

## **Introduction to Quantum Computing and Quantum Service Oriented Computing**

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Facultad de Informática

on line - <https://meet.google.com/kev-tkxz-nao> - viernes 28 de octubre de 2022 - 11:00

*Entrada libre hasta completar el aforo*

### **Resumen:**

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Part of the research community thinks that it is still early to tackle the development of quantum software engineering techniques. The reason is that how the quantum computers of the future will look like is still unknown. However, there are some facts that we can affirm today: 1) quantum and classical computers will coexist, each dedicated to the tasks at which they are most efficient. 2) quantum computers will be part of the cloud infrastructure and will be accessible through the Internet. 3) complex software systems will be made up of smaller pieces that will collaborate with each other. 4) some of those pieces will be quantum, therefore the systems of the future will be hybrid. 5) the coexistence and interaction between the components of said hybrid systems will be supported by service composition: quantum services. This talk analyzes the challenges that the integration of quantum services poses to Service Oriented Computing.

### **Sobre Juan Manuel Murillo Rodríguez:**

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Professor Murillo is Full Professor in the field of Software Engineering at the University of Extremadura (Spain). Throughout his career he has participated in more than 40 competitive research projects. He has also developed extensive collaboration with private companies, which has granted him the Award of Excellence for the Transfer of Research Results. All this activity is developed within the Quercus Software Engineering Group which he contributed to create in 1995. Currently, he leads the SPILab (Social and Pervasive Innovation Lab) which is focused on the development of service technology for mobile devices. Most recently, Prof Murillo was appointed General Manager of the Foundation of Computing and Advanced Technologies of Extremadura (COMPUTAEX), which manages CenitS, the Center for Research, Technological Innovation and Supercomputing. COMPUTAEX is a member of the Spanish Supercomputing Network. Prof. Murillo will contribute to the specialization of CenitS in the fields of Health and Energy as well as the development of quantum software technologies to enable quantum computing such as future HPC.