



- Name: Mujtaba Zahidy
- Nationality: Afghan
- Project: Satellite quantum links for secure continental communications
- Host Institute: University of Padova, Italy
- Project Supervisor: Prof. Paolo Villorosi

Short Bio

I was born and raised in Iran in 1989 in the capital city, Tehran. I studied AMO physics at the Iran University of Science and Technology and for my M.Sc., I joined the group of quantum information at the Sharif University of Technology, Tehran. My thesis was on “Quantum uncertainty principle”.

Scientific profile

My project concerns the study of QC over links in space using satellites and ground telescopes. The relevance of satellite optical communications has been demonstrated in a number of successful tests, encouraging the extension of space optical links, but at the same time posing a serious concern on the privacy of such communications and its resilience to attacks. QKD over satellite links is on the verge of passing from the pioneering research to implementations for a full-fledged demonstration. The project will investigate protocols that optimize the space-channel specific characteristics required for post-processing, for both discrete and continuous-variable QKD. Moreover, the project will extend the modelling of the link with respect to the ground and space terminal specifications and the interface with secure terrestrial networks.



Scientific interests

Quantum information theory, Quantum Communication, Quantum foundation, Open quantum systems, and Quantum transport in mesoscopic systems