

# Quantum Gravity Spring 2015

## Problem Set 4

*Due: Thursday, Feb 12.*

**Reading:** Read lecture notes 10, 11 and 12, and 13 when it goes online. I also recommend reading Chapters 12 and 13 of Kiritsis's String Theory book (though you might need to skip some of the more stringy D-brane discussions).

1. Lecture note 11, exercise "AdS5 as near horizon limit"
2. Lecture note 11, exercise "Near horizon Kerr"
3. Lecture note 12, exercise "Far and near Hawking temperatures"
4. Lecture note 12, exercise "Scattering of a massive scalar".
5. Lecture note 12, exercise "Quasinormal modes"