

**IEEE New Zealand Central Section
AGM - 2011**



Venue: James Cook Grand Chancellor - Wellington
Room: Chancellor 2

Date: Thursday 8th December, 2011

Time: 6:00pm - 8:30pm

Refreshments and Networking to commence at 6:00pm

- 1. Welcome to the Section AGM at 6:45pm**
- 2. Special presentation by Professor Kim Jong-Hwan, Department of Electrical Engineering, KAIST, "Recent Progress and Development of Intelligence Technology for Robots That Think".**
3. Apologies
4. Minutes of the last AGM
5. Chairman's annual report
6. Financial report
7. Audit resolution
8. Election of officers
 - a. Chairman
 - b. Deputy Chairman
 - c. Secretary
 - d. Treasurer
 - e. Web Coordinator
 - f. Membership Development Coordinator
 - g. Student Activity Coordinator
 - h. Newsletter Coordinator
 - i. Committee Members
9. Other Business (Please advise)
 - a. Nomination of NZ Council Chair position from NZ Central Section
 - b. Bylaw requirement for NZ Central Section Election of Officers.
- 10. Close of Section AGM**
- 11. Welcome to COM/SP/IT Chapter AGM**
12. Apologies
13. Chairman's annual report
14. Financial report
15. Election of officers
 - a. Chairman
 - b. Deputy Chairman
 - c. Secretary
 - d. Treasurer
 - e. Web Coordinator
 - f. Committee Members
16. Other Business
- 17. Close of Chapter AGM**

Recent Progress and Development of Intelligence Technology for Robots That Think



Jong-Hwan Kim

KT Chair Professor, IEEE Fellow
FIRA President, IROC President

Director, National Center for Robot Intelligence Technology,
Director, National Research Lab for Cognitive Humanoid Robot

Abstract :

This talk introduces the recent progress and development of Intelligence Technology (IT) for Robots That Think (RTT) including intelligent robot, cyber physical robot system (CPRS), ubiquitous robot, genetic robot, etc. CPRS conjoins and coordinates the software agents and physical robots including SW and HW resources. Ubiquitous robot is composed of three forms of robots: software robot, embedded robot and mobile robot to represent an amalgamation of the tripartite personification of entities of perception, thinking and action. Genetic robot has its own genetic codes to represent a specific personality. Considering the next generation robots mentioned above, robot intelligence is classified into six categories such as cognitive intelligence, social intelligence, behavioural intelligence, ambient intelligence, collective intelligence and genetic intelligence. The robot intelligence is to make the RTT deliberately interact with the surrounding environment like living creatures. It is realized based on cognitive architecture. In the cognitive architecture, the Mechanism of Thought (MoT) is embedded as a key component of IT. This talk shows the feasibility of implementation of each of the six intelligences through simulations and experiments with synthetic characters “Rity”, Geney, GomDoll, etc. in the 3-D virtual environment and the humanoid robot HanSaRam (HSR), the robotic fish Fibo, etc. in the real world. The intelligence technology shall provide us with seamless, calm, and context-aware services in a networked environment.

Biography:

Jong-Hwan Kim received his B.S., M.S. and Ph.D. degrees in Electronics Engineering from Seoul National University, Korea, in 1981, 1983 and 1987, respectively. Since 1988, he has been with the Department of Electrical Engineering at KAIST and is currently KT Chair Professor. He was Head of Robotics Program, KAIST for 2004-2006. He is Adjunct Professor of Griffith University, Australia and Honorary Professor of De La Salle University, the Philippines. Dr. Kim is Director for both of the National Robotics Research Center for Robot Intelligence Technology and the National Research Lab for Cognitive Humanoid Robots. His research interests include computational intelligence and ubiquitous and genetic robotics. Dr. Kim has authored 5 books and 3 edited books, 2 journal special issues and around 300 refereed papers in technical journals and conference proceedings. He currently serves as an Associate Editor of the *IEEE T. on Evolutionary Computation* and the *IEEE Computational Intelligence Magazine*. Dr. Kim was one of the co-founders of the Int'l Conf. on *Simulated Evolution and Learning* in 1996. He was General Chair for the *IEEE Congress on Evolutionary Computation*, Korea, 2001 and General Chair for the *IEEE Int'l Symp. on Computational Intelligence in Robotics and Automation*, Korea, 2009. He has been on the program committees and advisory boards of more than 100 int'l conferences. Dr. Kim has delivered over 150 invited talks, keynote speeches and tutorials on computational intelligence and robotics in over 20 countries. His name was included in the *Barons 500 Leaders for the New Century* in 2000 as *the Father of Robot Football*. He is the Founder of FIRA and IROC and is currently serving them as President. Dr. Kim was the recipient of the science and technology award from the President of Republic of Korea in 1997 and has been elevated to 2009 IEEE Fellow.

Jong-Hwan Kim, KT Chair Professor, IEEE Fellow

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