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Mariana Rodrigues

Professora Auxiliar
Instituto de Telecomunicações - IUL
Department of Digital Technologies (ETDA)



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Curriculum

Mariana Catela Jacob Rodrigues is an Assistant Professor at Iscte – University Institute of Lisbon and an Associate Researcher at Instituto de Telecomunicações, within the Instrumentation and Measurement research group in Lisbon, Portugal.
She received her B.Sc. and M.Sc. degrees in Telecommunications and Computer Engineering from Iscte – University Institute of Lisbon in 2017 and 2019, respectively. She obtained her Ph.D. in Information Science and Technology from Iscte in 2024.
Her research focuses on the design and development of Ambient Assisted Living (AAL) and adaptive environments through the implementation of wireless sensor networks and artificial intelligence-based software solutions. Her research interests include Ambient Assisted Living (AAL), Internet of Medical Things (IoMT), Internet of Things (IoT), biomedical sensors and intelligent monitoring systems, physiological monitoring, embedded systems, artificial intelligence, and environmental monitoring.
She currently serves as Chair of the IEEE Women in Engineering (WIE) Affinity Group and Chair of the IEEE Instrumentation and Measurement Society Chapter at Iscte – University Institute of Lisbon.

Research Interests

Internet of Things (IoT) and Internet of Medical Things (IoMT); Ambient Assisted Living (AAL); Smart Sensors and Wearables; Biomedical and Physiological Monitoring; Environmental Monitoring; Indoor Air Quality Monitoring; Artificial Intelligence; Intelligent Embedded Systems; VR Serious Games; Cardiorespiratory Activity Monitoring; Indoor Localization Technologies

Academic Qualifications

University/Institution	Type	Degree	Period
ISCTE-Instituto Universitario de Lisboa	PhD	Information Science and Technology	2024
ISCTE-Instituto Universitario de Lisboa	M.Sc.	Telecommunications and Computer Engineering	2019
ISCTE-Instituto Universitario de Lisboa	Bachelor of Science	Telecommunications and Computer Engineering	2017

Teaching Activities

Teaching Year	Sem.	Course Name	Degree(s)	Coord.
2026/2027	2º	Artificial Intelligence Applied to Education	Bachelor Degree in Digital Educational Technologies;	Yes
2026/2027	2º	Power Electronics		Yes
2026/2027	2º	Applied Project in Automation II	Bachelor Degree in Digital Technologies and Automation;	No
2026/2027	2º	Microcontrollers	Bachelor Degree in Digital Technologies and Automation;	Yes
2026/2027	1º	Electronic Circuit Analysis	Bachelor Degree in Digital Technologies and Automation;	Yes
2026/2027	1º	Programming Fundamentals	Bachelor Degree in Mathematics Applied and Digital Technologies; Bachelor Degree in Software and Applications Development;	No
2026/2027	1º	Sensors Actuators and Signal Processing	Bachelor Degree in Digital Technologies and Automation;	Yes
2026/2027	1º	Applied Project in Automation I	Bachelor Degree in Digital Technologies and Automation;	No
2025/2026	2º	Artificial Intelligence Applied to Education	Bachelor Degree in Digital Educational Technologies;	Yes
2025/2026	2º	Power Electronics	Bachelor Degree in Digital Technologies and Automation;	Yes
2025/2026	2º	Applied Project in Automation II	Bachelor Degree in Digital Technologies and Automation;	No
2025/2026	2º	Microcontrollers	Bachelor Degree in Digital Technologies and Automation;	Yes

2025/2026	2º	Introduction to Entrepreneurship in a Technology-based Project	Summer course in Introduction to entrepreneurship in a technology-based project;	No
2025/2026	1º	Electronic Circuit Analysis	Bachelor Degree in Digital Technologies and Automation;	Yes
2025/2026	1º	Programming Fundamentals	Bachelor Degree in Digital Educational Technologies;	Yes
2025/2026	1º	Sensors Actuators and Signal Processing	Bachelor Degree in Digital Technologies and Automation;	Yes
2025/2026	1º	Applied Project in Automation I	Bachelor Degree in Digital Technologies and Automation;	No
2025/2026	1º	Topics in Intelligent Robotics	Post Graduation Program in Applied Machine Learning;	No
2024/2025	2º	Algorithms and Data Structures	Bachelor Degree in Software and Applications Development; Bachelor Degree in Digital Technologies and Artificial Intelligence;	No
2024/2025	2º	Microcontrollers	Bachelor Degree in Digital Technologies and Automation;	Yes
2024/2025	1º	Electronic Circuit Analysis	Bachelor Degree in Digital Technologies and Automation;	Yes
2024/2025	1º	Programming Fundamentals	Bachelor Degree in Politics, Economics and Society;	No
2024/2025	1º	Sensors Actuators and Signal Processing	Bachelor Degree in Digital Technologies and Automation;	Yes
2023/2024	2º	Artificial Intelligence	Bachelor Degree in Computer Science and Business Management (PL); Bachelor Degree in Computer Engineering (PL); Bachelor Degree in Telecommunications and Computer Engineering;	No
2023/2024	1º	Electronic Circuit Analysis	Bachelor Degree in Digital Technologies and Automation;	No
2022/2023	2º	Artificial Intelligence	Bachelor Degree in Telecommunications and Computer Engineering;	No
2021/2022	2º	Artificial Intelligence	Bachelor Degree in Computer Engineering; Bachelor Degree in Computer Science and Business Management;	No
2021/2022	1º	Artificial Intelligence		No
2020/2021	1º	Artificial Intelligence		No

Supervisions

- **Ph.D. Thesis**

- Ongoing

	Student Name	Title/Topic	Language	Status	Institution
1	Muhammad Tayyab Iqbal	Innovative Self-Sustaining IoT Systems for Global Access and Reliable Data Logging	--	Developing	Iscte

• M.Sc. Dissertations

- Ongoing

	Student Name	Title/Topic	Language	Status	Institution
1	Gonçalo Prazeres Torres	Indoor Air quality Monitoring System	Portuguese	Delivered	Iscte
2	Georgia Diamanti	Remote Veterinary Care in Europe: Current Trends and Future Perspectives	English	Developing	Iscte
3	Tiago Filipe Gomes Pissarra Gonçalves	AIR- Q InOut - Indoor outdoor Air quality Monitoring System	--	Developing	Iscte
4	Pedro Menezes Sobral	IOT-SmartIS - IoT Smart Irrigation Systems	--	Developing	Iscte
5	Luís Nuno de Magalhães Fleming Pessoa Gaspar	IoT for outdoor Air Quality Monitoring	--	Developing	Iscte
6	Antonia Angelou	Digital Transformation Maturity in Pharmaceutical Companies	English	Developing	Iscte
7	Basiratu Ibrahim	Evaluating the cost-benefit of digital health interventions in reducing hospital readmissions in Europe	English	Developing	Iscte
8	Renato Luís Ferreira Monteiro	A wearable-based system for indoor elderly monitoring	--	Developing	Iscte

- Concluded

	Student Name	Title/Topic	Language	Institution	Concluding Year
1	Lídia Mariana Lourenço Marques	Remote Sensing for Catastrophic Scenarios - LiDAR Data from Project Agile	English	Iscte	2025
2	Roberto Filipe Cardoso Miguel	SOLAR-IOT – IoT for Precision Agriculture – SoilAir monitoring	English	Iscte	2024
3	Teresa Maria Garrido Felício	RemSAGRO - Remote Sensing for Agriculture	English	Iscte	2023

Total Citations

Web of Science®	116
Scopus	188

Publications

• Scientific Journals

- Scientific journal paper

1	Jacob Rodrigues, M., Postolache, O. & Cercas, F. (2023). The influence of stress noise and music stimulation on the autonomous nervous system. IEEE Transactions on Instrumentation and Measurement, 72, 18. https://doi.org/10.1109/TIM.2023.3279881 - Times Cited Web of Science®: 9 - Times Cited Scopus: 12 - Times Cited Google Scholar: 18
2	Jacob Rodrigues, M., Postolache, O. & Cercas, F. (2022). Unobtrusive cardio-respiratory assessment for different indoor environmental conditions. IEEE Sensors Journal, 22(23), 23243?23257. https://doi.org/10.1109/JSEN.2022.3207522 - Times Cited Web of Science®: 6 - Times Cited Scopus: 8 - Times Cited Google Scholar: 9
3	Jacob Rodrigues, M., Postolache, O. & Cercas, F. (2020). Physiological and behavior monitoring systems for smart healthcare environments: a review. Sensors, 20(8). https://doi.org/10.3390/s20082186 - Times Cited Web of Science®: 89 - Times Cited Scopus: 105 - Times Cited Google Scholar: 175

• Books and Book Chapters

- Book chapter

1	Ribeiro, G., Jacob Rodrigues, M. & Postolache, O. (2025). Technologies for Stress and Wellbeing Monitoring. In Juan Carlos Augusto (Ed.), Volume 330: Handbook on Smart Health. IOS Press. https://doi.org/10.3233/SHTI251463 - Times Cited Google Scholar: 2
2	Jacob Rodrigues, M., Postolache, O. & Cercas, F. (2023). Wearable Tag for Indoor Localization in the Context of Ambient Assisted Living. Computational Collective Intelligence. Lecture Notes in Computer Science (pp. 418?430). Springer, Cham. https://doi.org/10.1007/978-3-031-41456-5_32 - Times Cited Web of Science®: 1 - Times Cited Scopus: 1 - Times Cited Google Scholar: 1

3	Rodrigues, M. J., Postolache, O. & Cercas, F. (2021). Autonomic nervous system assessment based on HRV analysis during virtual reality serious games. In Nguyen, N. T., Iliadis, L., Maglogiannis, I., and Trawiski, B. (Ed.), Computational Collective Intelligence. Lecture Notes in Computer Science (pp. 756?768). Springer Cham. https://doi.org/10.1007/978-3-030-88081-1_57 - Times Cited Web of Science®: 4 - Times Cited Scopus: 4 - Times Cited Google Scholar: 5

• Conferences/Workshops and Talks

- Publication in conference proceedings

1	Md Razu Miah, Jacob Rodrigues, M. & Postolache, O. (2026). ECG Interpretation in Natural Language from Derived Metrics Through API Invocation. ICEMS-BIOMED 2026 (pp. 27). MDPI. https://doi.org/10.3390/engproc2026148027 - Times Cited Google Scholar: 1
2	Jacob Rodrigues, M. & Postolache, O. (2026). Urban Health Monitoring Using Environmental and Physiological Data: A Pilot Study. ICEMS-BIOMED 2026 (pp. 21). MDPI. https://doi.org/10.3390/engproc2026148021
3	Rodrigues, M., Postolache, O. & Cercas, F. (2025). Air quality monitoring for human activity recognition. 2025 IEEE Medical Measurements & Applications (MeMeA). IEEE. https://doi.org/10.1109/MeMeA65319.2025.11067996 - Times Cited Scopus: 2 - Times Cited Google Scholar: 2
4	Miguel, R., Postolache, O. & Rodrigues, M. (2024). Soil and air characteristics monitoring base on IoT for precision agriculture. 2024 International Symposium on Sensing and Instrumentation in 5G and IoT Era (ISSI). IEEE. https://doi.org/10.1109/ISSI63632.2024.10720506 - Times Cited Scopus: 1 - Times Cited Google Scholar: 1
5	Rodrigues, M., Postolache, O. & Cercas, F. (2024). Wearable smart sensing platform for cardiac activity assessment. 2024 International Symposium on Sensing and Instrumentation in 5G and IoT Era (ISSI). IEEE. https://doi.org/10.1109/ISSI63632.2024.10720495
6	López, A., Ferrero, F., López, A., Ribeiro, G. & Postolache, O. (2024). EOG Measurement Analysis Under Different Lighting Conditions. 2024 8th International Symposium on Instrumentation Systems, Circuits and Transducers (INSCIT). IEEE.
7	Rodrigues, M. J., Postolache, O. & Cercas, F. (2023). Wearable smart sensing and UWB system for fall detection in AAL environments. In Goubran, R., Rajan, S., and Depari, A. (Ed.), 2023 IEEE Sensors Applications Symposium (SAS). IEEE. https://doi.org/10.1109/SAS58821.2023.10254065 - Times Cited Web of Science®: 3 - Times Cited Scopus: 10 - Times Cited Google Scholar: 12
8	Felício, T., Postolache, O. A., Rodrigues, M. J. & Sebastião, P. (2023). Vineyard thermal stress assessment through the combination of in-situ and remote sensing technology. In Goubran, R., Rajan, S., and Depari, A. (Ed.), 2023 IEEE Sensors Applications Symposium (SAS). IEEE. https://doi.org/10.1109/SAS58821.2023.10254061 - Times Cited Scopus: 2

9	Rodrigues, M. J., Postolache, O. & Cercas, F. (2022). The influence of music stimulation on heart rate variability: Preliminary results. 2022 IEEE International Symposium on Medical Measurements and Applications (MeMeA). IEEE. https://doi.org/10.1109/MeMeA54994.2022.9856561 - Times Cited Web of Science®: 3 - Times Cited Scopus: 3 - Times Cited Google Scholar: 5
10	Rodrigues, M. J., Postolache, O. & Cercas, F. (2021). Autonomic nervous system assessment during physical rehabilitation serious game. 2021 IEEE International Symposium on Medical Measurements and Applications (MeMeA). IEEE. https://doi.org/10.1109/MeMeA52024.2021.9478742 - Times Cited Web of Science®: 1 - Times Cited Scopus: 2 - Times Cited Google Scholar: 2
11	Araujo, J., Rodrigues, M. J., Postolache, O., Cercas, F., Ferrero Martín, F. & López Martínez, A. (2020). Heart rate variability analysis in healthy subjects under different colored lighting conditions. 2020 IEEE International Instrumentation and Measurement Technology Conference (I2MTC). IEEE. https://doi.org/10.1109/I2MTC43012.2020.9129619 - Times Cited Scopus: 17 - Times Cited Google Scholar: 24
12	Rodrigues, M. J., Postolache, O. & Cercas, F. (2019). Indoor air quality monitoring system to prevent the triggering of respiratory distress. 2019 International Conference on Sensing and Instrumentation in IoT Era (ISSI). IEEE. https://doi.org/10.1109/ISSI47111.2019.9043669 - Times Cited Scopus: 11 - Times Cited Google Scholar: 15
13	Rodrigues, M. J., Postolache, O. & Cercas, F. (2019). Wireless sensor network for cardiac activity monitoring. 2019 E-Health and Bioengineering Conference (EHB). IEEE. https://doi.org/10.1109/EHB47216.2019.8969873 - Times Cited Scopus: 2 - Times Cited Google Scholar: 6
14	Jacob Rodrigues, M., Postolache, O. & Cercas, F. (2019). Wireless sensor network for indoor air quality monitoring. In Fernando José da Silva Velez (Ed.), Conftele 2019: 11th Conference on Telecommunications. - Times Cited Scopus: 8

• Other Publications

- Other publications

1	Jacob Rodrigues, M. (2020). Saúde Societal: Uma abordagem inclusiva do conhecimento em saúde...

- Master's Dissertation

1	Jacob Rodrigues, M. (2019). SAGA: Smart Gateway for adaptive environments..

- Doctoral Thesis

1	Jacob Rodrigues, M., Postolache, O. & Cercas, F. (2024). Healthcare status and behavior monitoring based on smart tailored environments.. - Times Cited Google Scholar: 1

Academic Management Positions

Coordenador do 2º Ano (2026 - 2027)
Unit/Area: Bachelor Degree in Digital Technologies and Automation

Coordenador do 3º Ano (2026 - 2027)
Unit/Area: Bachelor Degree in Digital Technologies and Automation

Membro (Docente) (2025 - 2028)
Unit/Area: Comissão Pedagógica

Coordenador do 1º Ano (2025 - 2026)
Unit/Area: Bachelor Degree in Digital Technologies and Automation

Coordenador de ECTS (2025 - 2028)
Unit/Area: Department of Digital Technologies

Awards

Student Best Paper Award at the IEEE International Symposium on Medical Measurements and Applications (IEEE MeMeA 2022) (2022)

ISTA Top Talent 2018-2019 (2020)

Student Best Paper Award at the 2nd International Symposium on Sensing and Instrumentation in IoT Era (2019)

Professional Associations

IEEE Instrumentation and Measurement Society Chapter of ISCTE-IUL (Since 2020)

IEEE Sensors Council (Since 2019)

IEEE Women in Engineering (WiE) ISCTE-IUL (Since 2019)

IEEE Instrumentation and Measurement Society (Since 2019)

IEEE (Since 2019)

Organization/Coordination of Events

Type of Organization/Coordination	Event Title	Organizer	Year
Coordination of scientific event (with scientific committee) at ISCTE-IUL	The 22nd International Conference on Intelligent Environments	ISCTE, IT, UQAC, Middlesex University London, Sunway University, Audax_Iscte	2026
Member of scientific event's organizing committee	Iscte-Sintra Winter School on Intelligent Systems for Environmental Monitoring	ISCTE, IT, IEEE IMS	Since 2025

Member of scientific event's organizing committee	Smart Systems for Ambient Assisted Living: Healthcare and Environment	ISCTE, IT, IEEE IMS	2025
Member of scientific event's organizing committee	7th Workshop "Technologies for Everyday Life"	IT, ISCTE-IUL, IEEE IMS	Since 2024
Member of scientific event's organizing committee	4th International Symposium on Sensing and Instrumentation in IoT Era	IEEE, IT, ISCTE	2024
Member of free course/summer school's organizing committee	Smart Systems for Ambient Assisted Living ERASMUS + BIP 2024	IEEE, IT, ISCTE	2024
Member of free course/summer school's organizing committee	1ª Summer School of ISCTE in Penha Garcia “Healthy and Sustainable Environment”	ISCTE	2024
Member of free course/summer school's organizing committee	Smart Systems for Ambient Assisted Living Summer School 2023	IEEE, IT, ISCTE	2023
Member of free course/summer school's organizing committee	Smart Systems for Ambient Assisted Living Summer School 2022	IEEE, IT, ISCTE	2022
Member of non-scientific event's organizing committee	IEEE IMS Workshop - Sensing Art	IEEE, IT, ISCTE	Since 2021
Member of scientific event's organizing committee	Digital Physiotherapy based on Smart Sensors and Tailored Environments	IEEE, IT, ISCTE	2021
Member of free course/summer school's organizing committee	Smart Systems for Ambient Assisted Living Summer School 2021	IEEE, IT, ISCTE	2021
Member of scientific event's organizing committee	IEEE IMS MSC THESIS WORKSHOP 2020	IEEE, IT, ISCTE	2020
Member of scientific event's organizing committee	Code++ (1st edition 2020)		2020
Member of scientific event's organizing committee	IEEE ISCTE SB Workshop - Introduction to LaTeX		2020
Member of non-scientific event's organizing committee	IEEE IMS PhD Thesis Workshop 2020	IEEE, IT, ISCTE	2020
Member of scientific event's organizing committee	Start-Up Fair 2020 – ISCTE-IUL		2020
Coordination of scientific event (with scientific committee) outside of ISCTE-IUL	Girls in Tech @ Altice		2020
Member of free course/summer school's organizing committee	SmartLife Summer School 2020	IEEE, IT, ISCTE	2020
Member of scientific event's organizing committee	2nd International Symposium on Sensors and Instrumentation in Internet of Things Era (ISSI)	IEEE, IT, ISCTE	2019
Member of non-scientific event's organizing committee	2nd International Symposium on Sensors and Instrumentation in Internet of Things Era (ISSI)	IEEE, IT, ISCTE	2019
Member of scientific event's organizing committee	Start-Up Fair 2019 – ISCTE-IUL		2019
Member of non-scientific event's organizing committee	ISWCS 2018 - 15th International Symposium on Wireless Communications Systems		2018

Diffusion Activities

Activity Type	Event Title	Activity Description	Year
Talk/Conference in public diffusion event	9th REGIONAL MEETING ON TECHNOLOGIES IN EDUCATION - “Educating with intelligence”	The 9th Regional Meeting on Technologies in Education (ERTE 9) was promoted by the Regional Directorate for Education and Educational Administration (DREAE). The event, entitled “Educating with Intelligence,” aims to think and reflect on Artificial Intelligence (AI) in teaching and learning processes. The presentation “Artificial Intelligence in the Future of Education” was given.	2025