João Pedro Dias

Engineer. Developer. Researcher. Amateur photographer.

Porto, Portugal

✉ jpmdias@fe.up.pt | ⌂ jpdias.me | ⬡ jpdias | 🔗 joaopdias | 🐦 jpd1as | 🅢 jpdias

Summary

Current Researcher at INESC TEC and pursuing a PhD degree in Informatics Engineering. Graduated from the Integrated Masters in Informatics and Computing Engineering, I'm passionate about technology, with a special focus on security and privacy, web development, data mining & Internet of Things. Besides that, I'm also an amateur photographer, football player, book lover and science addict.
ORCiD: 0000-0001-9066-6436

Education

Doctoral Program in Informatics Engineering – ProDEI (PhD)
FACULTY OF ENGINEERING OF THE UNIVERSITY OF PORTO (FEUP)

Porto, Portugal
2016–Exp. 2020

- Work under Supervision of Hugo Sereno Ferreira, PhD and Co-Supervision of João Pascoal Faria, PhD

Master in Informatics and Computing Engineering – MIEIC (MSc)
FACULTY OF ENGINEERING OF THE UNIVERSITY OF PORTO (FEUP)

Porto, Portugal
2011–2016

- GPA: 15 out of 20
- Volunteer at *Semana Profissão: Engenheiro (SPE) 2014 & 2016*

Sciences and Technologies
EXTERNATO DE VILA MEÃ

Amarante, Porto, Portugal
2008–2011

- GPA: 17 out of 20

Work Experience

Faculty of Engineering of the University of Porto
INVITED ASSISTANT PROFESSOR

Campus FEUP, Porto, Portugal
Fev. 2017 – Today

- Teaching practical lectures of Operating Systems and Software Development Laboratories.

INESC TEC – Institute for Systems and Computer Engineering, Technology and Science | CSIG – Centre for Information Systems and Computer Graphics
RESEARCHER

Campus FEUP, Porto, Portugal
May 2017 – Today

- Researching in the area of Internet of Things, with special focus on Blockchain and Healthcare applications, in the scope of the project NanoSTIMA: *Macro-to-Nano Human Sensing: Towards Integrated Multimodal Health Monitoring and Analytics*.
- Project details: *nanostima.inesctec.pt*

LIACC – Artificial Intelligence and Computer Science Laboratory
RESEARCHER

University of Porto, Porto, Portugal
Sept. 2016 – Apr. 2017

- Researching data representation and data mining applications on railway transportation systems in the scope of the project PEDDIR: *Weigth in Motion and Wheels Defect Detection*.
- Technologies: `MongoDB`, `Python` and `Web Development` | Project details: *www.peddir.eu* & *www.in2rail.eu*

ShiftForward, S.A.
SUMMER ENGINEERING INTERN

Porto, Portugal
Jul. 2015 – Aug. 2015

- Development of a Deploy Logger Service, a service for documenting and recording the release of new product versions over time.
- Technologies: `Scala` and `Backbone.js` | Project details: *shiftforward.github.io/malamute*

Centro Hospitalar do Tâmega e Sousa, E.P.E.
IT DEPARTMENT INTERNSHIP

Penafiel, Porto, Portugal
Jul. 2014 – Aug. 2014

- Development of an expedient management system for replacing the existent system based on paper archives.
- Technologies: `MySQL` and `PHP`

Teaching

INTEGRATED MASTER IN INFORMATICS AND COMPUTING ENGINEERING · FEUP · 5 YEARS

2018 - 2019 *Invited Assistant Professor*, **Software Development Laboratory** · 4th year (First Semester)
– 3 hours *per* week

2018 - 2019 *Invited Assistant Professor*, **Operating Systems** · 2nd year (Second Semester)
– 4 hours *per* week

2017 - 2018 *Invited Assistant Professor*, **Operating Systems** · 2nd year (Second Semester)
– 4 hours *per* week · 2 classes · 45 students

Publications

CONFERENCE ARTICLES (PEER-REVIEWED)

DYNAMIC ALLOCATION OF SERVERLESS FUNCTIONS IN IoT ENVIRONMENTS *Bucharest, Romania*

DUARTE PINTO, JOÃO PEDRO DIAS, HUGO SERENO FERREIRA *2018*

16th IEEE International Conference on Embedded and Ubiquitous Computing { DOI: To Appear }

A REACTIVE AND MODEL-BASED APPROACH FOR DEVELOPING INTERNET-OF-THINGS SYSTEMS *Coimbra, Portugal*

JOÃO PEDRO DIAS, JOÃO PASCOAL FARIA and HUGO SERENO FERREIRA *2018*

7th Software Engineering Doctoral Symposium (SEDES 2018) – Part of the 11th International Conference on the Quality of Information and Communications Technology (QUATIC'2018) { DOI: 10.1109/QUATIC.2018.00049 }

A BRIEF OVERVIEW OF EXISTING TOOLS FOR TESTING THE INTERNET-OF-THINGS *Västerås, Sweden*

JOÃO PEDRO DIAS, FLÁVIO COUTO, ANA C.R. PAIVA, HUGO SERENO FERREIRA *2018*

First International Workshop on Verification and Validation of Internet of Things (VVIoT 2018) – Part of the 11th IEEE Conference on Software Testing, Validation and Verification (ICST 2018) { DOI: 10.1109/ICSTW.2018.00035 }

PATTERNS FOR THINGS THAT FAIL *Vancouver, Canada*

ANTÓNIO RAMADAS, GIL DOMINGUES, JOÃO PEDRO DIAS, ADEMAR AGUIAR, HUGO SERENO FERREIRA *2017*

24th Conference on Pattern Languages of Programs (PLoP 2017) { DOI: To Appear }

TOWARDS A FRAMEWORK FOR AGENT-BASED SIMULATION OF USER BEHAVIOUR IN E-COMMERCE CONTEXT *Porto, Portugal*

DUARTE DUARTE, JOÃO PEDRO DIAS, HUGO SERENO FERREIRA and ZAF. KOKKINOGENIS *2017*

15th International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS'17) { DOI: 10.1007/978-3-319-61578-3_3 }

AUTOMATING THE EXTRACTION OF STATIC CONTENT AND DYNAMIC BEHAVIOUR FROM E-COMMERCE WEBSITES *Madeira, Portugal*

JOÃO PEDRO DIAS and HUGO SERENO FERREIRA *2017*

8th International Conference on Ambient Systems, Networks and Technologies (ANT'17) { DOI: 10.1016/j.procs.2017.05.355 }

A HANDS-ON APPROACH ON BOTNETS FOR BEHAVIOR EXPLORATION *Porto, Portugal*

JOÃO PEDRO DIAS, JOSÉ PEDRO PINTO and JOSÉ MAGALHÃES CRUZ *2017*

2nd International Conference on Internet of Things, Big Data and Security (IoTBDS 2017) { DOI: 10.5220/0006392404630469 }

INFORMAL PUBLICATIONS & OTHERS

A PRELIMINARY STUDY ON MESH NETWORKS AND IoT *Porto, Portugal*

FILIPA BARROS, LUIS SOUSA, JOÃO PEDRO DIAS and HUGO SERENO FERREIRA *2018*

11th Meeting of Young Researchers of University of Porto (IJUP 2018)

AUTOMATING THE EXTRACTION OF STATIC CONTENT AND DYNAMIC BEHAVIOUR FROM E-COMMERCE WEBSITES *Porto, Portugal*

JOÃO PEDRO DIAS and HUGO SERENO FERREIRA *2017*

10th Meeting of Young Researchers of University of Porto (IJUP 2017)

A HANDS-ON APPROACH ON BOTNETS FOR A LEARNING PURPOSE *Porto, Portugal*

JOÃO PEDRO DIAS, JOSÉ PEDRO PINTO and JOSÉ MAGALHÃES CRUZ *2016*

9th Meeting of Young Researchers of University of Porto (IJUP 2016)

DISSERTATIONS

REVERSE ENGINEERING STATIC CONTENT AND DYNAMIC BEHAVIOUR OF E-COMMERCE SITES FOR FUN AND PROFIT

Porto, Portugal

SUPERVISED BY HUGO SERENO FERREIRA | GRADE OF 17 OUT OF 20.

2016

Master's Dissertation, Faculty of Engineering, University of Porto { ID: 10216/85374 }

Educational & Scientific Activities

MASTER'S DISSERTATION CO-SUPERVISING

2017 – 2018 **DYNAMIC ALLOCATION OF SERVERLESS FUNCTIONS IN IoT ENVIRONMENTS by Duarte Pinto, Supervised by Hugo Sereno Ferreira, PhD,** Masters in Informatics and Computing Engineering, Faculty of Engineering, University of Porto { ID: 10216/114149 }

Porto, Portugal

2017 – 2018 **BLOCKCHAIN AS A PKI FOR OWNERSHIP CONTROL OF IoT DEVICES by Guilherme Pinto, Supervised by Hugo Sereno Ferreira, PhD,** Masters in Informatics and Computing Engineering, Faculty of Engineering, University of Porto { ID: 10216/114144 }

Porto, Portugal

2016 – 2017 **INTEROPERABILITY IN SOFTWARE APPLICATIONS FOR SMART CITIES: TOWARDS A REFERENCE ARCHITECTURE by José Pedro Pinto, Supervised by Rosaldo Rossetti, PhD,** Masters in Informatics and Computing Engineering, Faculty of Engineering, University of Porto { ID: 10216/107529 }

Porto, Portugal

PROGRAM COMMITTEES & REVIEWS

2017 **PC Member**, IEEE S3C 2017 - 2017 IEEE Summer School on Smart Cities

Natal, Brazil

2017 **IEEE Intelligent Vehicles Symposium (IEEE IV'17)**, Reviewer

California, USA

2017 **IEEE 20th International Conference on Intelligent Transportation Systems (IEEE ITSC 2017)**, Reviewer

Yokohama, Japan

Conference Organization

2018 **Student Volunteer**, XP 2018 – 19th International Conference on Agile Software Development

Porto, Portugal

2018 **Conference Organization Chair**, DSIE'18 – 13th Doctoral Symposium in Informatics Engineering

Porto, Portugal

2018 **Advisor Board Member**, Talk a Bit – Technology Conference, 6th Edition (2018)

Porto, Portugal

2017 **Student Volunteer (Media Coverage)**, EPIA 2017 – 18th EPIA Conference on Artificial Intelligence

Porto, Portugal

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

Utah, USA

2017 **Advisor Board Member**, Talk a Bit – Technology Conference, 5th Edition (2017)

Porto, Portugal

2016 **Conference Chair**, Talk a Bit – Technology Conference, 4th Edition (2016)

Porto, Portugal

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

Rio de Janeiro, Brazil

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

Porto, Portugal

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

Porto, Portugal

Invited Talks & Workshops

Information Systems and Software Engineering Seminars (SESI & SES)

Lisboa, Portugal

HOSTED AT FACULTY OF ENGINEERING, UNIVERSITY OF PORTO FOR STUDENTS OF THE MIEIC & MESW DEGREES

Sept. 2017

• **Seminar**: *How to Kill Your Privacy and IoT Your Home Along the Way.*

Pixels Camp 2017

Lisboa, Portugal

HOSTED BY BRIGHT PIXEL AND BETA-I

Sept. 2017

• **Workshop**: *PiHeadquarters or How to Take Control of your House with Raspberry Pi and Docker.*

OPOSEC *Meetup*: [0x33] – The Meet   *Porto, Portugal*

Hosted by Blip.pt   *Apr. 2016*

- **Presentation**: *A hands-on approach on botnets for a learning purpose*.

ShARE World Seminar 2015 – "Europe vs. Asia: Grass Is Always Greener On The Other Side"   *FEUP, Porto, Portugal*

Hosted by ShARE Global Student Think Tank   *March 2015*

- **Workshop**: *How To Create Your First Personal Webpage*.

Additional Training

2018	**1st UPTEC School on the Future of Computing**, UPTEC – Science and Technology Park of University of Porto	*FBAUP, Porto, Portugal*
2017	**CyberTalk: Security - Business Enablement**, Multicert – Electronic Certification Services, S.A.	*FEUP, Porto, Portugal*
2017	**Project Management**, ERASMUS+ Mobility for teaching	*FEUP, Porto, Portugal*
2016	**AWS Technical Essentials Online**, Amazon Web Services – Training and Certification	*Online*
2015	**Practical Workshop in Agile Project Management**, Strongstep - Innovation in Software Quality	*UPTEC, Porto, Portugal*
2015	**CERN Spring Campus**, CERN - European Organization for Nuclear Research	*Lisbon, Portugal*
2014	**M101JS: MongoDB for Node.js Developers**, MongoDB University	*Online*

Skills & Languages

Programming	Python • Node.JS • C/C++ • Scala • Java • C# • PHP
Web Technologies	HTML5 • CSS • JavaScript • Laravel(PHP) • Flask(Python) • Bootstrap(CSS) • jQuery(JS)
Databases	MySQL • PostgreSQL • InfluxDB • MongoDB
Others	Arduino • Git • Android • Windows Apps • Docker •LaTeX
Languages	Portuguese (Mother-tongue) • English

Pro Bono Activity

Academic

IEEE University of Porto Student Branch   *Porto, Portugal*

Student Member   *2012 – Today*

Executive Committee (Secretary)   *2013 – 2015*

- As a voluntary member I had organized and co-organized some workshops (*C#*, *Photography*, *LaTeX*, *Web Development*) and other events including *IEEE Day*, *IEEEXtreme* and *IEEEmadC*.
- As secretary I was also responsable for mantain the minutes of all meetings and other paperwork.

Humanitarian

***Luz da Vida* Youth Group**   *Amarante, Porto, Portugal*

Founder Member   *2009 – 2011*

- Founder and former active member, I had taken part of large number of activities on behalf of the village community.

Honors & Awards

International

2018	**427th (of 3350)**, IEEEXtreme – 24h Programming Competition 11.0, *ieee.org/xtreme*	*Online – Porto, Portugal*
2017	**847th (of 2815)**, Google Hash Code 2017, *hashcode.withgoogle.com*	*Online – Porto, Portugal*
2015	**189th (of 2477)**, IEEEXtreme – 24h Programming Competition 9.0, *ieee.org/xtreme*	*Online – Porto, Portugal*
2014	**Honorable Mention**, IEEEmadC – Mobile Application Dev. Contest, *ieeemadc.org*	*Online – Porto, Portugal*
2013	**126th (of 2570)**, IEEEXtreme – 24h Programming Competition 7.0, *ieee.org/xtreme*	*Online – Porto, Portugal*
2013	**2nd Place**, European BEST Engineering Competition, *ebec.best.eu.org*	*Warsaw, Poland*

Domestic

2011 **1st Place**, PmatE Mat12 – Mathematics Competition, *pmate.ua.pt*   *University of Aveiro, Portugal*
2009 **2nd Place**, PmatE Fis12 – Physics Competition, *pmate.ua.pt*   *University of Aveiro, Portugal*

Interests & Hobbies

Football Player   *F.A.D.A. Amateur League*
Grupo Desportivo e Recreativo de Travanca   *2016 – 2017*

Amateur Photographer
Nature, Landscape, Urban Exploration, Events   *2008 – Today*

- 2010 - Exposition at Movimento d'Artes, Travanca, Amarante, Portugal
  Promoted by the Cooperativa Cultural Vinha das Artes
- 2018 - Finalist at the Norte Multimédia Contest - Photography Category
  Promoted by the Norte Portugal Regional Coordination and Development Commission (CCDR-N)
- 2018 - Finalist at the PORTUGAL NUM ISQUEIRO BIC® Contest
  Promoted by the I Love My BIC initiative by BIC Portugal