PARTICIPANT FORM for the SUMMER SCHOOL

Constructivism and Enaction

A new paradigm for Cognitive Science

FIRSTNAME : Philippe NAME : Gaussier

I. – SITUATION

Status : ☐ University teacher (Institut Universitaire de France) ☐ ☐ Other :

University/ Laboratory : Equipe Neurocybernétique, laboratoire ETIS UMR CNRS 8051, Université de Cergy Pontoise

Website labo/perso : http://www-etis.ensea.fr/ http://www-etis.ensea.fr/Members/pgaussier

Special information(s) (article, scientific responsability, participation to research projects, other…) :

III. – RESEARCH THEME

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

P. Gaussier is Professor at the Cergy-Pontoise University in France and leads the neurocybernetic team of the Image and Signal processing Lab (ETIS). Robots are used as tools to study in ``real life'' conditions the coherence and the dynamics of different cognitive models (ecological and developmental perspective). New models can then be proposed and lead to new neurobiological or psychological experiments. Currently, his works are focused on one hand on the modelization of the cognitive mechanisms involved in visual perception, motivated navigation, action selection and on the other hand on the study of the dynamical interactions between individuals (imitation capabilities, social interactions, collective intelligence...). His research interests include the modelization of

the hippocampus and its relations with prefrontal cortex, the basal ganglia and other cortical structures like parietal, temporal areas. He is also working on an empirical formalism to analyze and compare different cognitive architectures. This formalism is applied to study the dynamics of the interactions between autonomous systems and their development. Current robotic applications include autonomous and on-line learning for motivated visual navigation (place learning, visual homing, object discremination...) and imitation games.

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 : a group of robots building stacks, visual navigation in indoor and outdoor environment, proto imitation

see http://www.etis.ensea.fr/~neurocyber/Videos/index_videos.html