



Contribution ID: 197

Type: **Invited/Solicited talk in mini-symposium**

## Geometry of accretion flow in ULX pulsars

The recent discovery of pulsating ultraluminous X-ray sources (ULXs) shows that the apparent luminosity of accreting magnetised neutron stars - X-ray pulsars (XRPs) - can exceed the Eddington luminosity by a factor of 100s. The relation between the actual and apparent luminosity is a key ingredient in theoretical models of ULXs, but it is still under debate. It is expected that extreme accretion in XRP results in radiation-driven outflows launched from the inner parts of the accretion disc. The outflows affect the apparent luminosity of the XRP and their pulsations through the geometrical beaming. I will discuss global geometry of accretion flow in ULX pulsars, the recent results based on modelling geometrical beaming and ideas related to possible mechanisms of pulse formation. I will demonstrate that strong amplification of luminosity due to the collimation of X-ray photons is inconsistent with a large pulsed fraction observed in ULXs.

**Primary author:** Dr MUSHTUKOV, Alexander (University of Oxford)

**Presenter:** Dr MUSHTUKOV, Alexander (University of Oxford)

**Session Classification:** Accretion Processes