## **IQSE AMO QO Seminar Series**

## Monday, April 17<sup>th</sup>, 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. János A. Bergou

### (City University of New York)

#### Complementarity: Is it intrinsic or measurement related?

**EVENT DETAILS:** I'll briefly review the now 100-year-old history of wave-particle duality, which started with the famous Einstein-Bohr debate gradually evolved into a full complementarity relation. Wave-like and particle-like behavior have their classical analogs. We have shown that besides these two classical realities there is a genuine quantum reality: entanglement, which is the most important resource for many applications. These three realities add up to a complete complementarity relation, now not a duality but a triality relation, and fully exhaust the information content of a quantum state. I'll discuss how much of this relation is intrinsic to the quantum state and how much is measurement related.

#### **ZOOM information:**

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

Meeting ID: 981 5625 1523 Passcode: 297578

One tap mobile +13462487799,,98156251523# US (Houston) +16694449171,,98156251523# US

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