

PRESS ANNOUNCEMENT Prigogine Award 2018

University of Siena, Italy
5th September 2018

PRIGOGINE MEDAL 2018

The Prigogine Gold Medal 2018 Award Ceremony will take place at the University of Siena on Tuesday 4th September 2018, during the first day of the 10th International Conference on Sustainable Development and Planning (SDP).



The Prigogine Medal was established in 2004 by the University of Siena and the Wessex Institute of Technology to honour the memory of Professor Ilya Prigogine, Nobel Prize Winner for Chemistry.

ILYA PRIGOGINE

Ilya Prigogine was born in Moscow in 1917, and obtained his undergraduate and graduate education in chemistry at the Free University in Brussels. He was awarded the Nobel Prize for his contribution to non-equilibrium thermodynamics, particularly the theory of dissipative structures. The main theme of his scientific work was the role of time in the physical sciences and biology. He contributed significantly to the understanding of irreversible processes, particularly in systems far from equilibrium. The results of his work have had profound consequences for understanding biological and ecological systems.

Prigogine's ideas established the basis for ecological systems research. The Prigogine Medal to honour his memory is awarded annually to a leading scientist in the field of ecological systems. All recipients have been deeply influenced by the work of Prigogine.

Previous Prigogine Laureates were:

- 2004 **Sven Jorgensen**, Denmark
- 2005 **Enzo Tiezzi**, Italy
- 2006 **Bernard Patten**, USA
- 2007 **Robert Ulanowicz**, USA
- 2008 **Ioannis Antoniou**, Greece
- 2009 **Emilio del Giudice**, Italy
- 2010 **Felix Müller**, Germany
- 2011 **Larissa Brizhik**, Ukraine
- 2012 **Gerald Pollack**, USA
- 2013 **Vladimir Voeikov**, Russia
- 2014 **Mae-wan Ho**, UK
- 2015 **Bai-Lian Larry Li**, USA
- 2016 **Brian Fath**, USA
- 2017 **João Carlos Marques**, Portugal

The 2018 Medal will be awarded to Professor Stuart Kauffman, Emeritus Professor of Biochemistry at the University of Pennsylvania and affiliate faculty at the Institute for Systems Biology.



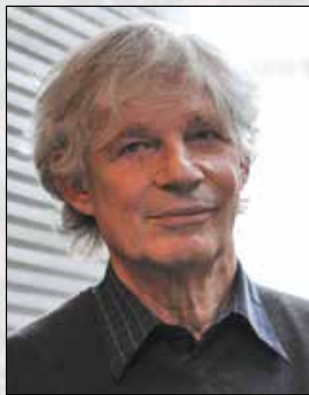
WESSEX INSTITUTE OF TECHNOLOGY

Advancing International Knowledge Transfer

www.wessex.ac.uk



STUART KAUFFMAN



Professor Stuart Kauffman is an American medical doctor, theoretical biologist, and complex systems researcher who studies the origin of life on Earth. He was a professor at the Universities of Chicago, Pennsylvania and Calgary. He is currently Emeritus Professor of Biochemistry at the University of Pennsylvania and affiliate faculty at the Institute for Systems Biology. He has a number of awards including a MacArthur Fellowship and a Wiener Medal.

He is best known for arguing that the complexity of biological systems and organisms might result as much from self-organisation and far-from-equilibrium dynamics as from Darwinian natural selection as discussed in his book *Origins of Order* (1993). In 1967 and 1969 Kauffman used random boolean networks to investigate generic self-

organising properties of gene regulatory networks. Using these models, he proposed that cell types are dynamical attractors in gene regulatory networks and that cell differentiation can be understood as transitions between attractors. Recent evidence suggests that cell types in humans and other organisms are attractors. In 1971 he suggested that a zygote may not be able to access all the cell type attractors in its gene regulatory network during development and that some of the developmentally inaccessible cell types might be cancer cell types. This suggested the possibility of "cancer differentiation therapy". He also proposed the self-organised emergence of collectively autocatalytic sets of polymers, specifically peptides, for the origin of molecular reproduction, which have found experimental support.

SPECIAL PRIGOGINE LECTURE

A World Beyond Physics: The Emergence and Evolution of Life

**to be delivered by Professor Stuart Kauffman
at the University of Siena, Italy**

For further information about the Prigogine Awards, please contact:

Wessex Institute of Technology
Ashurst Lodge, Ashurst,
Southampton SO40 7AA, UK

Tel: +44 (0) 238 029 3223

Email: wit@wessex.ac.uk

See the following Web pages for details of recent Prigogine Awards:

www.wessex.ac.uk/prigogine2015

www.wessex.ac.uk/prigogine2016

www.wessex.ac.uk/prigogine2017