

# 2010/2011 Seminar Series

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## **Einstein on a Computer**

By:

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In general relativity, there are only a small number of solutions to Einstein's equations that are known. For any realistic non-ideal system, the only way to get any meaningful results is to find a numerical solution. One way to do this is to break down space-time into a 3+1 dimensional system and evolve the resulting differential equations. This type of work is very compute intensive, and only recently have machines become sufficiently powerful to investigate interesting problems.

This talk will look at a basic overview the technique itself, and also look at the open source software package "Einstein Toolkit", which can be used to do this type of computational science.

Joey Bernard is the ACEnet Computational Research Consultant

**Wednesday, November 3rd @ 3:30pm  
Information Technology Centre C-317**