TUTORIALS

T1. Living Labs and Socio-Cultural and Technical Considerations of ICT4D

(Half Day Tutorial from 08.30 to 12.30)

Resource Person: ***Mr. Paul Cunningham***

This tutorial is focused on providing an introduction to Socio-Cultural and Technical Considerations of ICT4D, Living Labs and Collaborative Open Innovation in a developing country context, and an overview of the evolution of Living Labs across Southern and East Africa. This tutorial will be delivered in English and will be interactive in style requiring a high level of participant engagement.

Through discussion and group exercises, participants will discuss the importance of taking account of socio-cultural differences, technical considerations and sustainability issues when designing and implementing an ICT4D intervention. Through role play, they will also explore the potential roles of different stakeholders (in terms of motivations, contributions and expectations) in Living Labs located in Developing Countries. Different perspectives and emerging issues will also be identified.

Based on discussing examples of how Living Labs have been supported in African countries, participants will identify potential support mechanisms (both financial and volunteer) that could be activated in their own countries, taking a multi-stakeholder approach to kick-start the preparation for new Living Labs and extending current community based initiatives into Living Labs. By the end of the tutorial, the goal is that participants will have identified next steps and key stakeholders whose participation is necessary to achieve success.

T2. Enterprises Virtualization

(Half Day Tutorial from 08.30 to 12.30)

Resource Persons: ***Thilanka Mendis, Chamindra Attanayake, Jithendra Sirimanne, Tharindu Rajakaruna***

Virtualization means to create a virtual version of a device or resource, such as a server, storage device, network, VGA or even an operating system, software where the framework divides the resource into one or more execution environments. Virtualization is the single most effective way to reduce IT expenses while boosting efficiency and agility, not just for large enterprises, but for small and midsize businesses. This tutorial will give an insight to different types of hardware virtualization such as Full virtualization, Partial virtualization and Paravirtualization, introduction to IaaS, SaaS, PaaS, DaaS, advantages of virtualization and how virtualization can help your organization including hands on session.

T3. 'Build First Plan Later': The Voice of DIY Approaches in Today's Design

(Half Day Tutorial on the 10-Dec-2014 from 13.00 to 17.30)

Resource persons: ***Mr. Ravihansa Rajapakse and Prof Margot Brereton***

Do-It-Yourself (DIY) technologies are gaining popularity owing to their ease of learn and use. Many resources are available online to help design things that we would normally buy off-the-shore. Influence of DIY technologies is now visible in number of fields including information technologies. It offers an opportunity for people who were left behind in design, to engage actively in design activities. DIY approaches often encourage people to start developing things rather than planning extensively. This tutorial is designed to discuss the concept of, applications and potential of DIY technologies with practitioners and academics in emerging regions. It is designed for three hours including an introduction to theoretical aspects, demonstration of a DIY tool, a hands-on activity and a rapid prototyping session that will be followed by a discussion.

T4. Orchestrating Enterprise Smart Objects

(Half Day Tutorial from 08.00 to 12.30)

Resource persons: ***Asanka Alwis, Pradeep Dadigama, Pramuditha Aravinda, Heshan Perera and Niroshan Karunaratne***

Internet of Things (IoT) has become the industry buzz-word of today which has been backed by fair reasoning to believe that it will fuel technology innovation by creating the required eco system for smart objects to communicate meaningfully with one another. Enterprises are eager to thrive on its success which could elevate their efficiency and effectiveness and hence their overall yield.

In an effort to provide a feel of how such environments are actually created, the participants of this tutorial would have the opportunity to work with IoT platforms and SDKs, single-board computers (RaspberryPi), sensors and actuators to create prototypes of intelligent environments where such "Smart Objects" collaborate to produce meaningful end results in an enterprise environment.

T5. Educational and Technological Frameworks for E-Learning: Teaching and Learning Computer Science Online

(Half Day Tutorial from 08.00 to 12.30)

Resource Persons: ***Dr. Enric Mor, Dr. Enosha Hettiarachchi and Dr. M.Antonia Huertas***

E-learning, or technology enhanced learning, refers to the use of technology to support teaching and learning practice. Pedagogical frameworks play an important role in e-learning since they provide the principles through which theory is applied to learning and teaching practice. Frameworks help to characterize where technology plays a specific role in supporting learning, including educational principles and detailed practice.

Educational frameworks rely on technology as an essential aspect for the success of any e-learning initiative, especially in online and blended education. Thus, learning technologies include a wide range of core technologies, standards, specifications and platforms, integrated or stand-alone tools and the connection and interoperability between tools and modules. They also include learning materials: digital media, formats and their reusability.

This tutorial will introduce participants to the main elements of e-learning, both educational and technological. The aim of the tutorial is to provide a critical overview of the relationship between educational frameworks and learning technologies.

Therefore, the main technologies to support a model and which tools are best suited to which models will be discussed. Also, the design of courses, activities and learning resources in higher education will be addressed. More specifically, the UOC educational model and its technology architecture will be presented. The UOC (Open University of Catalonia, www.uoc.edu) is a fully online university with more than 40.000 students. It can be considered a success case and offers an interesting set of best practices and examples.

The tutorial will also focus on the key elements of online teaching and learning of Computer Science, especially on how to teach and assess skills. Examples of characteristic courses of the computer science curriculum will be presented and their adaptation to the educational model and the use of learning tools will be shown.

In the second part of the tutorial, participants will work on practical examples of the application of e-learning in computer science online education. Issues such as course design, planning, assessment design or preparation of learning resources and educational materials will be discussed.

The tutorial aims to interactively promote the exchange of ideas, practices and experiences of teaching online disciplines related to Computer Science.

T6. e-Health and the modern society

(Half Day Tutorial from 13.00 to 17.30)

Resource Persons: ***Dr. Tony Sahama, Prof. Andrew Stranieri, Mr. Mahesh Fernando and Prof. Priyantha Hewagamage***

The integration of Information and Communication Technologies (ICT) into healthcare processes "eHealth" is driving enormous change in healthcare delivery and productivity. The transformations empower patients and present opportunities for new synergies between healthcare professionals, clinical decision makers, policy makers and educators. Technologies that are directly driving changes include Tele-medicine, Electronic health records (EHR), Standards to ensure computer systems inter-operate, Decision support systems, Data mining and easy access to medical information. This tutorial provides an introduction to key informatics initiatives in eHealth using real examples and suggests how applications can be applied to modern society.

T7. Human_Centred Design in ICT for Emerging Regions

(Half Day Workshop from 13.00 to 17.30)

Resource persons: ***Prof Margot Brereton and Ravihansa Rajapakse***

This Workshop will introduce human-centred and participatory approaches to ICT development. ICT is often viewed through the lens of software implementation and development, rather than though the lens of design and human experience. People-centred and design-focussed approaches to ICT seek to explore technological possibilities in the context of a deep understanding of human needs, practices and aspirations. Work often builds upon understanding people's everyday lived realities.

In order to participate in the Workshop, you are requested to submit an abstract of approximately 1-2 pages describing a project that you are currently undertaking. Please describe the problem that your project addresses, the people that your project aims to help, and the current approach that you are taking to including people in the project, whether it be gathering requirements from them, discussing with them, studying them etc.

In addition, please bring along an object (or a picture of an object) that is important to you, either because you use it a lot, or really like it, or because it holds an emotional attachment.

Through examples presented by participants, the presenter and through Workshop exercises, we will collaboratively explore human-centred approaches to ICT development.

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