

## PARTICIPANT FORM for the SUMMER SCHOOL

### Constructivism and Enaction

### A new paradigm for Cognitive Science

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#### **I. – SITUATION**

**Status** :  University teacher     Research scientist     Thesis student     Post-doc     Other :

**University/ Laboratory** : Centre for Computational Neuroscience and Robotics (CCNR), University Of Sussex, UK

**Website labo/perso** : <http://www.informatics.sussex.ac.uk/users/mr58>

**Special information(s) (article, scientific responsibility, participation to research projects, other...)** :

#### **III. – RESEARCH THEME**

*Please indicate briefly (10 lines max) your themes of research, and 4 or 5 key words*

In my research, I build evolutionary robotics models to test hypotheses about mechanisms of (cognitive) behaviour. With this method, (simulated) robots are automatically parametrised by evolutionary search algorithms to solve simple tasks. This technique emphasises the embodiment and situatedness of behaviour and serves to minimise both the complexity of the explanandum and the experimenter's prejudices. I have applied this technique to investigate principles of motor organisation (Rohde & Di Paolo 2005) and value system architectures (Rohde & Di Paolo 2006, submitted to SAB'06). Future plans for research include the empirical investigation of time delays in human sensorimotor coordination and their effect on the phenomenal experience of time through perceptual supplementation experiments. I am also interested in investigating possibilities to interface findings from evolutionary robotics with findings from perceptual supplementation and phenomenological enquiry, as all three methods have been used to implement the enactivist approach and share a tendency towards minimalism.

**Keywords**: Evolutionary Robotics, Cognition, Perceptual Supplementation, Methodological Minimalism, Enactivism

### **III. – VIDEOS AND EXPERIMENTAL MATERIAL**

*Moments of relaxation might be the occasion to share and show original scientific video documents (not too long) or experimental material (which could be used by all the participants). A video party and an experimental demonstration session have been planned. Could you indicate video or experimental material you would like to present.*

**Videos :**

**Experimental demonstration :**