



2º SCORE Workshop on Quantum Computing

14-15 June 2022 – Salón de Grados [ETSII](#)

You may know about quantum computing. Or maybe not. Be that as it may, and at the end of the workshop, you will collapse into the expert knowledge that will make you dominate the future. Keep reading!

Quantum computing is one of the great revolutions in the history of computing due to its ability to break down the known barriers of classical computing. Today we can access real quantum computers from home and run small programs that show us their potential. However, current programming languages are very close to the definition of quantum hardware itself. There is still a long way to facilitate the construction of services around these new computing capabilities and their integration into classical computing systems.

This workshop will introduce quantum computing from a software point of view, highlighting the limitations of logic gates and current programming languages. These limitations open the door to innovation, so we will detail two challenges in this field: services on quantum infrastructures and the definition of quantum programming languages that allow raising abstraction. In addition, several application cases will be shown to understand the true scope of this revolution.

Program	
Tuesday 14	
16:00 17:15	[J.M.Murillo] Introduction to Quantum Computing/software: the current state to fix a common floor
Coffe break (45 minutes)	
18:00 19:00	[J.M.Murillo] Introduction to Quantum Computing/software: the current state to fix a common floor (Cont.)

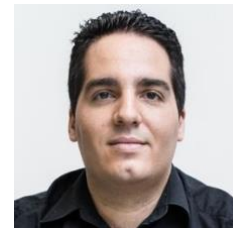


Wednesday 15	
9:00	[P. Trinidad] Opening
-	[J.M.Murillo] Opportunities in Quantum Services Engineering.
10:30	[J.García] Quantum API Gateway and our current research works.
Coffe break (45 minutes)	
11:15	[J.M.Murillo] Quantum Programming Languages for Quantum Services: an introduction to kick in Mathematicians and Combinatory Researchers.
-	[J.García] Quantum Applied Computing: QHealth Project. An executive summary of the project.
13:30	[S.Dustdar] Project Overview.
	[P. Trinidad] Wrapping Up and closing.



Juan M. Murillo, is a full professor of Software Engineering at the University of Extremadura. Co-founder of the Startups Gloin, Viable, and Health and Ageing Tech. His research interests include Quantum Software Engineering, Software Architectures, Mobile Computing, and Cloud Computing.

Jose Garcia-Alonso, is an associate professor in the Department of Informatics and Telematics System Engineering at the University of Extremadura (Spain) and co-founder of the Startups Gloin, Viable, and Health and Ageing Tech. He completed his Ph.D. degree (with European Mention) in 2014. His main research interests are Quantum Software Engineering, eHealthCare, eldercare, Mobile Computing, Context-Awareness, and Pervasive Systems.



Schahram Dustdar, is a Full Professor of Informatics at the Technical University of Vienna in Austria (TU Wien), focusing on Internet technologies, and head of the Distributed Systems Group. He has been an IEEE Distinguished Fellow since January 2016. During 2004-2010 he was Honorary Professor of Information Systems at the Department of Informatics at the University of Groningen (RuG), The Netherlands. He was an elected member of the Academy of Europe, where he is the Chairman of the Informatics Section. He was a recipient of the ACM Distinguished Scientist award (2009), the IBM Faculty Award (2012), and the IEEE TCSVC Outstanding Leadership Award for out-standing leadership in services computing in 2018. He is the CoEditor-in-Chief of the ACM Transactions on Internet of Things and the Editor-in-Chief of Computing (Springer). He is also an Associate Editor of the IEEE Transactions on Services Computing, the IEEE Transactions on Cloud Computing, the ACM Transactions on the Web, and the ACM Transactions on Internet Technology. He serves on the Editorial Board of IEEE Internet Computing and the IEEE Computer Magazine.