidad Técnica Checa (Praga, R.Checa), Dpto. de Física Ingeniería de Sistemas y Teoría de la Señal de la Univ. de Alicante. From: Jun 2002 - Jun 2003. Principal investigator: A.J. Castro-Tirado. Number of members: 20. Total amount: 73.000 €
4. Incorporation of the UHU to the Cisco Networking Academy Program (CNAP) under the agreements signed by the Rectors of the Huelva and Cádiz universities. Type: agreement-contract with companies and entities. Participating entities: Universidad de Huelva, Universidad de Cádiz, CISCO Systems, Inc. Date: 2006. Principal investigator: J.M. Andújar Márquez. Number of members: 7

### **C.4. Patents**

1. T.J. Mateo Sanguino, J.M. Lozano Domínguez. Horizontal Photoluminescent Road Signaling. WO 2018/224716. Priority date: 07/06/17. Owner entity: Universidad de Huelva
2. T.J. Mateo Sanguino, M.A. Rodríguez Román, J.M. Lozano Domínguez. System and Autonomous Device for Road Signaling Detection. WO 2018/050945. Priority date: 14/09/16. Owner entity: Universidad de Huelva
3. T.J. Mateo Sanguino, J.D. Morillo Reina. Device and System for the Recovery of Communication Equipment. WO 2016/055682. Priority date: 14/10/14. Owner entity: Universidad de Huelva
4. T.J. Mateo Sanguino. Toolless RJ Male Connector. ES2389790B1. Priority date: 04/04/11. Owner entity: Universidad de Huelva

### **C.5. Others**

- Director at the Virtual Teaching Service, University of Huelva. Since 11/07/2021
- Deputy director at the Dep. Electronic Eng., Computer Sys. and Automatics, 01/10/2014
- Instructor of the CISCO Certified Networking Association (CCNA) program, since 2007
- Honors (Advanced Level Instructor Excellence), Cisco Networking Academy, 2013
- Honors (Instructor after 10 Years of Service), Cisco Networking Academy, 2018
- Member of the Research Commission of the Strategic Plan 2012-2015. Vice-Rector for Research of the University of Huelva. Since 30/09/2011
- Postdoctoral stay: École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, Date: 01/06/2011, Duration: 3.5 months, Research theme: Augmented reality interface for a telepresence robot
- CICE award granted by the Ministry of Innovation and Science of the Andalusian Government (total amount 3000 €) and enrollment (total amount 2000 €) for the 'Creara' entrepreneur program (Business 50 K), 2008