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# THE BIRTH OF THE UNIVERSE & THE MEANING OF SPACE TIME:

## *The Real Big Bang Theory*

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A PRESENTATION BY  
GRANT MATHEWS  
PROFESSOR OF PHYSICS

Utilizing the DVT to make a journey across the universe and into its deep past, we will examine how the universe is a time machine and how Einstein's theory of relativity helps us to conceptualize the meaning of space and time. We will discuss some current research views about the formation and evolution of the universe and explore such questions as:

- Why is the universe so large?
- Is the universe finite or infinite?
- Why are there only three large space dimensions plus time?
- What is cosmic inflation, the multiverse, and why do we believe there are parallel universes?

Finally, we will summarize how early glimpses of the universe have provided an understanding of the formation of the complex structure of galaxies and galactic clusters observed today, and what will be the future of the universe.

**JORDAN HALL OF SCIENCE  
DIGITAL VISUALIZATION THEATER, ROOM 100  
SUNDAY, MARCH 3  
3:00 P.M.**