

Europass Curriculum Vitae

Personal information

Surname(s) / First name(s)

Address(es)

Telephone(s)

Email(s)

Homepage

Nationality(-ies)

Date of birth

Gender

Abrantes, Filipe

Rua Fernão Magalhães 25, 4400-629 Vila Nova de Gaia, Portugal

(+351)917786474

filipe.abrantes@gmail.com

<http://abrantix.org/>

Portugal

9th June 1981

Male

Occupational field

Android Developer, Telecommunications Engineer

Work experience

Dates

Feb 2011 - Current

Occupation or position held

Founder

Main activities and responsibilities

Game and application development for Android and iOS. Coordination between the technical and art teams. Was in charge of the release of Return Zero, a 3d tunnel racer for Android and Parashoot, an action game for Android and iOS developed with Unity 3D, a cross-platform game engine.

Name and address of employer

We came from Mars

Type of business or sector

Mobile application development

Dates

Sept 2010 - Current

Occupation or position held

Freelance Android developer

Main activities and responsibilities

Developed parts of the Androidify and Photowall Live Wallpaper apps.

Name and address of employer

Larva Labs LLC

Type of business or sector

Mobile application development

Dates

June 2008 - Jan 2011

Occupation or position held

Researcher

Main activities and responsibilities

Develop and coordinate research and development activities in the areas of Autonomous Computing and Mobile Applications.

Name and address of employer

Fraunhofer Portugal (AICOS)

Type of business or sector

R&D

Dates

Oct. 2004 - May 2008

Occupation or position held

Junior Researcher

Main activities and responsibilities

Developed research and development activities in IST EU projects and internal projects. He was also responsible for the supervision of *Licenciatura* and Master Students.

Name and address of employer

INESC Porto

Type of business or sector

R&D

Dates

Fall 2005

Occupation or position held

Assistant Professor

Main activities and responsibilities

Name and address of employer
Type of business or sector

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer
Type of business or sector

Taught laboratory classes of Data Communications and Computer Networks in the courses of Electrical and Computer Engineering and Informatics Engineering. Occasionally, he also teaches laboratory courses of Mobile Communications on the topic of Ad-Hoc routing.

Faculty of Engineering of University of Porto (FEUP)
Education

Feb. 2004 - July 2004

Internship

Development of the final project of the *Licenciatura* degree. Classification of 19 out of 20.

INESC Porto

Telecommunications and Multimedia R&D

Education and training

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Name and type of organization providing education and training

Level in national or international classification

Oct. 2004 - July 2009

PhD in Electrical and Computer Engineering.

Thesis Title: *Explicit Congestion Control Algorithms for Time-Varying Capacity Media*.

Faculdade de Engenharia da Universidade do Porto.

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Name and type of organization providing education and training

Level in national or international classification

Sep. 1999 - July 2004

Licenciatura in Electrical and Computer Engineering.

Telecommunications specialty.

Faculdade de Engenharia da Universidade do Porto.

16.2 out of 20

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Name and type of organization providing education and training

Level in national or international classification

July 1999

High School graduation.

Specifics in Math and Physics.

Escola Secundária António Sérgio.

17.3 out of 20

Personal skills and competences

Mother tongue(s)

Other language(s)

*Self-assessment
European level^(*)*

English

Spanish

Portuguese

English, French, Spanish, Italian

Understanding		Speaking		Writing	
Listening	Reading	Spoken interaction	Spoken production		
C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user	C1 Proficient user
B1 Independent user	B2 Independent user	B1 Independent user	B1 Independent user	B1 Independent user	B1 Independent user

**French
Italian**

A2 Basic user	A2 Basic user	A2 Basic user	A2 Basic user	A2 Basic user
A1 Basic user	A2 Basic user	A1 Basic user	A1 Basic user	A1 Basic user

^(*) Common European Framework of Reference (CEF) level

Organisational skills and
competences

Was involved in the organization of the 1st Meeting of Young Researchers of the University of Porto.

Technical skills and
competences

Excellent knowledge of the Android platform at the application level. Extensive experience in managing Activity and Service lifecycles, Intents and custom drawing both with Canvas and OpenGL ES. Familiar with the impact that Garbage Collection and several other Android-specific issues have on the overall user experience. Fairly experienced with the Unity 3D game engine.

Excellent knowledge of IP technology from the Medium Access layer up, with emphasis on the topics of congestion control and traffic engineering, and on transport, mobile routing and medium access protocols. Good technical writing skills. Good simulation and modeling skills. Ability to conduct independent self-motivated work as well as to participate in large-scale projects with multiple partners. Comfortable at giving public presentations. Familiar with the following transmission technologies: IEEE 802.11abg, IEEE 802.3, IEEE 802.16, Bluetooth, and also familiar with most network protocols such as MPLS, IPv4/6, IPsec, PPTP/PPP, OSPF, OLSR, AODV, SIP, HIP and with most existing transport protocols (TCP, UDP, DCCP, SCTP, ...) and service protocols (HTTP, DNS, DHCP, LDAP, UPnP, ...).

Computer skills and
competences

Broad experience with C/C++ at both kernel and high level programming. 2 years of active Java development using Android APIs. Advanced user of Linux OS, Windows OS, MAC OSX and familiar with UNIX systems such as FreeBSD. Familiar also with the software development cycle and with collaborative development tools. Experienced in embedded software development. Decent knowledge of the following languages: Perl, TCL, bash scripting, C# and .NET framework, PHP, HTML, SQL, Javascript, web APIs (Google Maps, GeoIP, ...). Knowledge of the following application software: Network Simulator 2, MATLAB/Simulink, Mathematica, Apache (HTTP), Bind (DNS), Squid, OpenLDAP, DHCP, MySQL/Postgres, Samba, Qmail, Latex, OpenOffice, Microsoft Office, Google Docs.

Driving licence(s)

B-Category license valid until 2046.

Additional information

References: Manuel Ricardo and José Ruela from INESC Porto.

Publications

Filipe Abrantes, João Taveira Araújo, and Manuel Ricardo.
Explicit Congestion Control Algorithms for Time-Varying Capacity Media.
to appear (IEEE Transactions on Mobile Computing), 2010

Filipe Abrantes, João Taveira Araújo, and Manuel Ricardo.
Flash Crowd Effect in RCP.
6th International Workshop on Protocols for FAST Long-Distance Networks (PFLD-Net), March 2008

Filipe Abrantes and Manuel Ricardo.
A Simulation Study of XCP-b Performance in Wireless Multi-Hop Networks.
3rd ACM Workshop on Quality of Service and Security for Wireless Networks (Q2SWinet), October 2007

Filipe Abrantes and Manuel Ricardo.
XCP for Shared-Access Multi-Rate Media.
ACM SIGCOMM Computer Communication Review, July 2006

Filipe Abrantes and Manuel Ricardo.
On Congestion Control for Interactive Applications in Dynamic Heterogeneous 4G Networks.
16th IEEE International Symposium on Personal, Indoor, and Mobile Radio communications (PIMRC), September 2005

Personal interests

I enjoy traveling as much as possible; playing soccer, cycling and photography preferred hobbies. Occasionally I also play the Wii – I have been making steady progress in Guitar/Band Hero drumming.

Annexes

Projects

Name	³ (2010/11) - http://abrantix.org/3.php
Work Description	³ is his current Android project. It is an experimental app that takes Rock'on's idea of exploring different different browsing methods for one's music library a little further. ³ has currently (June 2011) over 700k downloads, over 150k active installs and approximately 100k sessions per day. ³ is free and open source. ³ helped him develop knowledge in OpenGL ES, as well as a deep understanding of Android internals.
Name	Parashoot (2011) - http://parashoot.wecamefrommars.com
Work Description	Parashoot is a remake of the popular '81 and '84 classics, Sabotage and Paratroopers. It has just been released on the Android Market and will soon be released in the Appstore as well. Parashoot introduced him to the Unity 3D engine as well as other 3D graphics advanced topics.
Name	Return Zero (2011) - http://returnzero.wecamefrommars.com
Work Description	Return Zero is a beautiful 3D tunnel racer developed exclusively for Android. It has sold over 3k copies and the free version has been downloaded more than 200k time in just 3 months. Return Zero allowed him to master the OpenGL framework in Android.
Name	Androidify (2010/11) - http://www.androidify.com
Work Description	While working as a feelancer for Larva Labs he got the chance to participate in the development of Androidify, a joint project with Google Creative Labs. The app was released with a massive success reaching 1M downloads in just a couple of days. Androidify helped him gain experience handling vector graphics in Android.
Name	Photowall Live Wallpaper (2010/11) - https://market.android.com/details?id=com.larvalabs.photowall
Work Description	As a freelancer working for Larva Labs he also participated in the development of Photowall, a Live Wallpaper that arranges photos from Facebook, Picasa and the user gallery dynamically on the user's home. The app has more than 500k downloads and was featured on the Android Market. This project helped him get a better understanding of Android Live Wallpapers as well as 2D canvas drawing.
Name	Mover (2009) - http://mover.projects.fraunhofer.pt
Work Description	He was part of the team that developed Mover, a accelerometer-based activity monitoring and fall-detection application for Android phones. It was submitted to the Android Developer Challenge 2 and ranked 5th in the Lifestyle category.
Name	Rock'on Music Player for Android (2009) - http://abrantix.org/rockon.php
Work Description	His first public Android application. It explored an alternative browsing method for music libraries based on album art. The application was free and open source but it has since been discontinued.
Name	Explicit Congestion Control Algorithms for Capacity Varying Media (2005-2008)

Work Description	This is the research topic of his PhD thesis. During this project he has developed excellent network simulation skills, and system modeling abilities. He also developed his knowledge in the field of control theory. Finally, it helped him understand the process required to conduct successful research.
Name	Integration of XCP and IPsec (2007-current)
Work Description	This project involved modifications to the FreeBSD kernel so that XCP could be used with IPsec. He was responsible for the supervision of the project in which 2 Masters students have participated.
Name	WiMetroNet (2006-2008)
Work Description	WiMetroNet is an internal project of INESC Porto which objective is to develop a networking architecture for mobile metropolitan networks (i.e. to be used by Public Transportation Services). In this project he has been involved in the development of Layer 2 congestion control mechanisms, and on the development of mobility models of the Public Transportation System of Porto.
Name	Ambient Networks (2006-2007)
Work Description	Ambient Networks was an IST EU project focused on the design of networking architectures and mechanisms that facilitate ubiquitous and seamless communication. It included partners such as Ericsson, Nokia, NEC, BT or Telefonica. During this project he has worked on the implementation of a modified kernel-level socket API for FreeBSD and on novel congestion control approaches. He participated in the writing of four project deliverables and attended and organized several project meetings.
Name	Session and Terminal Mobility: Approaches and Experiments (2006)
Work Description	This project was about experimenting and evaluating the mobility characteristics of the HIP and the SIP protocols. He was responsible for the supervision of the project in which one <i>Licenciatura</i> student was involved.
Name	Daidalos (2004-2005)
Work Description	Daidalos was an IST EU project which goal was to develop next generation operator networks. During this project he has worked on the integration of ad-hoc and infrastructure operator networks. He developed a Linux kernel module for an implementation of the AODV routing protocol, and also evaluated several algorithms through simulation. He participated in the writing of one project deliverable.
Name	Autonomous Wireless Mesh Networks (2005)
Work Description	Consisted in the development of a prototype of a wireless mesh network built with low cost wireless routers, powered by solar panels. He was responsible for the supervision of the project in which have participated 2 <i>Licenciatura</i> students.
Name	X-Fetch (2005)
Work Description	X-Fetch was an urban game developed by students of the Universidade Católica,. The Aml concept was applied to the game to improve the interaction of players between the real and the virtual worlds of the game. He has participated in the actual deployment of the game which was played in the city of Porto, twice.
Name	Aml (2004)
Work Description	The Ambient Intelligence (Aml) project was developed as part of his internship at INESC Porto and also as part of the final project of his <i>Licenciatura</i> degree. During this project he has acquired knowledge mostly in the field of ad-hoc routing and flooding techniques. The project also involved software development for embedded systems, proximity detection using the Bluetooth technology, and service discovery protocols.