



## **A History of Predicting the Future: Earth, Wind, Fire and Computers**

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January 21, 2004

The quest to accurately predict the course of future events is driven by the desire to make good decisions, from wearing appropriate clothes for the weather to evacuating people from danger. This talk will examine our interest and confidence in, and ability (or lack thereof) to predict the future. We will concentrate on the last hundred years or so, emphasizing the period following the invention of electronic computers.

We will first examine the question of how and how well computers can predict the weather. For some things, we have a long way to go, but for others we have achieved “perfection.” Long-range weather prediction is generally considered impossible, yet there are some ways to beat these odds. Similarly, long-range prediction of wildfire behavior is a difficult task. Nearly ten years ago, the Crisis Forecasting Project began with a goal to develop faster-than-real-time methods for predicting the course of a wildfire. We will discuss the interplay between weather and fire and the state-of-the-art in wildfire prediction.

Lastly, we will look at the fundamental changes in computers that have, at least in part, enabled the advances discussed above. We will emphasize both technological progress and the role of the marketplace. The next “best” computers may originate from a surprising source and their predecessors might be in your home today.