

Award Ceremony

**2018 ICO/ICTP
Gallieno Denardo Award**

13 February 2018, 16:00

Budinich Lecture Hall

Programme



The Abdus Salam
**International Centre
for Theoretical Physics**
www.ictp.it
Strada Costanza 11, 34151 Trieste, Italy



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The Abdus Salam
**International Centre
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INTERNATIONAL COMMISSION FOR OPTICS
COMMISSION INTERNATIONALE D'OPTIQUE

LECTURE BY AWARD WINNER URBASI SINHA

A Tale of Three Slits:

From Superposition to Scalable Quantum Computing

Fundamental investigations of principles of quantum mechanics and applications in modern technology form two sides of the same coin. In this talk, we will discuss two parallel lines of work in fundamentals and applications that our lab has been investigating. The first one deals with a foundational problem in quantum mechanics and the first experimental demonstration in the microwave domain of the expected correction term in the application of the Superposition principle in slit based interference experiments. The second work deals with using similar slit based systems, now towards building novel higher dimensional bipartite qudits, certifying and quantifying their entanglement -- towards scalable architectures in quantum computing. Thus, not only do we perform high-precision experiments to know our system better, we then apply such systems towards high-end novel technological explorations.

ABOUT THE ICO/ICTP GALLIENO DENARDO AWARD

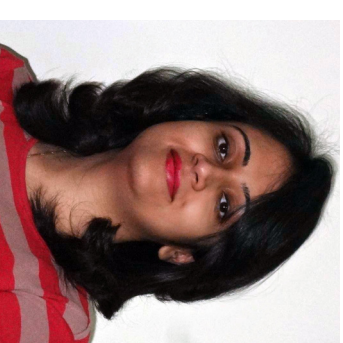
The ICO/ICTP Gallieno Denardo Award is given annually to researchers younger than 40 years of age from a developing country who have made significant contributions to the field of optics or photonics. The recipient receives a certificate, US \$1,000, and an invitation to participate in and deliver a lecture at an ICTP activity relevant to optics.

CEREMONY PROGRAMME

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Welcome remarks by Filippo Giorgi
(on behalf of ICTP Director Fernando Quevedo)

Introduction of ICO Representative Roberta Ramponi
by Joe Niemela



The recipient of the 2018 ICO/ICTP Gallieno Denardo Award is Urbasi Sinha of the Raman Research Institute, Bangalore, India, for her pioneering research in photonic quantum technologies, contributions to cutting edge experimental research in quantum optics, and extensive and multifaceted outreach activities towards popularizing experimental optical science in India.