

A Computational Cookbook of Chaos: Fractal Rabbits, Wild Pendulums and Strange Attractors

Dr Andrew French

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Synopsis

Humans have sensibly engineered our world to behave in a predictable, regular fashion. Indeed the mathematical language which describes motion is dominated by harmonious relationships, and equations that we can solve. This is not really how things are. Although we can write down rules for how systems will move, accurate long term clairvoyance is often impossible. We might be able to predict the position of the moon centuries ahead, but the weather next month, or the state of a pool table after a break is most uncertain. *Chaos Theory* can help extract pattern from this apparent randomness. We will explore visualisations which have a startling beauty and complexity, even from the simplest of models.

Bio

Dr French, a former Radar engineer, teaches Physics and Mathematics at Winchester College. He is also editor of *Pictorial Roll*, runs *ProgSoc* (the computer programming society), is Master In Charge of Athletics and lead instructor at the Climbing Wall.