

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 : University of Siena, Italy; Department of Philosophy and Social Sciences

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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

The goal of my research is to develop a radical constructivist explanation of the process of arithmetical knowledge.

The constructivist approach, born within the debate on the “foundation of mathematics”, has been developed solely within the traditional research program of formal logic, although this is inadequate to capture the situated and temporal nature of the process of mathematical knowledge.

I try to elaborate some “radically constructivist” modeling tools in order to capture the dynamics of the processes of arithmetical knowledge from its sensori-motor genesis in the practice of counting.

The adopted approach fits an enactive paradigm, is alternative with respect to the supposition of rules and axioms and requires that one refuses any competence/performance dualism, concentrating instead upon an immanent analysis of performance as a biological process itself.

Keywords: Philosophy of mathematics, intuitionism, situatedness, action.

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 :