

*Post Doctoral Position at the Institute for Advanced Studies University of  
Strasbourg*

This position to be taken up as soon as possible is linked to the Fellowship held by Professor Alan Kirman who will supervise the work jointly with Professor Robin Cowan.

Theme.

The general research theme is that of the USIAS project proposed by Alan Kirman. In summary: This project is developing an approach to economic and social systems based on complexity analysis. A major part of it will deal with an approach to economics which does not assume that the economy will self-organise into a satisfactory state. Economies and social systems in general are not always in equilibrium in any standard sense but are systems, which evolve and adapt over time and periodically passes from crisis to periods of stasis without any external shocks. Aggregate behaviour emerges and develops from the interaction between participants in these systems. This view of such systems integrates considerations from physics, biology, sociology and psychology.

What sort of alternative to standard economic models can be built if we follow this approach? We should see the development of the idea of a society or an economy as a complex system. Simple individuals acting in what they see to be their own interest and influencing and being influenced by others can generate very complicated and unpredictable aggregate phenomena. Collectively the individuals may be able to get more done than they can achieve alone. We can take lessons from social insects, and "Swarm intelligence". Nobody would try to understand the organisation of an ant-hill by looking at the "representative ant".

The important lesson is that aggregate behaviour is emergent and such emergence may yield results which are far from what we might have expected when looking at the individuals and their behaviour. As soon as we start to consider situations in which individuals interact directly with each other and the results of their interaction feed back into the system, the evolution of that system may display quite unstable behaviour. The project will examine examples of such systems. One particular problem that is an ongoing part of the project is that of the integration of racial groups and this focuses on how the proportion of black university faculty in South African research universities is evolving and how this process can be accelerated. We use an agent based approach and examine how the various feed backs influence the racial proportions.

## Candidate Qualifications

We are looking for someone with a strong interest in the social sciences and who has some expertise in computational modelling. Experience with building and simulating such models and with network analysis would be especially useful. The applicant will have defended his or her PhD or foresee a defense within 3 months of taking up this position.

This is a one-year position with the possibility of extension for a second year. The local affiliation will be at the Bureau d'Economie Théorique et Appliquée (BETA) <http://www.beta-umr7522.fr> at the University of Strasbourg <http://unistra.fr>.

## Application:

Interested applicants should send a CV, copies of up to two written works, and a letter of motivation to Prof. Alan Kirman [alan.kirman@ehess.fr](mailto:alan.kirman@ehess.fr); and Prof. Robin Cowan [cowan@unistra.fr](mailto:cowan@unistra.fr). Applications will be accepted until the position is filled.