

# Seeing Gravity and the (Invisible) Universe with Pulsar Timing Arrays

*Saturday 29 April 2023 14:00 (30 minutes)*

Pulsars are rotating neutron stars that emit beamed emission observed as periodic pulses on Earth. The practice of “pulsar timing” yields a wealth of uniquely powerful measurements across different astrophysical phenomena. Among these is the gradual detection of a stochastic background of gravitational waves (GWs) using a collection of pulsars rotating with millisecond spin periods. In my talk, I will overview the concept of “pulsar timing arrays” and discuss ongoing work being undertaken by members of the NANOGrav collaboration in constraining the presence of GWs at nanohertz frequencies.

**Presenter:** FONSECA, Emmanuel (West Virginia University)

**Session Classification:** Talks