



FIRA 2013 Plenary Speakers



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Keynote Speech:

The Next Technological Wave: Intelligence Technology (“IT”) for Intelligence Super-Agent

Keynote Abstract:

Information technology (IT), first coined in 1958 and booming since the early 1990s, is the application of computers and telecommunication equipments to store, retrieve, transmit and manipulate data. In 1990s, the concept of Information Superhighway was developed to realize the goals of IT across the globe. In a business context, it has been defined as “the study, design, development, application, implementation, support or management of computer-based information systems” by the Information Technology Association of America. It has generated several associated industries, such as computer HW, SW, electronics, semiconductors, internet, telecom equipment, e-commerce and computer services..

Now we are facing a new technological challenge on how to store and retrieve knowledge and manipulate intelligence, in addition to the management of information and data, for autonomous services by intelligent systems. In this regard, the speaker has proposed “intelligence technology (“IT”) for robots that think” in his recent paper in IEEE Computational Intelligence Magazine (August 2013). “IT” is the application of computers and machines to perceive and process data and information for knowledge-based reasoning and utilize their own reasoning to execute an appropriate action. “IT” covers all aspects of intelligence from perception at sensor level and reasoning at cognitive level to behavior planning at execution level for each low level segment of the machine. It is equipped with technologies for cognitive reasoning, social interaction with humans, behavior planning, ability to cooperate with other robots, ambience awareness, and an artificial genome that can be passed on to other robots. Based on these six aspects of