

**OSSCOM**

Partnership with Enterprises Towards Building Open Source Software  
Communities and Rejuvenation of Technical Education and Innovation.



Tempus

office@osscom.org  
www.osscom.org

# Workshop

## Programming Mobile Applications with Android

Organized by

The Open Source Software Community

in cooperation with

University of Castilla-La Mancha

22 - 26 September 2014  
*Albacete, Spain*



## Aim

This workshop is one of a series of activities organized through OSSCOM to coordinate with EU institutions to develop OSS capacity and expertise at partner country institutions. The aim of this workshop is to provide in depth knowledge and develop course curricula in Android SDK as well as basic building blocks of making Android Applications.

## Targeted Audience

- Students seeking career in Mobile (Android) Industry.
- Person having interest in Android Technology.
- Education Faculty & Staff.
- Freelancers who wish to tap the increasing demand in the market, for custom Android application development.

## Language

The workshop language is English.

## Reimbursement Cost:

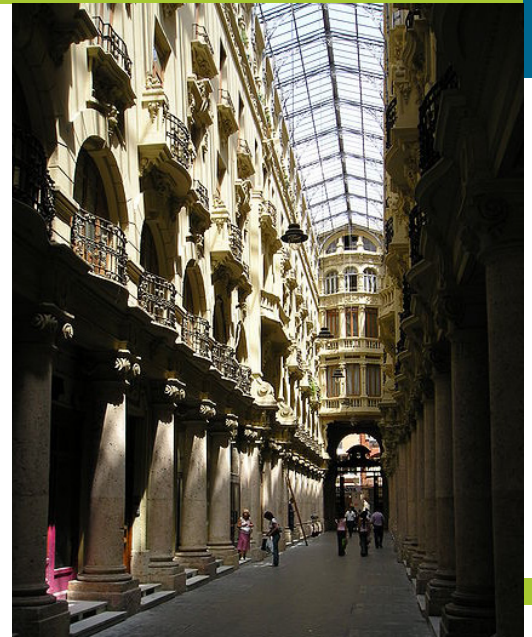
OSSCOM members : Free  
OSSCOM non-members : 350 EURO

## Outlines

- Introduction to Android
- Android basics
- User Interfaces
- Multimedia elements
- Android Advanced

## Outcomes

- Understand the Android OS architecture.
- Install and use appropriate tools for Android development, including IDE, device emulator, and profiling tools.
- Understand the Android application architecture, including the roles of the task stack, activities, and services.
- Build user interfaces with fragments, views, form widgets, text input, lists, tables, and more.

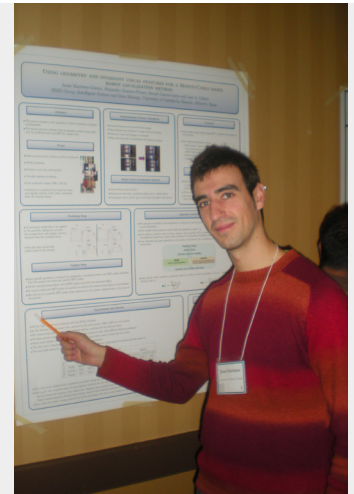




## Instructors' profiles

### Jesus Martinez-Gomez, Workshop Lecturer

Jesus Martinez-Gomez received his PhD degree in Computer Science in 2011 from the University of Castilla-La Mancha. His research includes computer vision with application to robotics, as well as artificial intelligence. He has experience on the design and development of Android-based mobile applications, and as result of this experience, he started in 2013 as part time lecturer in the UCLM, where he currently teaches both mobile applications and Java programming language.



## Agenda

<i>Day 1 Monday, 22 September 2014 – Introduction to Android</i>	
<b>10:00</b>	Workshop presentation
<b>10:30</b>	Android development requirements.- What do we need to develop Android applications
<b>11:00</b>	Setup of Android Software Development Kit (SDK)
<b>12:00</b>	Introduction to the Android emulator.- Advantages and disadvantages
<b>13:00</b>	First view to an Android application source code
<b>13:30</b>	Android Manifest File.- How to manage permissions
<b>15:30-17:30</b>	Android Lab I.- Create, compile and execute a hello world application
<i>Day 2 Tuesday, 23 September 2014 – Android basics</i>	
<b>10:00</b>	Elements of an Android project.- Source code, layouts, and resources files.
<b>11:00</b>	Android applications life cycle.- How Android applications are managed in our mobiles devices?
<b>12:00</b>	Activities.- What are they used for?
<b>13:00</b>	Views.- What are they used for?
<b>15:30-17:30</b>	Android Lab II.- Create, compile and execute an application to understand the Android life cycle.

*Day 3 Wednesday, 24 September 2014 – Visual Interfaces*

<b>10:00</b>	Visual elements.- buttons, text areas, spinners, lists, ...
<b>12:00</b>	Layouts and Fragments.- How to organize the visual elements to improve visualization in different devices.
<b>13:00</b>	Events.- How to handle and manage events
<b>15:30-17:30</b>	Android Lab III.- Create, compile and execute an application with different visual interfaces

*Day 4 Thursday, 25 September 2014 – Multimedia elements*

<b>10:00</b>	Multimedia elements introduction
<b>10:30</b>	Images.- Types of images and how to use them (load from resources or download from the Internet)
<b>11:00</b>	Videos.- Different ways to load videos in our application.
<b>12:00</b>	Sounds.- Developing of a simple jukebox
<b>13:00</b>	Use of the camera.- How to integrate images acquired with the camera in our application
<b>15:30-17:30</b>	Android Lab IV.- Create, compile and execute a multimedia application including images, sounds and videos.

*Day 5 Friday, 26 September 2014 – Android advanced*

<b>10:00</b>	Introduction to advanced Android capabilities
<b>10:30</b>	Maps and locations.- How to use them and limitations
<b>11:30</b>	Sensors.- Using sensors to obtain real-time data
<b>12:30</b>	Gestures.- How to recognize user gestures and use them in our applications
<b>13:30</b>	External data.- How to access files, databases and content providers
<b>15:30-17:30</b>	Android Lab V.- Create, compile and execute an advanced application with localization, advanced gestures and sensors processing.

Email: [Office@osscom.org](mailto:Office@osscom.org)  
Website: [www.OSSCOM.org](http://www.OSSCOM.org)

