

# João Pedro Dias

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**Summary** João Pedro Dias has an MSc in INFORMATICS AND COMPUTING ENGINEERING by the FACULTY OF ENGINEERING, UNIVERSITY OF PORTO. He is a Ph.D. student of the DOCTORAL PROGRAM IN INFORMATICS ENGINEERING by the same university since 2017. He is an Invited Assistant Lecturer at FEUP since 2017 and has co-supervised 5 MSc dissertations. Has participated as Researcher in 2 projects at LIACC and INESC TEC (Porto, Portugal). Works in the area of Software Engineering, with a special interest in Design Patterns, Internet-of-Things, and Security with more than 20 papers published and indexed.

## PROFESSIONAL APPOINTMENTS

- <sup>2017</sup> / \_ **Invited Assistant Lecturer**  
Department of Informatics Engineering (DEI), Faculty of Engineering, University of Porto, Porto, Portugal
- <sup>2017</sup> / \_ **Researcher**  
Centre for Information Systems and Computer Graphics (CSIG)  
Institute for Systems and Computer Engineering (INESC TEC), Technology and Science, Porto, Portugal
- <sup>2016</sup> / <sup>2017</sup> **Researcher**  
LIACC – Artificial Intelligence and Computer Science Laboratory  
University of Porto, Porto, Portugal
- <sup>2015</sup> / <sup>2015</sup> **Summer Engineering Intern**  
ShiftForward, S.A. (now Velocidi)  
Porto, Portugal
- <sup>2014</sup> / <sup>2014</sup> **IT Department Internship**  
Centro Hospitalar do Tâmega e Sousa, E.P.E.  
Penafiel, Porto, Portugal

## EDUCATION

- <sup>2016</sup> / \_ **Doctoral Programme in Informatics Engineering – ProDEI (PhD)**, Faculty of Engineering, University of Porto, Porto, Portugal  
Work under Supervision of Hugo Sereno Ferreira, PhD and Co-Supervision of João Pascoal Faria, PhD
- <sup>2011</sup> / <sup>2016</sup> **Integrated Masters in Informatics and Computing Engineering – MIEIC (BSc + MSc)**, Faculty of Engineering, University of Porto, Porto, Portugal  
GPA: 15 out of 20

<sup>2008</sup>/<sub>2011</sub> **Elementary School – Sciences and Technologies**, Externato de Vila Meã, Porto, Portugal  
GPA: 17 out of 20

## TEACHING

### Invited Assistant Lecturer

#### Integrated Master in Informatics and Computing Engineering · FEUP · 5 years

				<sup>17</sup> / <sub>18</sub>	<sup>18</sup> / <sub>19</sub>	<sup>19</sup> / <sub>20</sub>	<sup>20</sup> / <sub>21</sub>
		Year	ECTS	Classes			
Object Oriented Programming Lab	LPOO	2	6	-	1	-	-
Operating Systems	SOPE	2	6	2	1	2	2
Software Engineering	ESOF	3	6	-	-	-	1
Software Development Lab	LDSO	4	7,5	-	1	-	-
Software Systems Architecture	ASSO	4	6	-	1	-	-

## PUBLICATIONS

### Peer-Reviewed Journals

- 2020 ♦ Pedro Lourenço, João Pedro Dias, Ademar Aguiar, Hugo Sereno Ferreira, and André Restivo. “Experimenting with Liveness in Cloud Infrastructure Management”. In: *Communications in Computer and Information Science* 1172 (2020)
- ♦ Diogo Amaral, Gil Domingues, João Pedro Dias, Hugo Sereno Ferreira, Ademar Aguiar, Rui Nóbrega, and Filipe Figueiredo Correia. “Live Software Development Environment using Virtual Reality: a Prototype and Experiment”. In: *Communications in Computer and Information Science* 1172 (2020)
- 2018 ♦ João Pedro Dias, Ângelo Martins, and Hugo Sereno Ferreira. “A Blockchain-based Approach for Access Control in eHealth Scenarios”. In: *Journal of Information Assurance and Security* 13 (4 2018), pp. 125–136

## Peer-Reviewed Conference Proceedings

- 2020 ♦ Margarida Silva, João Pedro Dias, André Restivo, and Hugo Sereno Ferreira. “Visually-defined Real-Time Orchestration of IoT Systems”. In: *Proceedings of the 17th International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services*. MOBIQUITOUS 2020. Online: Association for Computing Machinery, 2020
- ♦ João Pedro Dias, Tiago Boldt Sousa, André Restivo, and Hugo Sereno Ferreira. “A Pattern-Language for Self-Healing Internet-of-Things Systems”. In: *Proceedings of the 25th European Conference on Pattern Languages of Programs*. EuroPLop '20. Irsee, Germany: Association for Computing Machinery, 2020. DOI: [10.1145/3361149.3361165](https://doi.org/10.1145/3361149.3361165)
- ♦ D. Torres, J. P. Dias, A. Restivo, and H. S. Ferreira. “Real-time Feedback in Node-RED for IoT Development: An Empirical Study”. In: *2020 IEEE/ACM 24th International Symposium on Distributed Simulation and Real Time Applications (DS-RT)*. 2020, pp. 1–8. DOI: [10.1109/DS-RT50469.2020.9213544](https://doi.org/10.1109/DS-RT50469.2020.9213544)
- ♦ Bruno Piedade, João Pedro Dias, and Filipe F. Correia. “An Empirical Study on Visual Programming Docker Compose Configurations”. In: *Proceedings of the 23rd ACM/IEEE International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings*. MODELS '20. Virtual Event, Canada: Association for Computing Machinery, 2020. ISBN: 9781450381352. DOI: [10.1145/3417990.3420194](https://doi.org/10.1145/3417990.3420194). URL: <https://doi.org/10.1145/3417990.3420194>
- ♦ João Pedro Dias, Bruno Lima, João Pascoal Faria, André Restivo, and Hugo Sereno Ferreira. “Visual Self-Healing Modelling for Reliable Internet-of-Things Systems”. In: *Proceedings of the 20th International Conference on Computational Science*. Springer, 2020, pp. 27–36. DOI: [10.1007/978-3-030-50426-7\\_27](https://doi.org/10.1007/978-3-030-50426-7_27)
- ♦ João Pedro Dias, André Lago, and Hugo Sereno Ferreira. “Conversational Interface for Managing Non-Trivial Internet-of-Things Systems”. In: *Proceedings of the 20th International Conference on Computational Science*. Springer, 2020, pp. 27–36. DOI: [10.1007/978-3-030-50426-7\\_29](https://doi.org/10.1007/978-3-030-50426-7_29)
- 2019 ♦ João Pedro Dias, Hugo Sereno Ferreira, and Tiago Boldt Sousa. “Testing and Deployment Patterns for the Internet-of-Things”. In: *Proceedings of the 24th European Conference on Pattern Languages of Programs*. EuroPLop '19. Irsee, Germany: Association for Computing Machinery, 2019. ISBN: 9781450362061. DOI: [10.1145/3361149.3361165](https://doi.org/10.1145/3361149.3361165)
- ♦ Ademar Aguiar, André Restivo, Filipe Figueiredo Correia, Hugo Sereno Ferreira, and João Pedro Dias. “Live Software Development: Tightening the Feedback Loops”. In: *Proceedings of the Conference Companion of the 3rd International Conference on Art, Science, and Engineering of Programming*. Programming '19. Genova, Italy: ACM, 2019, 22:1–22:6. ISBN: 978-1-4503-6257-3. DOI: [10.1145/3328433.3328456](https://doi.org/10.1145/3328433.3328456)
- ♦ Pedro Lourenço, João Pedro Dias, Ademar Aguiar, and Hugo Sereno Ferreira. “CloudCity: A Live Environment for the Management of Cloud Infrastructures”. In: *Proceedings of the 14th International Conference on Evaluation of Novel Approaches to Software Engineering - Volume 1: ENASE*. INSTICC. SciTePress, 2019, pp. 27–36. ISBN: 978-989-758-375-9. DOI: [10.5220/0007699700270036](https://doi.org/10.5220/0007699700270036)

- ◆ Diogo Amaral, Gil Domingues, João Pedro Dias, Hugo Sereno Ferreira, Ademar Aguiar, and Rui Nóbrega. “Live Software Development Environment for Java using Virtual Reality”. In: *Proceedings of the 14th International Conference on Evaluation of Novel Approaches to Software Engineering - Volume 1: ENASE*,. INSTICC. SciTePress, 2019, pp. 37–46. ISBN: 978-989-758-375-9. DOI: [10.5220/0007699800370046](https://doi.org/10.5220/0007699800370046)
- 2018 ◆ D. Pinto, João Pedro Dias, and Hugo Sereno Ferreira. “Dynamic Allocation of Serverless Functions in IoT Environments”. In: *2018 IEEE 16th International Conference on Embedded and Ubiquitous Computing (EUC)*. Oct. 2018, pp. 1–8. DOI: [10.1109/EUC.2018.00008](https://doi.org/10.1109/EUC.2018.00008)
- ◆ João Pedro Dias, F. Couto, A. C. R. Paiva, and Hugo Sereno Ferreira. “A Brief Overview of Existing Tools for Testing the Internet-of-Things”. In: *2018 IEEE International Conference on Software Testing, Verification and Validation Workshops (ICSTW)*. Apr. 2018, pp. 104–109. DOI: [10.1109/ICSTW.2018.00035](https://doi.org/10.1109/ICSTW.2018.00035)
- ◆ João Pedro Dias, João Pascoal Faria, and Hugo Sereno Ferreira. “A Reactive and Model-Based Approach for Developing Internet-of-Things Systems”. In: *2018 11th International Conference on the Quality of Information and Communications Technology (QUATIC)*. Sept. 2018, pp. 276–281. DOI: [10.1109/QUATIC.2018.00049](https://doi.org/10.1109/QUATIC.2018.00049)
- ◆ José Pedro Pinto, João Pedro Dias, and R. J. F. Rossetti. “Growing Smart Cities on an Open-Data-Centric Cyber-Physical Platform”. In: *2018 IEEE International Smart Cities Conference (ISC2)*. Sept. 2018, pp. 1–6. DOI: [10.1109/ISC2.2018.8656989](https://doi.org/10.1109/ISC2.2018.8656989)
- ◆ João Pedro Dias, Hugo Sereno Ferreira, and Ângelo Martins. “A Blockchain-Based Scheme for Access Control in e-Health Scenarios”. In: *Proceedings of the Tenth International Conference on Soft Computing and Pattern Recognition (SoCPaR 2018)*. Ed. by Ana Maria Madureira, Ajith Abraham, Niketa Gandhi, Catarina Silva, and Mário Antunes. Cham: Springer International Publishing, 2020, pp. 238–247. ISBN: 978-3-030-17065-3. DOI: [10.1007/978-3-030-17065-3\\_24](https://doi.org/10.1007/978-3-030-17065-3_24)
- ◆ Guilherme Vieira Pinto, João Pedro Dias, and Hugo Sereno Ferreira. “Blockchain-Based PKI for Crowdsourced IoT Sensor Information”. In: *Proceedings of the Tenth International Conference on Soft Computing and Pattern Recognition (SoCPaR 2018)*. Ed. by Ana Maria Madureira, Ajith Abraham, Niketa Gandhi, Catarina Silva, and Mário Antunes. Cham: Springer International Publishing, 2020, pp. 248–257. DOI: [10.1007/978-3-030-17065-3\\_25](https://doi.org/10.1007/978-3-030-17065-3_25)
- 2017 ◆ Antonio Ramadas, Gil Domingues, Joao Pedro Dias, Ademar Aguiar, and Hugo Sereno Ferreira. “Patterns for Things that Fail”. In: *Proceedings of the 24th Conference on Pattern Languages of Programs. PLoP '17*. ACM - Association for Computing Machinery, 2017
- ◆ João Pedro Dias, José Pedro Pinto, and José Magalhães Cruz. “A Hands-on Approach on Botnets for Behavior Exploration”. In: *Proceedings of the 2nd International Conference on Internet of Things, Big Data and Security*. SCITEPRESS - Science and Technology Publications, 2017, pp. 463–469. ISBN: 978-989-758-245-5. DOI: [10.5220/0006392404630469](https://doi.org/10.5220/0006392404630469)

- ◆ Duarte Duarte, Hugo Sereno Ferreira, João Pedro Dias, and Zafeiris Kokkinogenis. “Towards a Framework for Agent-Based Simulation of User Behaviour in E-Commerce Context”. In: *Trends in Cyber-Physical Multi-Agent Systems. The PAAMS Collection - 15th International Conference, PAAMS 2017*. Cham: Springer International Publishing, 2018, pp. 30–38. ISBN: 978-3-319-61578-3. DOI: [10.1007/978-3-319-61578-3\\_3](https://doi.org/10.1007/978-3-319-61578-3_3)
- ◆ Joao Pedro Dias and Hugo Sereno Ferreira. “Automating the Extraction of Static Content and Dynamic Behaviour from e-Commerce Websites”. In: *Procedia Computer Science* 109 (2017). 8th International Conference on Ambient Systems, Networks and Technologies, ANT-2017 and the 7th International Conference on Sustainable Energy Information Technology, SEIT 2017, 16-19 May 2017, Madeira, Portugal, pp. 297–304. ISSN: 1877-0509. DOI: [10.1016/j.procs.2017.05.355](https://doi.org/10.1016/j.procs.2017.05.355)

### Informal Publications & Others

- 2018 ◆ Filipa Barros, Luis Sousa, João Pedro Dias, and Hugo Sereno Ferreira. “A Preliminary Study on Mesh Networks and IoT”. in: *Book of Abstracts of the 11th Meeting of Young Researchers of University of Porto (IJUP 2018)* (2018)
- 2017 ◆ João Pedro Dias and Hugo Sereno Ferreira. “Automating the Extraction of Static Content and Dynamic Behaviour from e-Commerce Websites”. In: *Book of Abstracts of the 10th Meeting of Young Researchers of University of Porto (IJUP 2017)* (2017)
- 2016 ◆ João Pedro Dias, José Pedro Pinto, and José Magalhães Cruz. “A hands-on approach on botnets for a learning purpose”. In: *Book of Abstracts of the 9th Meeting of Young Researchers of University of Porto (IJUP 2016)* (2016)

### Preprints

- 2020 ◆ Andreia Rodrigues, Jose Pedro Silva, João Pedro Dias, and Hugo Sereno Ferreira. “Multi-Approach Debugging of Industrial IoT Workflows”. In: *CoRR* abs/2009.05828 (2020). arXiv: [2009.05828](https://arxiv.org/abs/2009.05828). URL: <https://arxiv.org/abs/2009.05828>
- 2018 ◆ João Pedro Dias and Hugo Sereno Ferreira. “State of the Software Development Life-Cycle for the Internet-of-Things”. In: *CoRR* abs/1811.04159 (2018). arXiv: [1811.04159](https://arxiv.org/abs/1811.04159). URL: <http://arxiv.org/abs/1811.04159>

### Dissertations

- 2016 ◆ João Pedro Dias. “Reverse Engineering Static Content and Dynamic Behaviour of E-Commerce Sites for Fun and Profit”. Master’s Dissertation, Faculty of Engineering, University of Porto, Supervised by Hugo Sereno Ferreira. 2016. URL: <http://hdl.handle.net/10216/85374>

## EDUCATIONAL ACTIVITIES

### Master's Dissertation Co-Supervision

- <sup>2020</sup> / \_ *Self-protection Strategies for Secure IoT Systems* by Miguel Duarte (On-going)  
Supervisor: André Restivo, PhD  
Faculty of Engineering, University of Porto, Porto, Portugal
- <sup>2019</sup> / <sup>2020</sup> *Visual Programming Language for Orchestration with Docker* by Bruno Piedade, Handle: [10216/128974](#)  
Supervisor: Filipe Correia, PhD  
Faculty of Engineering, University of Porto, Porto, Portugal
- <sup>2018</sup> / <sup>2019</sup> *Implementing a Multi-Approach Debugging of Industrial IoT Workflows* by Andreia Rodrigues, Handle: [10216/122773](#)  
Supervisor: Hugo Sereno Ferreira, PhD  
Faculty of Engineering, University of Porto, Porto, Portugal
- <sup>2017</sup> / <sup>2018</sup> *Dynamic Allocation of Serverless Functions in IoT Environments* by Duarte Pinto, Handle: [10216/114149](#)  
Supervisor: Hugo Sereno Ferreira, PhD  
Faculty of Engineering, University of Porto, Porto, Portugal
- Blockchain as a PKI for Ownership Control of IoT Devices* by Guilherme Pinto, Handle: [10216/114144](#)  
Supervisor: Hugo Sereno Ferreira, PhD  
Faculty of Engineering, University of Porto, Porto, Portugal
- <sup>2016</sup> / <sup>2017</sup> *Interoperability In Software Applications For Smart Cities: Towards A Reference Architecture* by José Pedro Pinto, Handle: [10216/107529](#)  
Supervisor: Rosaldo Rossetti, PhD  
Faculty of Engineering, University of Porto, Porto, Portugal

## PROJECTS

- <sup>2017</sup> / <sup>2018</sup> **NanoSTIMA: Macro-to-Nano Human Sensing: Towards Integrated Multimodal Health Monitoring and Analytics**, Researcher at INESC TEC  
Reference NORTE-01-0145-FEDER-000016, [nanostima.inesctec.pt](#)
- <sup>2016</sup> / <sup>2017</sup> **PEDDIR DEMO: Weigth in motion and wheels defect detection (Sistema de Pesagem Dinâmica e Detecção de Irregularidades dos Rodados)**, Researcher at LIACC  
Reference NORTE-01-0247-FEDER-006397, [peddir.eu](#)

## PRESENTATIONS & WORKSHOPS

Slides and abstracts for all presentations are available at [speakerdeck.com/jpdias](#)

- 2020 ♦ João Pedro Dias. “From the Cloud to the Fog and the Mist: A Workshop on the Internet-of-Things (Workshop)”. EU Code Week 2020 Edition by IEEE UP Student Branch (Local Organizer). 2020. URL: <https://codeweek.eu>
- 2019 ♦ João Pedro Dias. “Internet-of-broken-Things: A highly-opinionated overview”. 0xOPOSEC Meetup. 2019. URL: <https://www.meetup.com/0xOPOSEC/>
- ♦ João Pedro Dias. “Unravelling the Web of Things: Exploring Mozilla Things Framework (Workshop)”. Pixels Camp v3.0 by Bright Pixel. 2017. URL: <https://pixels.camp>
- 2017 ♦ João Pedro Dias. “PiHeadquarters or How to Take Control of your House with Raspberry Pi and Docker (Workshop)”. Pixels Camp v2.0 by Bright Pixel. 2019. URL: <https://pixels.camp>
- 2016 ♦ João Pedro Dias and José Pedro Pinto. “A hands-on approach on botnets for a learning purpose”. 0xOPOSEC Meetup. 2016. URL: <https://www.meetup.com/0xOPOSEC/>
- 2015 ♦ João Pedro Dias and José Pedro Pinto. “How To Create Your First Personal Webpage”. ShARE World Seminar 2015 – “Europe vs. Asia: Grass Is Always Greener On The Other Side”. 2015. URL: <http://www.share-share.org/world-seminar/>

## ACADEMIC SERVICE & AFFILIATIONS

### Reviewer

- 2<sup>nd</sup> International Conference on Artificial Intelligence, Information Processing and Cloud Computing (AIIPCC 2021), 1 Full Paper
- 4<sup>th</sup> International Conference on Computer Science and Application Engineering (CSAE 2020), 1 Full Paper
- IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (IEEE PIMRC 2019), 1 Full Paper
- IEEE Intelligent Vehicles Symposium (IEEE IV 2017), 1 Full Paper
- IEEE Summer School on Smart Cities (IEEE S3C 2017), 2 Full Papers, 1 Short Paper
- IEEE 20<sup>th</sup> International Conference on Intelligent Transportation Systems (IEEE ITSC 2017), 2 Full Papers

### Committees

- 2019 **Track Co-Chair**, Symposium on Informatics Engineering, part of the 3<sup>rd</sup> Doctoral Congress Engineering (DCE19)

**Program Committee Member**, Talk a Bit – Student Organized Tech Conference, 7<sup>th</sup> Edition (2019)

- 2018 **Makerspace Chair**, 19<sup>th</sup> International Conference on Agile Software Development (XP 2018)

**Conference Organization Chair**, 13<sup>th</sup> Doctoral Symposium in Informatics Engineering (DSIE'18)

**Advisor Board Member**, Talk a Bit – Student Organized Tech Conference, 6<sup>th</sup> Edition (2018)

2017 **Program Committee Member**, 2017 IEEE 1<sup>st</sup> Summer School on Smart Cities (IEEE S3C 2017)

**Web Communication Co-chair**, The Second ACM International Workshop on Smart, Autonomous, and Connected Vehicular Systems and Services (ACM CarSys 2017), part of the The 23<sup>rd</sup> Annual International Conference on Mobile Computing and Networking (MobiCom 2017)

**Advisor Board Member**, Talk a Bit – Student Organized Tech Conference, 5<sup>th</sup> Edition (2017)

2016 **Conference Chair**, Talk a Bit – Student Organized Tech Conference, 4<sup>th</sup> Edition (2016)

**Web Communication Co-chair**, 2016 IEEE 19<sup>th</sup> International Conference on Intelligent Transportation Systems (ITSC 2016)

### Volunteer Activities

2017 **Student Volunteer (Media Coverage)**, 18<sup>th</sup> EPIA Conference on Artificial Intelligence (EPIA 2017)

Porto, Portugal

2014 **Student Volunteer**, Inter-University Programming Marathon (MIUP 2014)

Porto, Portugal

**Student Volunteer**, INForum - Symposium on Informatics (INForum 2014)

Porto, Portugal

### Affiliations

2019 / 2020 **Association for Computing Machinery (ACM)**, Student Membership.

2017 / – **Institute for Systems and Technologies of Information, Control and Communication (INSTICC)**.

2013 / 2018 **Institute of Electrical and Electronics Engineers (IEEE)**, Student Membership as part of the University of Porto Student Branch (IEEE UP SB).

## GRANTS, HONORS & AWARDS

### Grants

2019 / 2021 **PhD Scholarship**, by FCT – Fundação para a Ciência e a Tecnologia (Portuguese Foundation for Science and Technology)  
Reference SFRH/BD/144612/2019

### International Honors & Awards

2017 **427<sup>th</sup> (of 3350)**, IEEEExtreme – 24h Programming Competition 11.0, [ieeex.org/xtreme](http://ieeex.org/xtreme)  
Online – Porto, Portugal



- 847<sup>th</sup> (of 2815)**, Google Hash Code 2017, [hashcode.withgoogle.com](https://hashcode.withgoogle.com)  
Online – Porto, Portugal
- 2015 **189<sup>th</sup> (of 2477)**, IEEEExtreme – 24h Programming Competition 9.0, [ieee.org/xtreme](https://ieee.org/xtreme)  
Online – Porto, Portugal
- 2014 **Honorable Mention**, IEEEEmadC – Mobile Application Development Contest, [ieeemadc.org](https://ieeemadc.org)  
Online – Porto, Portugal
- 2013 **126<sup>th</sup> (of 2570)**, IEEEExtreme – 24h Programming Competition 7.0, [ieee.org/xtreme](https://ieee.org/xtreme)  
Online – Porto, Portugal
- 2<sup>nd</sup> Place**, European BEST Engineering Competition, [ebec.best.eu.org](https://ebec.best.eu.org)  
Warsaw, Poland

### Domestic Honors & Awards

- 2020 **6<sup>th</sup> (of 51 Teams)**, CIBER PERSEU 2018 Portuguese Army Exercise – Capture The Flag component by [iHackLabs](https://ihacklabs.com), [exercito.pt](https://exercito.pt)  
Online (Portugal)
- 9<sup>th</sup> (of 209 Teams)**, Portuguese Stage of the 2020 MetaRed CTF Championship by RCTS-FCCN (FCT Portugal) and Metared, [cert.rcts.pt](https://cert.rcts.pt)  
Online (Portugal)
- 3<sup>th</sup> (of 6 Teams)**, Capture The Flag by BSidesPorto, [bsidesporto.com](https://bsidesporto.com)  
Online (Portugal)
- 2018 **6<sup>th</sup> (of 31 Participants)**, CIBER PERSEU 2018 Portuguese Army Exercise – Capture The Flag component by [diateam](https://diateam.com), [exercito.pt](https://exercito.pt)  
Portuguese Military Academy, Lisbon, Portugal
- 2011 **1<sup>st</sup> Place**, PmatE Mat12 – Mathematics Competition, [pmate.ua.pt](https://pmate.ua.pt)  
University of Aveiro, Portugal
- 2009 **2<sup>nd</sup> Place**, PmatE Fis12 – Physics Competition, [pmate.ua.pt](https://pmate.ua.pt)  
University of Aveiro, Portugal

### ADDITIONAL TRAINING

- 2020 **Introduction to Reverse Engineering with Ghidra** by Matthew Alt of Voidstar Security, 4-hours training, Hackaday-U (Online)
- Autopsy Basics and Hands On** by Brian Carrier, 8-hours training, Basis Technology Corp. (Online)
- Practical Ethical Hacking - The Complete Course** by Heath Adams, 24.5-hours training, TCM Security, Inc., Udemy (Online)
- Python for Penetration Testers** by Cristi Zot, 2-hours training, Udemy (Online)

- 2018 **1<sup>st</sup> UPTEC School on the Future of Computing**, 1-week training, UPTEC – Science and Technology Park of University of Porto
- 2017 **CyberTalk: Security - Business Enablement**, 4-hours training, Multicert – Electronic Certification Services, S.A.
- Project Management**, 12-hours training, ERASMUS+ Mobility for teaching at Faculty of Engineering, University of Porto
- 2016 **AWS Technical Essentials Online**, 1-day training, Amazon Web Services – Training and Certification
- 2015 **Practical Workshop in Agile Project Management**, 4-hours training, Strongstep - Innovation in Software Quality
- CERN Spring Campus**, 1-week training, CERN - European Organization for Nuclear Research
- 2014 **M101JS: MongoDB for Node.js Developers**, 25-hours training, MongoDB University (Online)

## PROTOTYPES

The prototypes are released under open-source licences, most of them being available through my Github profile: [github.com/jpdias](https://github.com/jpdias).

- 2019 / \_ **Self-Healing Extensions for Node-RED**, [github.com/jpdias/node-red-contrib-self-healing](https://github.com/jpdias/node-red-contrib-self-healing)  
A collection of nodes for Node-RED to build more resilient IoT systems by adding self-healing capabilities.
- 2016 / 2017 **Botnet-Lab**, [github.com/jpdias/botnet-lab](https://github.com/jpdias/botnet-lab)  
An IRC based tool for testing the capabilities of a botnet written in Python 2.7.
- 2016 / 2016 **Portfolio-Photo**, [github.com/jpdias/portfolio-photo](https://github.com/jpdias/portfolio-photo)  
An YAML and Jekyll (Ruby) dynamically generated photography portfolio using the Flickr API.
- 2015 / 2015 **Deploy Logger Service (Codename Malamute)**, [github.com/ShiftForward/malamute](https://github.com/ShiftForward/malamute)  
Application and integration API built for documenting and record the release of new versions of projects (deploys) and its modules. Developed during the summer internship at ShiftForward (now Velocidi).
- 2014 / 2015 **Turing Machine**, [github.com/jpdias/TuringMachine](https://github.com/jpdias/TuringMachine)  
A web-based Turing Machine with a pre-defined language, compiler and execution capabilities.

## PRO-BONO AND OTHER ACTIVITIES

### Academic

<sup>2013</sup>/<sub>2015</sub> **Executive Committee Member (Secretary)**, IEEE University of Porto Student Branch  
Organization of several technical workshops and other events including *IEEE Day*, *IEEE Xtreme* and *IEEE madC*.

### Humanitarian

<sup>2013</sup>/<sub>2015</sub> **Founder Member**, *Luz da Vida* Youth Group  
Organization of activities on behalf of the village community.

### Hobbies

<sup>2016</sup>/<sub>2017</sub> **Football Player**, Grupo Desportivo e Recreativo de Travanca  
F.A.D.A. Amateur League, Amarante, Porto, Portugal

<sup>2008</sup>/<sub>-</sub> **Amateur Photographer** – Wildlife, Landscapes and Travel

- *Winner of the quest Landscapes from Above*, promoted by 500px, [500px.com/quests/1000000106](https://500px.com/quests/1000000106), 2020
- *One of the 50 best pictures of #MySocialEurope photo competition - How should the Future of social Europe look like?*, promoted by the European Commission, 2019
- *Finalist at the Norte Multimédia Contest - Photography Category*, promoted by the Norte Portugal Regional Coordination and Development Commission (CCDR-N), exposed at Trindade Metro Station (Porto), 2018
- *Finalist at the PORTUGAL NUM ISQUEIRO BIC® Contest*, promoted by the I Love My BIC initiative by BIC Portugal, 2018
- *Exposition at Movimento d'Artes*, promoted by the Cooperativa Cultural Vinha das Artes, 2010

## LANGUAGES

Portuguese      Native

English          B Level (Self-Evaluation)