## PHAROS Conference 2020: The multi-messenger physics and astrophysics of neutron stars



Contribution ID: 12

Type: Oral Presentation

## Gravitational dynamics of relativistic binary pulsar systems

Thursday 2 April 2020 15:30 (15 minutes)

Pulsars in relativistic binary systems are excellent probes of fundamental physics and binary evolution. Long term measurements of pulse arrival times from such pulsars enable theory-independent measurements of relativistic parameters that can then be used for testing different theories of gravity such as General Relativity and scalar-tensor theories of gravity. Assuming a theory of gravity, such experiments also provide highly precise measurements of neutron star masses and insights on their/nequation of state. In this talk, I will provide an introduction to pulsar timing, and present recent results from long term timing campaigns of different relativistic binary pulsars including the first observations of Lense-Thirring precession in a binary pulsar system. I will also discuss a possible supra-massive pulsar in an eccentric binary system.

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Session Classification: Parallel 2B

Track Classification: General relativity, mergers and gravitational waves