

# From individual rationality to crowd evolutionary wisdom

Stefano Cerri (Emeritus Professor at the University of Montpellier)

The talk will survey the author's personal professional experience concerned with the synergies between Informatics and Human learning. Three main phases will be presented with the goal to discuss and exemplify these synergies:

1. the “learner modeling” phase (1970->1990) ended up with the concepts of “natural laboratory” and “inverted dialogues” in the NAT\*LAB EU project;
2. the “agents and services” phase (1990->2010) with the STROBE model of communicating agents and its reification in persistent GRID services as in the ELEGI EU project; finally
3. the current (2010->?) VIEWPOINTS approach to knowledge construction and exploitation that privileges the topological proximity of concepts in a knowledge graph with respect to the alternative (and complementary) classical, logic based knowledge representation formalisms such as those popular within the semantic web.

In each of these phases, the challenging goal of enhancing human learning by technologies (the essence of ITS research) has had without doubt an important effect in developing new computational concepts, models and techniques of generic potential application within interactive scenarios. This co-adaptation, vice versa, supports the conviction that human learning may be considered a side effect of interaction both within formal and informal learning contexts so that better interactive systems do have important effects on human learning.



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