

### Homework #8 (10pts total)

1. What role did the ether have for 19th century physicists?
2. What does the empirical equivalence of inert and gravitational masses entail?
3. The metric field  $g_{\mu\nu}$  determines the structure of a Riemannian space. What did Einstein assume about the metric field?
4. In what sense is space no longer absolute in general relativity?