



## **Casimir effect as an explanation of dark energy**

Jiro Matsumoto

Nagoya University

### **Abstract**

It is known that the simply evaluated value of the zero point energy of quantum fields is extremely deviated from the observed value of dark energy density. In this study, it is shown that Casimir energy, which is the zero point energy brought from boundary conditions, can explain dark energy by using proper renormalization method and considering the finite temperature Casimir effect of the particles in the compacted extra dimensions.