

# IQSE AMO QO Seminar Series

Tuesday, September 13th, 11:30 am ZOOM &  
IQSE seminar room (MPHY 578)

Pizza will be served for IQSE members at 11:00 am. The talk will start around 11:30 am

## Dr. Luiz Davidovich

IQSE, Texas A&M University

### TIME-INVERSION IN QUANTUM METROLOGY

Quantum metrology aims to estimate parameters, like weak electric and magnetic fields, temperature, phases, small displacements, and the time duration of a dynamical process, with precision beyond that attained by classical metrological methods. The usual procedure involves measuring a probe, prepared in a convenient initial state, after it has interacted with the system under investigation, and then obtaining from the measurement results an estimation of the parameter of interest, through some convenient estimator. Precision can be enhanced by using specially tailored quantum states of the probes, like squeezed and entangled states. This talk will review some experiments under the unifying concept of time-inversion, which will be shown to be relevant for many quantum metrological tasks.

#### **ZOOM information:**

<https://tamu.zoom.us/j/98156251523?pwd=QVdSdGxtL1UyY0g1L083SU5QR0QrUT09>

Meeting ID: 981 5625 1523

Passcode: 297578

One tap mobile

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