

W. BRIAN ARTHUR**External Professor at the Santa Fe Institute**

W. Brian Arthur is an External Professor at the Santa Fe Institute. Formerly he was Morrison Professor of Economics and Population Studies at Stanford; he is the recipient of the Lagrange Prize in Complexity Science and the Schumpeter Prize in Economics.

Complexity and the Shift in Western Thought

Over the last few decades scientific thinking in the West has been going through a steady and deep change. All the sciences are shedding their certainties and becoming more procedural, more algorithmic, more organic, more Turingesque; and less equation-based, less continuous, less machinelike, less Newtonian, than before. Mathematics too is shifting in this direction. Several factors are causing this: the inherent contradictions of the old approach, the rise of biology and computation as rigorous sciences, and the coming of computation as a key tool for investigation. Complexity is not a cause of this shift, it is a symptom of it.

Prof Arthur will ask, What is this new world view? What evidence supports it? How does it fit with philosophy, both ancient and modern? And where does complexity come in?