

Preface

The Organizing Committee is delighted to present the high-quality papers presented in the first International Conference on Intelligent Computing, Communication and Devices (ICCD 2014) organized by SOA University during 18–19, April 2014. The title was chosen as this converges three upcoming technologies for the next decade. In recent times, “Intelligence” is the buzzword for any discipline and many scholars are working in these areas.

In simple terms “intelligence” is the ability to think and learn. Looking back to its origin and development, reports say that since 1956 when artificial intelligence was formally found, it has enjoyed tremendous success over the past 60 years. During the 1960s, the subject was dominated by traditional artificial intelligence following the principle of physical symbolic system hypothesis to get great success, particularly in knowledge engineering. During the 1980s, Japan proposed the fifth generation computer system (FGCS), which is knowledge information processing forming the main part of applied artificial intelligence. During the next two decades, key technologies for the FGCS was developed such as VLSI architecture, parallel processing, logic programming, knowledge base system, applied artificial intelligence and pattern processing, etc. The last decade observed the achievements of intelligence in mainstream computer science and at the core of some systems such as Communication, Devices, Embedded Systems, Natural Language Processor, and many more.

ICCD 2014 covers all dimensions of intelligent sciences in its three tracks, namely Intelligent Computing, Intelligent Communication, and Intelligent Devices. Intelligent Computing track covers areas such as Intelligent and Distributed Computing, Intelligent Grid and Cloud Computing, Internet of Things, Soft Computing and Engineering Applications, Data Mining and Knowledge Discovery, Semantic and Web Technology, Hybrid Systems, Agent Computing, Bioinformatics, and Recommendation Systems.

At the same time, Intelligent Communication covers communication and network technologies, including mobile broadband and all optical networks that are the key to groundbreaking inventions of intelligent communication technologies. This covers Communication Hardware, Software and Networked Intelligence,

Mobile Technologies, Machine-to-Machine Communication Networks, Speech and Natural Language Processing, Routing Techniques and Network Analytics, Wireless Ad Hoc and Sensor Networks, Communications and Information Security, Signal, Image and Video Processing, Network Management, and Traffic Engineering.

The Intelligent Device is any equipment, instrument, or machine that has its own computing capability. As computing technology becomes more advanced and less expensive, it can be built into an increasing number of devices of all kinds. The Intelligent Device covers areas such as Embedded Systems, RFID, RF MEMS, VLSI Design and Electronic Devices, Analog and Mixed-Signal IC Design and Testing, MEMS and Microsystems, Solar Cells and Photonics, Nanodevices, Single Electron and Spintronics Devices, Space Electronics, and Intelligent Robotics.

The “Call for Paper” for this conference was announced in the first week of January 2014 and due to shortage of time we have to keep a very tight deadline for paper submission, i.e., 15 March 2014. But to our surprise, we received 324 papers, which were considered for review and editing. Of these 324 papers, 163 papers were accepted for presentation and publication whereas 147 papers were registered, which are covered in this proceeding.

I am sure the participants would have shared a good amount of knowledge during the two days of this conference. I wish all success in their academic endeavors.

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