

## Colloquia

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**FALL 2015**

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Solving the Mysteries of Neutron Stars and Black Holes

day

**DEC 16, 2015 WED**

location

**EE 01**

time

**15:40**

### ABSTRACT

There has been tremendous progress in the past few years on the measurements of the properties of neutron stars and black holes in our Galaxy. In this talk, I will discuss how these new advances are achieved and how they improve our understanding of fundamental physics. In particular, the radii measurements of neutron stars already constrain the equation of state of ultradense matter well beyond what can be achieved by terrestrial nuclear experiments. Probing the environments of black holes, on the other hand, give us excellent tests of general relativity. I will conclude by presenting the future observations that will further test physics in new regimes.

The Physics Colloquia are designed to address a non-specialist, broad audience and introduce topics of contemporary research through lectures by leading experts. We warmly invite all members of the student body, including undergraduates enrolled in any programme.

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