W. Brian Arthur is External Professor at the Santa Fe Institute, and Nanyang Visiting Professor at NTU. He is best known for his early theoretical work on increasing returns or positive feedbacks in the economy and their role in locking markets in to the domination of one or two players. He is also one of the pioneers of the science of complexity—the science of how patterns and structures self-organize. He is one of the founders of the Santa Fe Institute, and served many years on its Science Board and Board of Trustees. Recently he has investigated technology and innovation in his book The Nature of Technology, What it Is and How it Evolves (2009).

Arthur is the recipient of the inaugural Lagrange Prize in Complexity Science in 2008, the Schumpeter Prize in Economics in 1990, and two honorary doctorates. He has been Dean and Virginia Morrison Professor of Economics and Population Studies at Stanford, and Citibank Professor at the Santa Fe Institute. He is a Fellow of the Econometric Society. His other books are Increasing Returns and Path Dependence in the Economy (1994), and Complexity and the Economy, (2014).

The Emergence of Technology in Human History

In the last millennium, particularly in the last 400 years, our human world has become modern. How did this happen and what caused it? Prof Arthur will argue that the modern world was created by technology, and that new technologies themselves evolve from previous technologies and from better understanding of physical phenomena. He will trace the evolution of technology over the last 1,000 years, and show how it has completely changed our world, enabled humans to live better, longer lives, and posed new problems for the planet.

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