



# PHYSICS AND ASTRONOMY SEMINAR

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## **“Exact Results for the String Spectrum in $AdS_4 \times CP^3$ versus the All-Loop Bethe Ansatz”**

### Abstract

Recently a conjecture has been made on an exact equivalence between strings in  $AdS_4 \times CP^3$  and a certain class of Heisenberg integrable spin chains quantized via Bethe Ansatz equations due to Gromov and Vieira. However, this hypothesis has lacked confirmation in several sectors so far, and encountered difficulties to account for discrepancies between semiclassical string results on one side and integrability on the other side. I present the results of a direct quantum mechanical calculation in string theory without making a semiclassical approximation, which miraculously confirms equivalence between strings and integrability up to all orders.

Monday, November 14, 2011

2:00 p.m.

Human and Social Development Building  
Room A250