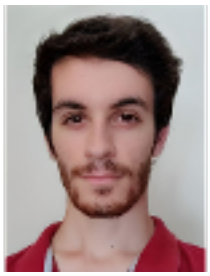
# Bruno Mataloto

**Professor Auxiliar**
ISTAR-Iscte - Information Sciences, Technologies and Architecture Research Centre
Department of Digital Technologies (ETDA)



## Contacts



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| **E-mail** | Bruno_Mataloto@iscte-iul.pt |
| **Office** | C7.08 |



## Curriculum

Bruno Mataloto has a PhD in Information Sciences and Technologies at ISCTE-IUL, where he has been a Guest Assistant Professor for the past five years, teaching courses in Internet of Things (IoT), Disruptive Technologies, Programming Fundamentals, and Systems, Installations, and Smart Buildings. He is also the head of the Internet of Things Lab at ISCTE-IUL. He has participated as a trainer in several editions of the Summer and Winter Schools held at ISCTE and in training events at Molde University, Norway. He is also a researcher at the ISTAR research center, where he has worked on several projects funded by the Foundation for Science and Technology (FCT) and the Gulbenkian Institute of Science. His PhD project, "Social-IoT 4 Energy Savings and Building Management," studies how IoT systems can influence human behavior. This project has been presented at various national and international events, such as the Smart Cities Summit and Pioneer Alliance, and has resulted in eight published Q1 papers.

## Research Interests

- Internet of Things
- Interactive Dashboards
- Low-Power Networks
- User Behavior

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| 3D Virtual Environements |
| Smart Cities |
| 3D Printing |
| Real-time sensor monitoring |
| Water and Energy Management Saving Systems |

## Academic Qualifications

| University/Institution | Type | Degree | Period |
|---|---|---|---|
| ISCTE-Instituto Universitario de Lisboa | PhD | Ciências e Tecnologias da Informação | 2024 |
| ISCTE-Instituto Universitario de Lisboa | M.Sc. | Engenharia de Telecomunicações e Informática | 2019 |
| ISCTE-Instituto Universitario de Lisboa | Licenciate | Engenharia de Telecomunicações e Informática | 2017 |

## Teaching Activities

| Teaching Year | Sem. | Course Name | Degree(s) | Coord. |
|---|---|---|---|---|
| 2025/2026 | 2º | Algorithms and Data Structures | Bachelor Degree in Digital Technologies and Information Security; | Yes |
| 2025/2026 | 2º | Building Utilities and Smart Buildings | Bachelor Degree in Digital Technology and Sustainable Built Environment; | Yes |
| 2025/2026 | 2º | Physiological Data Analysis | Bachelor Degree in Digital Technologies and Health; | Yes |
| 2025/2026 | 1º | Internet of Things Laboratory | Institutional Degree in Escola de Tecnologias e Arquitetura; | No |
| 2025/2026 | 1º | Conservation and Sustainability | Master Degree in Conservation and Sustainable Rehabilitation; Post Graduation Program in Conservation and Sustainable Rehabilitation; | No |
| 2025/2026 | 1º | Disruptive Technologies | Master Degree in Digital Technologies for Business; | No |
| 2025/2026 | 1º | Assistive Technologies and Telehealth | Bachelor Degree in Digital Technologies and Health; | Yes |
| 2025/2026 | 1º | Managing the Digital Transformation in Healthcare | Master Degree in Managing Digital Transformation in the Health Sector; | Yes |
| 2025/2026 | 1º | Health Data and Information Systems | Master Degree in Managing Digital Transformation in the Health Sector; | No |

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|---|---|---|---|---|
| 2024/2025 | 2º | Building Utilities and Smart Buildings | Bachelor Degree in Digital Technology and Sustainable Built Environment; | No |
| 2024/2025 | 1º | Internet of Things Laboratory | Institutional Degree in Escola de Tecnologias e Arquitetura; | No |
| 2024/2025 | 1º | Programming Fundamentals | Bachelor Degree in Digital Technology and Sustainable Built Environment; | No |
| 2024/2025 | 1º | Disruptive Technologies | Master Degree in Digital Technologies for Business; | No |
| 2023/2024 | 2º | Disruptive Technologies | | No |
| 2023/2024 | 1º | Iot for Smart Cities | | No |
| 2023/2024 | 1º | Internet of Things Laboratory | Institutional Degree in Escola de Tecnologias e Arquitetura; | No |
| 2022/2023 | 1º | Iot for Smart Cities | | No |
| 2022/2023 | 1º | Internet of Things Laboratory | Institutional Degree in Escola de Tecnologias e Arquitetura; | No |
| 2021/2022 | 1º | Internet of Things Laboratory | Institutional Degree in Escola de Tecnologias e Arquitetura; | No |

## Supervisions

### • M.Sc. Dissertations

**- Ongoing**

| | Student Name | Title/Topic | Language | Status | Institution |
|---|---|---|---|---|---|
| 1 | Rita Rodrigues da Cova Canas Marques | Application of blockchain to Anatomic Pathology | -- | Developing | Iscte |
| 2 | Ana Marta Oliveira Antunes | Digital Health readiness: competencies and interaction with Health Information Systems in clinical and educational contexts | -- | Developing | Iscte |
| 3 | Manuel Lencastre Torres Gonçalves Henriques | Is it possible to predict the best time to perform follicular aspiration by integrating clinical, hormonal and ultrasound data into predictive models? | -- | Developing | Iscte |
| 4 | Alessandro Catanese | DEVELOPMENT AND VALIDATION OF A RADIOLOGY DIGITAL COMPETENCY PROFILE ALIGNED WITH THE EUROPEAN HEALTH DATA SPACE | English | Developing | Iscte |

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| 5 | Catarina Alexandre do Carmo Loureiro | IOT-ASOIL - IoT Systems for Air and Soil Characteristics Monitoring | -- | Developing | Iscte |
| 6 | Gilberto Manuel Kássimo Júnior | Hybrid Teaching Methodology of Robotics Programming with Simulation and Real Hardware | -- | Developing | Iscte |

**- Concluded**

| | Student Name | Title/Topic | Language | Institution | Concluding Year |
|---|---|---|---|---|---|
| 1 | Carolina Chaves Fernandes | Comparative Analysis of Communication Protocols for Crop Monitoring: Energy Efficiency and Data Acquisition | English | Iscte | 2025 |
| 2 | Diogo Alves da Silva | Smart IoT Lighting System for Energy Consumption Optimization | English | Iscte | 2024 |
| 3 | Oleksandr Kobelyuk | SoilIoT - Smart Sensing and IoT for Precision Agriculture - Soil Characteristics Monitoring | English | Iscte | 2024 |
| 4 | Ricardo Nuno Pinto Mendes | Multifactor Monitoring and Control System for Intelligent Water Management | English | Iscte | 2024 |

### • M.Sc. Final Projects

**- Concluded**

| | Student Name | Title/Topic | Language | Institution | Concluding Year |
|---|---|---|---|---|---|
| 1 | Rui João Vicente Pereira | Digital Multiservice Coastal Network | Portuguese | Iscte | 2025 |
| 2 | Vasco Bizarra Ferreira | The Impact of IoT- Enabled Energy Management Systems on Hotel Operating Costs and Sustainability Outcomes | English | Iscte | 2024 |

## Total Citations

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| **Web of Science®** | 214 |
| **Scopus** | 270 |

## Publications

### • Scientific Journals

**- Scientific journal paper**

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|---|---|
| 1 | Tokkozhina, U., Mataloto, B. M., Martins, A. L. & Ferreira, J. C. (2024). Decentralizing online food delivery services: A blockchain and IoT model for smart cities. Mobile Networks and Applications. 29 (1), 59-69<br>- Times Cited Web of Science®: 12<br>- Times Cited Scopus: 15<br>- Times Cited Google Scholar: 23 |
| 2 | Mataloto, B., Ferreira, J. & Resende, R. (2023). Long term energy savings through user behaviour modeling in smart homes. IEEE Access. 11, 44544-44558<br>- Times Cited Web of Science®: 14<br>- Times Cited Scopus: 17<br>- Times Cited Google Scholar: 24 |
| 3 | Mataloto, B., Calé, D., Carimo, K., Ferreira, J. & Resende, R. (2021). 3D IoT dystem for environmental and energy consumption monitoring system. Sustainability. 13 (3)<br>- Times Cited Web of Science®: 18<br>- Times Cited Scopus: 21<br>- Times Cited Google Scholar: 29 |
| 4 | Casquiço, M., Mataloto, B., Ferreira, J., Monteiro, V., Afonso, J. A. & Afonso, J. A. (2021). Blockchain and Internet of Things for electrical energy decentralization: A review and system architecture. Energies. 14 (23)<br>- Times Cited Web of Science®: 17<br>- Times Cited Scopus: 22<br>- Times Cited Google Scholar: 31 |
| 5 | Elvas, L. B., Mataloto, B., Martins, A. & Ferreira, J. (2021). Disaster management in smart cities. Smart Cities. 4 (2), 819-839<br>- Times Cited Web of Science®: 49<br>- Times Cited Scopus: 65<br>- Times Cited Google Scholar: 99 |
| 6 | Mataloto, B., Mendes, H. & Ferreira, J. (2020). Things2People interaction toward energy savings in shared spaces Using BIM. Applied Sciences. 10 (16)<br>- Times Cited Web of Science®: 13<br>- Times Cited Scopus: 12<br>- Times Cited Google Scholar: 18 |
| 7 | Mataloto, B., Ferreira, J., Resende, R., Moura, R. & Sílvia, L. (2020). BIM in People2People and Things2People interactive process. Sensors. 20 (10), 1-18<br>- Times Cited Web of Science®: 10<br>- Times Cited Scopus: 13<br>- Times Cited Google Scholar: 25 |
| 8 | Mataloto, B., Ferreira, J. & Cruz, N. (2019). LoBEMS—IoT for building and energy management systems. Electronics. 8 (7), 1-27<br>- Times Cited Web of Science®: 73<br>- Times Cited Scopus: 89<br>- Times Cited Google Scholar: 139 |

## • Books and Book Chapters

**- Book chapter**

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|---|---|
| 1 | Mataloto, B., Ferreira, J. & Resende, R. (2025). Sensors and Networks for Savings and Comfort of Cities' Inhabitants. In Swarm Intelligence Applications for the Cities of the Future.: Taylor & Francis Group. |

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| 2 | Mataloto, B. & Ferreira, J. (2019). Smart Auditorium: Development and Analysis of a Power and Environment Monitoring Platform. In EAI INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY FOR SMART CITIES. Braga: Springer, Cham. |

## • Conferences/Workshops and Talks

**- Publication in conference proceedings**

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|---|---|
| 1 | Ricardo Mendes, Coutinho, C. & Mataloto, B. (2025). Multiparameter Monitoring and Control System for Intelligent Water Management. In Procedia Computer Science. (pp. 600-607).: Elsevier BV. |
| 2 | Silva, D., Mataloto, B. & Coutinho, C. (2024). Smart IoT lightning system for energy consumption optimization. In 2024 International Symposium on Sensing and Instrumentation in 5G and IoT Era (ISSI). Lagoa, Portugal: IEEE.<br>- Times Cited Scopus: 2<br>- Times Cited Google Scholar: 4 |
| 3 | Kobelyuk, O., Postolache, O. & Mataloto, B. (2024). Smart sensing and IoT for precision agriculture: Soil characteristics monitoring. In 2024 International Symposium on Sensing and Instrumentation in 5G and IoT Era (ISSI). Lagoa, Portugal: IEEE.<br>- Times Cited Google Scholar: 1 |
| 4 | Elvas, L. B., Mataloto, B. & Ferreira, J. (2023). The impact of the pandemic due to covid-19 on mobility and environment. In Nuno A S Domingues, Cecília R C Calado, Nuno C Leitão (Ed.), Proceedings of the 1st International Conference on Challenges in Engineering, Medical, Economics & Education: Research & Solutions (CEMEERS-23). (pp. 115-122). Lisboa: EIRAI. |
| 5 | Filipe, P., Mataloto, B. & Coutinho, C. (2022). IoT system for the validation of conditions in shipping couriers. In Morel, L., Dupont, L., and Camargo, M. (Ed.), 2022 IEEE 28th International Conference on Engineering, Technology and Innovation (ICE/ITMC) & 31st International Association For Management of Technology (IAMOT) Joint Conference. Nancy, France: IEEE.<br>- Times Cited Google Scholar: 2 |
| 6 | Mota, B. da., Mataloto, B. & Coutinho, C. (2022). Sustainable gardens for smart cities using low-power communications. In Morel, L., Dupont, L., and Camargo, M. (Ed.), 2022 IEEE 28th International Conference on Engineering, Technology and Innovation (ICE/ITMC) & 31st International Association For Management of Technology (IAMOT) Joint Conference. (pp. 1210-1216). Nancy: IEEE.<br>- Times Cited Scopus: 2<br>- Times Cited Google Scholar: 3 |
| 7 | Filipe, P., Mataloto, B. & Coutinho, C. (2022). IoT system for the validation of conditions in shipping couriers. In 2022 International Symposium on Sensing and Instrumentation in 5G and IoT Era (ISSI). (pp. 103-108). Shanghai: IEEE.<br>- Times Cited Scopus: 1<br>- Times Cited Google Scholar: 2 |
| 8 | Resende, R. P., Mataloto, B., Dias, L., Ferreira, J. C., Rato, V. & Boné, J. (2020). Digital twins para sustentabilidade e gestão de acidentes. In Martins, J. P., Costa, A. A., e Sanhudo, L. (Ed.), ptBIM 2020 - 3º Congresso Português de Building Information Modelling. (pp. 785-795). Porto: Universidade do Porto. |
| 9 | Santos, D., Mataloto, B., Ferreira, J. C., Monteiro, V. & Afonso, J. L. (2019). Smart auditorium: Development and analysis of a power and environment monitoring platform. In Afonso, J. L., Monteiro, V., and Pinto, J. G. (Ed.), Sustainable Energy for Smart Cities. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering. (pp. 73-87). Braga: Springer. |

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| 10 | Santos, D., Mataloto, B. & Ferreira, J. C. (2019). Data center environment monitoring system. In CCIOT 2019: Proceedings of the 2019 4th International Conference on Cloud Computing and Internet of Things. (pp. 75-81). Tokyo, Japan: Association for Computing Machinery.<br>- Times Cited Web of Science®: 8<br>- Times Cited Scopus: 11<br>- Times Cited Google Scholar: 18 |

**- Talk**

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|---|---|
| 1 | Mataloto, B. & Resende, R. (2023). Building sustainable design and operation through users input. ISTAR Brown Bag Meeting. |
| 2 | Elvas, L. B., Mataloto, B. & Ferreira, J. (2023). The Impact of the pandemic due to COVID-19 on mobility and environment. International Conference Proceedings 1st International Conference on Challenges in Engineering, Medical, Economics & Education: Research & Solutions (CEMEERS-23). |

## • Other Publications

**- Other publications**

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|---|---|
| 1 | Mataloto, B., Martins, A., Ferreira, J., Ribeiro, R., António R. Andrade & Luís Mota (2019). Tourism Guidance Tracking and Safety Platform. |
| 2 | Mataloto, B., Martins, A., Ferreira, J., Ribeiro, R., António R. Andrade & Luís Mota (2019). Tourism Guidance Tracking and Safety Platform. INTSYS 2019 - 3rd EAI International Conference on Intelligent Transport Systems. |
| 3 | Ribeiro, R., Mataloto, B., Ferreira, J., Dias, J., Vitor Monteiro, Vitor Monteiro...Monteiro, V. (2019). Smart Auditorium: Development and Analysis of a Power and Environment Monitoring Platform. |
| 4 | Ribeiro, R., Mataloto, B., Ferreira, J. & Dias, J. (2019). Smart Auditorium: Development and Analysis of a Power and Environment Monitoring Platform. EAI INTERNATIONAL CONFERENCE ON SUSTAINABLE ENERGY FOR SMART CITIES. |
| 5 | Ferreira, J. & Mataloto, B. (2019). The “aftermath“ of Industry 4.0 in Small and Medium Enterprises. IFIP TC13 WG6: Human Work Interaction Design (HWID) - UX@WORK, 17th IFIP TC 13 International Conference, Paphos, Cyprus. |
| 6 | Mataloto, B., Ferreira, J. & Nuno Cruz (2019). Full IoT Lora School Building Management System.<br>- Times Cited Google Scholar: 5 |

## Research Projects

| Project Title | Role in Project | Partners | Period |
|---|---|---|---|

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|---|---|---|---|
| Architectural survey and conservation and museumization project for the Vale de Milhaços Gunpowder Factory, Corroios | Researcher | ISTAR-Iscte (DLS) - Leader | 2025 - 2027 |
| Nepalese Education in E-health - Master | Researcher | ISTAR-Iscte (SSE) - Leader, BRU-Iscte, CIS-Iscte, UNIVERSITETET I OSLO - (Norway), KATHMANDU UNIVERSITY - (Nepal), POKHARA UNIVERSITY - (Nepal) | 2023 - 2026 |
| University Community Engagement in Technologies for Sustainability: a Social Architecture. | Researcher | ISTAR-Iscte (SSE) - Leader, BRU-Iscte, CIS-Iscte | 2019 - 2021 |

## Academic Management Positions

Membro (2025 - 2028)
Unit/Area: Comissão de Ética

Coordenador do 2º Ano (2025 - 2026)
Unit/Area: Bachelor Degree in Digital Technologies and Health

Membro (Docente) (2021 - 2023)
Unit/Area: Comissão Pedagógica