

Conference Report

ELEVENTH INTERNATIONAL CONGRESS OF CYBERNETICS AND SYSTEMS

This event was held at Brunel University, Uxbridge, Middlesex (UK) on August 23–27, 1999. Organised by the World Organisation of Systems and Cybernetics (W.O.S.C.), this triennial conference was dedicated to the memory of the late Professor Frank H. George, a Honorary W.O.S.C. Hon. Fellow and one of the founding members of the Organisation, the first Professor of Cybernetics at Brunel University. His leadership and vision stimulated the growth of the Institute of Cybernetics at Brunel which later became a department in its own right. The Department attracted many researchers from several countries. Professor George has published many books and papers in the realm of cybernetics, was a leader in the field of cognitive science and psychology and he alerted many influential people to the potential of computers in our lives.*

The Opening Plenary meeting was held on Monday afternoon, August 23, in the presence of a large assembly of participants from 14 countries of Europe, the Americas and Asia. After a formal introduction by the W.O.S.C. Director-General, Professor R. Vallée, two of the late Professor George's ex-pupils, delivered memorial lectures. The first was by Professor T. Addis of the University of Portsmouth (UK) on 'Stone Soup: Identifying intelligence through construction'. He maintained that the simplest kind of intelligence may be constructed as a computer program demonstrating that intelligent machines, as they are currently conceived, are unlikely to be independent of their human context. The second memorial lecture by Professor Leslie Johnson of the University of Kent at Canterbury (UK) discussed the impact of cybernetics on management and Professor George's contribution to the topic.

The second part of the Plenary meeting was devoted to the presentation of the Norbert Wiener Memorial Gold Medal to Professor Ilya Prigogine, Nobel Laureate, for his great contributions to science in general, and cybernetics and systems in particular. The recipient then delivered a most stimulating lecture on deterministic and probabilistic processes. In particular, he was discussing the old question of contrast between the apparent implications of the second law of thermodynamics (increasing entropy), at least in living systems, which are more structured and organised. He then described dissymmetric structures, i.e. systems far from equilibrium, where the second law does not apply. Professor Prigogine continued with a discussion of the meaning of time and considered when time ceases to be looked at as

irreversible, as in the Newtonian mechanics. Here, he indicated his difference of opinion from that of Norbert Wiener. The lecture was a very in-depth and logical exposé of thought-out views and pioneering thinking.

The next three days were devoted to meetings of sections, as follows: Philosophical Cybernetics and Consciousness; Perception and Cognition; Biocybernetics; Bio-medical Cybernetics; Economic Cybernetics; Systems, Self Organisation and Informatics; Social Systems; Environmental Cybernetics and Ecosystems; Systems and Cybernetics Methodological Acalugaritei Networks; Automation and Robotics; Artificial Intelligence; Intelligent and Adaptive Systems; General Homeostatics and Applied Problems in Homeostatics. In addition, there was a symposium, organised by Dr A.V. Jdanko, on the Principles of Cybernetics as a General Theory of Control Systems. It is worth noting that the Eleventh Congress has dealt with a greater number of topics than any preceding event. Cybernetics is, indeed, entering the third millennium as a truly interdisciplinary science of tremendous importance and implications.

Friday morning, August 27, was devoted to a Closing Plenary meeting at which three speakers discussed some interesting topics. The first speaker, Professor R. Vallée, outlined his views on the future of cybernetics, stressing its scope, importance and effect on human knowledge. Dr A.M. Andrew (UK) then considered the relationship between the ideas of Norbert Wiener and Warren McCulloch. Dr Andrew maintained that the latter has made a tremendous contribution to cybernetics and played a fundamental part in its origin, despite the differences of views between the two giants. The third speaker, Professor R.H. Rudall, Director of the Norbert Wiener Institute and editor of *Kybernetes*, described the work of the Institute, its aims and achievements, as well as its plans for the future. The meeting and Congress ended with a call by the chairman, Professor J. Rose, to the audience, to continue their efforts and research in cybernetics and perhaps present the results of their work at the next Congress in 2002.

In addition to the above activities, the Official Dinner took place on Wednesday evening. This very convivial and congenial well-attended event included a presentation of the Frank H. George Research Award, sponsored by the *Kybernetes* Publishers (MCB Publishers, Bradford, UK) to Professor D. Dutta Majumder (Professor Emeritus, Indian Statistical Institute, Calcutta, India) for his two papers presented at the Congress: 'Cybernetic Approach to Medical Technology for Diagnostics and Therapy Planning'; 'A Cybernetic Approach to Spontaneous Cancer Emission'. The paper 'Cybernetics, Ecosystems and Emergence' by D.

* *ROBOTICA* 16, Part 4, 480–481 (1998).

Donato Bergandi (Museum National d'Histoire Naturelle, Paris, France; Laboratoire d'Ecologie Générale, Brunoy, France) has also received a special mention in connection with the Award.

The Proceedings of the Congress, incorporating over 120 papers, are available from:

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Please send a cheque for fifty pounds sterling (£50) made out to W.O.S.C. and drawn on a Bank that has subsidiary in the UK. A Banker's draft will also be acceptable. The W.O.S.C. account is held at the HSBC Bank, St Annes Square, Lytham St Annes FY8 1SA, England, UK (account number 11182625; routing 40-40-02).

J. Rose, Hon. Director W.O.S.C.