

## **Seminarium Studium Doktoranckiego NCBJ**

Thursday, 22 October, 9:00

<https://www.gotomeet.me/NCBJmeetings/phd-seminar>

### **Speaker:**

**Paritosh Verma (Studium Doktoranckie NCBJ)**

### **Title:**

**Searching for gravitational waves from pulsars in Jordan Brans Dicke theory**

### **Abstract:**

I shall talk about gravitational waves in Jordan Brans Dicke (JBD) theory. There are two tensor polarization states in the General theory of relativity (GR) but there can also be vector and scalar polarization states in alternative theories of gravity. The JBD theory is one of the attempts to modify the general theory of relativity by varying gravitational constant  $G$  and it has three polarization states. The first two states are the same as in GR and the third one is the scalar polarization. We have extracted these three polarizations for a particular case of a rotating neutron star with a mountain and then calculated the F-statistic. Finally, we have developed a simulation to estimate the amplitudes from quadrupole as well as dipole emission.