

## Julian Vincent, Ph.D.



In 2008 Julian Vincent retired from the Chair of Biomimetics in the Department of Mechanical Engineering, University of Bath. His MA (zoology) was from the University of Cambridge; his PhD (insect hormones) and DSc (insect cuticle) were from the University of Sheffield. He spent most of his research career in the Zoology Department at the University of Reading, studying the mechanical design of organisms and working out ways in which aspects of the design can be used in technology. During this time he ran the Centre for Biomimetics, which he had started with Professor George Jeronimidis from the Department of Engineering in Reading. His remit in the University of Bath was to introduce concepts from biology into engineering and design, thus making the adaptive design of organisms available to advanced engineering design and control.

He has published well over 300 papers, articles and books and has given summer schools, conference lectures (mostly plenary), public lectures and research seminars around the World. His interests are very wide, covering aspects of mechanical design of plants and animals, complex fracture mechanics, texture of food, design of composite materials, use of natural materials in technology, advanced textiles, deployable structures in architecture and robotics, smart systems and structures. He is a professional Member of the Institute of Materials, which awarded him the Leslie Holliday Prize in 1980, and is a Chartered Engineer and a Fellow of the Institute of Mechanical Engineers. In 1990 he won the Prince of Wales Environmental Innovation Award. In 1997 he gave the Trueman Wood lecture at the RSA. He is the Founding President of the International Society of Bionic Engineering.

He is currently developing an ontology loosely based on the Russian system for inventive problem solving (TRIZ). Ultimately this will make biological design available to engineers without any knowledge of biology being required. It will also be able to interface with autonomous agents in a design environment, solving problems using biomimetics where appropriate.