CV Date	14/10/2025

Part A. PERSONAL INFORMATION

First Name	Jose Maria		
Family Name	Sabater Navarro		
Sex	Male	Date of Birth	
ID number Social Security, Passport			
URL Web	https://medicalrobotics.umh.es/group/josemariasabater/		
Email Address	j.sabater@umh.es		
Open Researcher and Contributor ID (ORCID)	0000-0002-3890-6225		

A.1. Current position

Job Title	Catedrático de Universidad		
Starting date	2017		
Institution	Universidad Miguel Hernández de Elche		
Department / Centre	Ingeniería de Sistemas y Automática / Escuela Politécnica Superior de Elche		
Country		Phone Number	
Keywords	Robotics; Automatization and instrumentation		

A.2. Previous positions (Research Career breaks included)

Period	Job Title / Name of Employer / Country
2009 - 2023	Subirector de la Escuela Politécnica Superior de Elche / Universidad Miguel Hernández de Elche
2002 - 2009	Titular de Escuela Universitaria / Universidad Miguel Hernández de Elche

A.3. Education

Degree/Master/PhD	University / Country	Year
Programa Oficial de Doctorado en Tecnologías Industriales	Universidad Miguel Hernández de Elche	2003
Ingeniero Industrial Especialidad Técnicas Energéticas	Universitat Politècnica de València	1998

Part B. CV SUMMARY

Jose María Sabater-Navarro is Industrial Engineer (specializing in energy techniques) by the Polytechnic University of Valencia in 1998. Doctor of Engineering from the Miguel Hernández University of Elche in 2003. He is currently Full Professor of the Universidad Miguel Hernández of Elche in the field of Systems Engineering and Automatics and he is coordinator of medical robotics in the research group in Biomedical Neuroengineering of the same university. He has held positions of Deputy Director of Polytechnic School (2009-2023) Director of the Master's Degree in Industrial Engineering (2012-2023 and Director of Polytechnic School of Elche since 2023.

In the research aspect, he is the author of: +70 publications in impact journal (JCR index), of which more than 20 are in the first quartil (Q1). 1 book on medical robotics (isbn:9778-84-15413-12-7), 1 book on robotics (isbn 978-84-16898-28-2), +25 publications in non-impacted interest magazine, +10 book chapters in books of scientific interest, +30 guest lectures and/or lectures such as "invited lecturer", +180 congress articles, both national and international.

He has participated in more than 25 R&D International Competitive Projects, being IP in 2 of them. Regarding national funds, he has participated in +40 National Competitive projects being IP in 20 of them. As regards technology transfer, he has 9 patents and 2 software registrations, with 2 patents and 1 software registration currently being exploited. He has participated in 13

contracts with companies, 3 of them as principal investigator and performed various private contracts (22). He has participated in the promoter group and is currently on the scientific board of the technology-based spin-off Instead-Technologies, Ltd.

He currently has recognized 3 6-year's research periods, the last in the period 2014-2019. He also has recognized 1 additional transfer research period.

In the teaching aspect he is since 2000 professor of the University Miguel Hernández of Elche, occupying different positions. Since 2023 he is Director of the Higher Polytechnic School of Elche. From 2009 to 2023 he was Deputy Director of the Higher Polytechnic School of Elche. He previously coordinated the Degree in Electrical Engineering and the Degree in Industrial Engineering until its extinction. From 2012 to 2023 he has been Director of the Master's Degree in Industrial Engineering. He has participated in the implementation of the Bachelor's degrees in Industrial Engineering at the Miguel Hernández University and the Master's Degree on Industrial Engineering. He has been advisor of 9 PhD thesis (two of them obtained the Extraordinary Doctorate award) as well as more than a hundred Final Degree/ Master Projects and also Erasmus+ Projects with exchange students. In addition, he is also an evaluator for Fundamental Research Projects of the Spanish State Plan for Scientific and Technical Research and Innovation, and of the Spanish National Agency of Evaluation and Prospective (ANEP) since 2009 to the present. He has also been academic and professional tutor of various internships in companies. Teacher in different training courses organized by the UMH and training courses for professional staff organized by CEFIRE. He is co-author of 3 complete teaching books, and has taught more than 10 different subjects in the area of systems engineering and automatic, 7 of them newly implemented at the Miguel Hernández University of Elche, and is currently professor of "Robotics" in Bachelor level and "Service Robotics" and "Technologies for health" in Master's degrees and doctoral programs. All these lectures are taught in English. Currently he has recognised 4 5-year's periods of teaching activity.

Part C. RELEVANT ACCOMPLISHMENTS

C.1. Most important publications in national or international peer-reviewed journals, books and conferences

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 **Scientific paper**. Manrique-Cordoba, J.; Martorell, C.; Romero-Ante, JD; Sabater-Navarro, J.M.2024. Neural Tract Avoidance Path- Planning Optimization: Robotic Neurosurgery. Applied Sciences. MDPI. 14-3687. ISSN 2076-3417. https://doi.org/10.3390/app14093687

2 **Scientific paper**. Romero-Ante, JD; Chicharro, E.; Manrique-Cordoba, J.; Vicente-Samper, JM; Gracia-Sanchez, A.; Sabater-Navarro, J.M.2024. Validation of a New Ankle Brachial Index Measurement System Using Pulse Wave Velocity. Biosensors. MDPI. 14-5. ISSN 2079-6374. https://doi.org/10.3390/bios14050251

3 **Scientific paper**. Martinez Lozano, A.; Gutierrez Mazon, R.; Juan Poveda, C.; Blanco Angulo, C.; Garcia Martinez, H.; Torregrosa, G.; (7/8) Sabater-Navarro, J.M. (AC); Avila Navarro, E. 2024. Microwave Imaging System Based on Signal Analysis in a Planar Environment for Detection of Abdominal Aortic Aneurysms. Biosensors. MDPI. 12-9. ISSN 2079-6374. https://doi.org/10.3390/bios14030149

4 **Scientific paper**. C. Blanco-Angulo; A. Martinez; J. Arias; A.Rodriguez; JM Vicente; (6/7) J.M. Sabater-Navarro (AC); E. Avila. 2023. Low-Cost direct-writing of silver-based ink for planar microwave circuits up to 10 GHz. IEEE Access. IEEE. 8, pp.183596-183605. ISSN 2169-3536. https://doi.org/10.1109/ACCESS.2023.3234772

5 **Scientific paper**. Carlos G. Juan; E. Bronchalo; B. Potelon; C.Quendo; V.F.Muñoz; JM Ferrandez-Vicente; (7/7) JM Sabater-Navarro (AC). 2022. On the selectivity of planar microwave glucose sensors with multicomponent solutions. Electronics. MDPI. 12-191. ISSN 2079-9292. https://doi.org/10.3390/electronics12010191

6 **Scientific paper**. Zambrana Vinaroz, D.; Vicente-Samper, JM.; Manrique-Cordoba, J.; (4/4) Sabater-Navarro, J.M. (AC). 2022. Wearable Epileptic Seizure Prediction System Based on Machine Learning Techniques Using ECG, PPG and EEG Signals. Sensors. MDPI. 22-9372. ISSN 1424-8220. https://doi.org/10.3390/s22239372

7 **Scientific paper**. C.G. Juan; B. Potelon; C. Quedo; E. Avila; E. Bronchalo; JM Sabater-Navarro. 2021. Study of Qu-Based Resonant Microwave Sensors and Design of 3-D-Printed Devices Dedicated to Glucose Monitoring. IEEE Transactions on instruments and measurements. IEEE. 70-7, pp.1-16. ISSN 0018-9456. https://doi.org/10.1109/TIM.2021.3122525

8 **Scientific paper**. K. Correa-Arana; N. Bermejo; OA Vivas; JM Sabater-Navarro. 2021. Performance evaluation of a computational model for brain shift calculation. International Journal of Medical Engineering and Informatics. Inderscience. 13-4. https://doi.org/10.1504/IJMEI.2021.10037428

9 **Scientific paper**. C.Juan; H. Garcia; E. Avila; E. Bronchalo; V.Galiano; O. Moreno; D.Orozco; JM Sabater. 2019. Feasibility study of portable microwave microstrip open-loop resonator for non-invasive blood glucose level sensing: proof of concept. Medical & biological engineering & computing. Springer Berlin Heidelberg. pp.1-17. ISSN 0140-0118. https://doi.org/10.1007/s11517-019-02030-w

10 **Scientific paper**. C.G. Juan; E. Bronchalo; B. Potelon; C. Quedo; E. Avila; JM Sabater-Navarro. 2018. Concentration measurement of microliter-volume water-glucose solutions using Q Factor of microwave sensors. IEEE Transactions on instruments and measurements. IEEE. 68-7, pp.2621-2634. ISSN 0018-9456. https://doi.org/10.1109/TIM.2018.2866743

11 **Scientific paper**. A. Garcia-Martinez; JM Vicente; JM Sabater-Navarro. 2017. Automatic detection of surgical haemorrhage using computer visión. Artificial Intelligence in Medicine. 78, pp.55-60. ISSN 0933-3657. https://doi.org/10.1016/j.artmed.2017.06.002

C.3. Research projects and contracts

1 **Project**. S2/1.1/E0173 AGROBOTICS-DITWINS - Ecosistema para impulsar la circularidad y la agro-robótica a través del uso de gemelos digitales. Comisión Europea. Jose María Sabater-Navarro. (Universidad Miguel Hernández de Elche). 01/06/2025-31/05/2028. 126.485,18 €.

2 **Project**. CPP2023-010685 Plataforma avanzada de rehabilitación para terapias personalizadas y evolutivas basadas en el impacto en las actividades cotidianas del paciente.. Ministerio de Ciencia e Innovación. AEI. Nicolas García. (Universidad Miguel Hernández de Elche). 01/07/2024-30/06/2027. 183.410,28 €.

3 **Project**. FERP-2024-226 VisionAI: algoritmos de visión artificial para el diagnóstico precoz de la Degeneración Macular Asociada a la Edad. fundación Eugenio rodiguez pascual. Gema Navarrete. (Universidad Miguel Hernández de Elche). 03/01/2025-02/01/2027. 25.000 €.

4 **Project**. 116.443,93, INNVA1/2024/15 Sistema de detección de brain-shift y reposicionamiento del tumor en tiempo real en operaciones quirúrgicas de tumores cerebrales (BRAINDERSY). Generalitat Valenciana. Jose Maria Sabater Navarro. (Universidad Miguel Hernández de Elche). 01/01/2024-31/12/2026. 243.627,92 €. Co-ordinator.

5 **Project**. CONCEPTO 6/2025 TeachUr. Validación para los robots de Universal Robot de un sistema de aprendizaje por demostración aplicado a tareas de rasurado. Universidad Miguel Hernández de Elche. Jose Maria Sabater Navarro. (Universidad Miguel Hernández de Elche). 27/03/2025-15/01/2026. 10.000 €.

6 **Project**. INNVA1/2024/59 Sistema de monitorización doméstica de la evolución de patologías relacionadas con la Enfermedad Arterial Periférica. Universidad Miguel Hernández de Elche. Jose Maria Sabater Navarro. (Universidad Miguel Hernández de Elche). 01/01/2024-01/01/2026. 187.435,2 €.

7 **Project**. IDPBook - Desarrollo de un diario de salud electrónico para la autogestión y empoderamiento de los pacientes afectos de Inmunodeficiencias Primarias.. Jose Maria Sabater Navarro. (FUNDACION PARA LA INVESTIGACION HOSPITAL UNIVERSITARIO LA FE). 01/01/2022-31/12/2022. 5.000 €.

8 **Project**. PID2019-111023RB-C32 Evaluación de las suturas de un sistema robótico para anastomosis. Ministerio de Ciencia e Innovación. Investigación. Jose Maria Sabater Navarro. (Universidad Miguel Hernández de Elche). 01/06/2020-31/12/2022. 99.220 €. Principal investigator.

9 **Project**. Gestión de datos abiertos para la investigación en salud clínica. Generalitat Valenciana. Jose Maria Sabater Navarro. (Universidad Miguel Hernández de Elche). 03/11/2021-15/11/2021. 6.000 €.

10 **Project**. Diseño y validación de un sensor electrónico en el calcetín para la valoración del riesgo de ulceración del pie diabético, mediente la monitorizacion de la presión, temperatura y humedad del pie. Jose Maria Sabater Navarro. (Instituto de investigación sanitaria y Biomédica de Alicante). 21/12/2021-20/06/2021. 5.000 €.

11 **Project**. DPI2016-80391-C3-2-R Sistema predictivo del brain-shift basado en mediciones de distancia no invasivas. Ministerio de Ciencia e Innovación. Investigación. Jose Maria Sabater Navarro. (Universidad Miguel Hernández de Elche). 01/01/2017-31/12/2019. 151.000 €. Principal investigator.

12 **Contract**. Algoritmo de control y algoritmo de monitorización para la telerehabilitación multimodal asistida por dispositivos robóticos Innovative devices for rehabilitation and assistance S.L. Jose Maria Sabater Navarro. 01/12/2020-01/12/2022. 8.300 €.

13 **Contract**. Evaluación, optimización e implementación de un servicio para la monitorización ambulante del estrés en personas mayores GeroCleop S.L.. 25/03/2019-02/03/2021.

14 **Contract**. Dispositivos electrónicos para la mejora de la calidad de vida en pacientes con enfermedades crónicas Instead Technologies for helping people. Jose Maria Sabater Navarro. 12/06/2018-12/06/2022. 7.000 €.

C.4. Activities of technology / knowledge transfer and results exploitation

1 EP25382177. Methods and systems for generating trajectories for a robotic system Spain. 26/02/2025. Universidad Miguel Hernández de Elche.

2 P201930231. Sistema robotizado vestible para el control de los movimientos de la muñeca y antebrazo Spain. 14/05/2021. Universidad Miguel Hernández de Elche.

3 **Patent of invention**. Jose Maria Sabater Navarro; Enrique Bronchalo; German Torregrosa; Ernesto Avila; Oscar Moreno. ES 201531702. Dispositivo no invasivo para medir nivel de glucosa en sangre y método que hace uso del mismo 25/11/2015. Universidad Miguel Hernández de Elche.