Call for Papers

Francisco J. Varela and artificial life: a Special Issue of *Artificial Life*

Submission Deadline: 15th August 2003

Guest Editor
Ezequiel A. Di Paolo
University of Sussex,
Brighton, UK
ezequiel@cogs.susx.ac.uk

Editor-in-Chief
Mark A. Bedau
Reed College
Portland, Oregon
mab@reed.edu

Francisco J. Varela (1946 – 2001) was a remarkable scientist and interdisciplinary thinker. His often radical ideas have made an impact in many research areas ranging from immunology to enactive cognitive science and autonomous robotics, from formal approaches to biological autonomy to first-person methodologies in neuroscience. Much of his work has found a reflection in the varied interests of artificial life and he himself was an early champion of the field. He was involved in the development of cellular automata models of autopoiesis, computer simulation of metadynamics in idiotypic networks, and he was also interested in neural assemblies, robotic autonomy, and dynamical approaches to situated and embodied cognition.

The journal *Artificial Life* will commemorate Varela's impact on the field with a special issue. We seek high quality contributions that critically assess or creatively develop and extend Varela's influence on a broad range of topics within artificial life. Any current research on the simulation or synthesis of living systems that is influenced by Varela or that shares a similar fundamental motivation is welcome. The ideal contribution will not only discuss Varela's work but will also be able to present ongoing research.

Topics may include, but are not necessarily limited to, the following:

- Wet artificial life and chemical approaches to autopoiesis,
- The definition of life,
- Formal models of autopoiesis, (e.g., CAs, artificial chemistries),
- Origins of life,
- Life and cognition,
- Dynamics of immune networks,
- Biological and robotic autonomy,

- Identity and cognition in organisms and robots,
- Enactive and embodied approaches to robot design,
- Interactions between cells and the extracellular matrix,
- Cell assemblies, long-range synchrony and neural plasticity,
- Biology of social interactions,
- Evolution as natural drift.

Submission

Authors intending to submit are encouraged to contact the guest editor as soon as possible to discuss paper ideas and suitability for this issue. Submission of manuscripts should be made to the guest editor before **15th August 2003** at the address below. Submit manuscripts in PDF format by email with "*Artificial Life* Special Issue" in the subject line.

Dr Ezequiel A. Di Paolo
School of Cognitive and Computing Sciences,
University of Sussex,
Brighton, BN1 9QH, UK
Email: ezequiel@cogs.susx.ac.uk
Tel.: +44 1273 877763
Fax.: +44 1273 671320

The format of submissions should follow the general standards for the *Artificial Life* journal – consult the web pages for the *Artificial Life* journal:
`http://mitpress.mit.edu/journal-home.tcl?issn=10645462`