

UCLA Department of Physics & Astronomy

COLLOQUIUM

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PAB 1-434

The Biggest and Darkest Questions in The Universe

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At this very moment in time, the big, dark machines of physics are telling us some extraordinarily big, dark answers about the universe. The only problem is, we can not make sense of them. This implies the next great leap in our understanding of the universe is just around the corner. The stakes are particularly high: never before in science have puzzles been framed so sharply, yet gone unsolved by an entire generation of the brightest minds. What a time to be a physicist!

So, in this colloquium, I'll address the biggest and darkest questions of the universe. The big questions about what we do know, i.e. the standard model, and the big questions about what we don't know, i.e. everything 'dark' out there in the cosmos. And I'll describe some new and novel ways in which we might be able to make sense of it all, including a radical re-examination of two of the most famous equations in physics.