

## **Michael Hutchings**

Title: New obstructions to symplectic embeddings in four dimensions

Abstract: We use embedded contact homology to define and calculate new obstructions to symplectically embedding one four-dimensional symplectic manifold with boundary into another. The obstructions turn out to be sharp for the problem of embedding an ellipsoid into a ball (as shown by work of McDuff-Schlenk) or a disjoint union of balls into a ball (as shown by work of Biran). More generally there are many mysteries about these obstructions which we will discuss.