



SOCIETY OF ACTUARIES

Article from:

# ARCH 2013.1 Proceedings

August 1- 4, 2012

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## **Complexity Science – what it is and why you want to know about it**

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A major revolution has taken place in mathematics, finance and economics. Many real world applications, such as the stock market, housing prices and portfolio optimization cannot be adequately addressed by traditional methods. Traditional modeling techniques may be necessary, but not sufficient. This session is an engaging and mind opening, but relatively painless, introduction to Complexity Sciences. It will introduce the attendee to new methods such as Experimental Mathematics, Genetic Algorithms, Predictive Modeling, Deterministic Chaos, Fractal Geometry, Behavioral Economics, Cellular Automata and other topics in the new paradigm of Complexity Sciences. Attendees will come away from the session with an overview of the Complexity Sciences and a basic understanding of the terminology and taxonomy of Complexity. You will not come away an expert in any of them; but they will be much more than just fancy phrases to you. Complexity is the science of the 21<sup>st</sup> century (per Stephen Hawking) - be a part of it!