



KEY NOTE SPEECH

STEFANO A. CERRI

Abstract

The presentation will consist of three parts :

A general premise on the scientific and technical nature of IT in general and Artificial Intelligence in particular, with examples that demonstrate the progressive convergence towards disciplines structured around a few general principles from which many, apparently very different, applications can be derived as happens in Physics. This is why the paradox of the transition from "stamp collecting" to Physics.

A central part which discusses the speaker's choice of three large pre-competitive research projects - with European projects and concrete results - carried out by him over the years, from which it is understood that the three lines chosen to announce the conference (Adaptive and Personalized Systems, Service Science and Software Engineering, Semantic and Social Web) are actually strongly interdependent. From each of these projects there are a few essential lessons useful for the future.

A conclusion with some personal speculation on the priorities to be adopted, in the era of surprises such as ChatGPT and similar Augmented Intelligence (or Interactive Artificial Intelligence) services; fascinating and equally worrying tools.

At the end, unscheduled but upon request, a brief suggestion offered by the DKTS President months ago to the EU Parliament. which is legislating on AI in Europe. This proposal may lead to reflection on how to reduce fears and increase trust among the general public, as happens in the case of medicines legislation.



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Premise

Rutherford aphorism, the concept of Informatics, Interactive Artificial Intelligence as Augmented Intelligence (AI).

Historical examples: SCHEME vs LISP, OZ as a multiparadigm language, Biology and DNA, the evolution of ITS.

Unifying the three tracks of NIDS by three foundational concepts of IAI: Roles, state, collective intelligence

3.1. Track I: Adaptive and Personalized Systems

Roles in partner modeling; inverted dialogues (DELTA EU project NAT*LAB et al 1990).

3.2. Track III: Service Science and Software Engineering

Stateful conversations for personalized services (Vth FP EU project ELEGI 2005).

3.3 Track II: Semantic and Social Web.

Collective wisdom (From ENCORE to ViewpointS 2020 +).

What is missing for the future of AI ? Conclusion

4.1. Emotions, personality traits, neuroinformatics (eg: Frasson).

4.2. Deep learning, Large language models (eg: ChatGPT) and integration with GOFAL.



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Pascal Dugenie, Clement Jonquet, and Stefano A. Cerri. The Principle of Immanence in GRID-Multiagent Integrated Systems. In *AWeSOMe'08: 4th International Workshop On Agents and Web Services Merging in Distributed Environments - OTM 2008 Workshops*, number 5333 in LNCS, pages 98–107, Monterrey, Mexico, November 2008. Springer-Verlag. doi: 10.1007/978-3-540-88875-8_29. URL <https://hal-lirmm.ccsd.cnrs.fr/lirmm-00339373>.

Clement Jonquet, Pascal Dugenie, and Stefano A. Cerri. Service-Based Integration of Grid and Multi-Agent Systems Models. In *International Workshop on Service-Oriented Computing: Agents, Semantics, and Engineering, SOCASE'08*., volume LNCS, pages 56–68, Estoril, Portugal, May 2008b. Springer Berlin / Heidelberg. doi: 10.1007/978-3-540-79968-9_5. URL <https://hal-lirmm.ccsd.cnrs.fr/lirmm-00288454>.



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