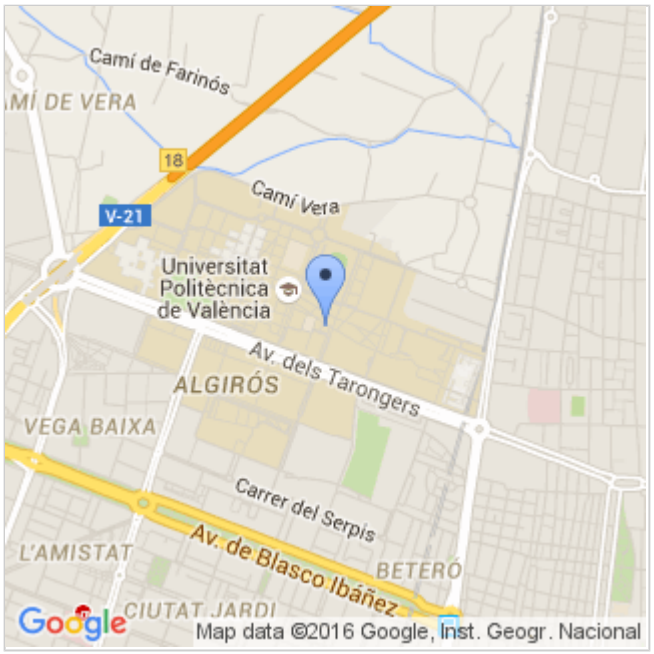
Expression of Interest



UNIVERSITAT POLITÈCNICA DE VALÈNCIA

Contact Person/Scientist in Charge

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Universitat Politècnica de València (UPV)

Department / Institute / Centre

- **Name:** Research Center on Software Production Methods (PROS) - Universitat Politécnica de València
- **Address:** Campus de Vera; Camino de Vera, s/n; Valencia (46022)
- **Province:** Valencia

Research Area

- Information Science and Engineering (ENG)

Brief description of the institution:

Universitat Politècnica de València (UPV) is the single Spanish Technical University that features in the main University world rankings. It is within the top 5 Spanish Universities with the highest revenue from both public research and knowledge transfer activities, and a national leader in patent license income and start up creation. Constituted in 1971, it comprises nearly 30.000 students, over 2500 academics, and 17 university research centres of excellence.

UPV has a relevant experience in the participation in international research programmes, with over 100 FP7 projects and 40 H2020 projects in the period 2014-2015. UPV researchers are also actively involved all H2020 life program stages, from workprogramme drafting discussions, to project coordination. It is also taking part in several major partnering initiatives (JTIs, PPPs, KICs…).

Brief description of the Centre/Research Group (including URL if applicable):

Universitat Politècnica de València (UPV) www.upv.es is the single Spanish Technical University that features in the main University world rankings. It is within the top 5 Spanish Universities with the highest revenue from both public research and knowledge transfer activities, and a national leader in patent license income and start up creation.

PROS Research Centre www.pros.upv.es (Research Centre on Software Production Methods), is a Research Institute from the UPV created in 2008 by lecturers and researchers with more than 25 years of research experience. At PROS Centre more than 50 researchers work in the study and creation of new processes, methods and strategies in order to support the software production process from a rigorous, reliable and industrial-oriented perspective.

The PROS research areas are: Software Testing and Quality, Model-driven development (MDD) and automatic code generation, Human-computer Interaction, Method Engineering, Organizational Modelling and Requirements Engineering, , Ambient Intelligence and Genomic Information Systems.

PROS major equipment for research experimentation include:

-Computation cluster for automatic software testing

-Cyber-physical Laboratory: Smart Devices to develop and prototype Smart Cities/Buildings

-Autonomic Laboratory: Smart Devices to develop and prototype highly dynamic scenarios, including Autonomous Vehicles (drones)

-Genomic databases server

Project description:

Automated User Interface Testing

In todays digitized world, software applications are mission-critical assets through which companies carry out their business.

A key factor for the success of an application is the perceived quality at the User Interface (UI): It determines how well customers can use the application by interacting with its functions. Ensuring this quality requires efficient and thorough testing from a user's perspective.

However, the increasing complexity of Human Machine Interface paradigms in general and UIs in particular, technological heterogeneity and short development cycles make testing such applications difficult. The state of the industrial practice in UI oriented testing still requires a substantial amount of manual work and is hence costly, especially for SMEs. Unsurprisingly, this often leads to insufficient system level testing and low quality of applications that jeopardize some of the key targets set out in the Digital Agenda. We propose

a new suite of tools for automated UI level testing in line with industry requirements that scales to the complexity of modern applications. Based on the observation that most UIs are conceptually very similar, we combine best-of-breed test generation and modelling techniques with a universal and technology agnostic testing approach capable of handling various HMI paradigms in heterogeneous environments. As a result we will reduce the cost of testing and, at the same time, increase the quality of the system. The goal of this proposal is to develop, implement and evaluate the AMUSING approach in a coordinated EU endeavour

Applications

Curriculum vitae and motivation (before end of june)