

## SPECIAL ISSUE ON AWARENESS SCIENCE AND TECHNOLOGY

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The so called “Awareness” usually terms an ability of human being or animals that can be conscious of, feel, or perceive any objects. This implies vigilance in sensing of faculty and alertness in drawing inferences from what have experienced. The awareness is so essential that it can even be considered as an equivalent term to “being”. Here the awareness science and technology goes beyond of the awareness of human being or animals, focused also on an awareness of machine, which is controllable by the human or self-controllable but with an expected manner. The ultimate goal of awareness computing is to create computing systems or machines that are themselves aware. It is related with intelligence but beyond the intelligence. This field is still emerging and is very important and challenging but rather different from other fields since awareness is essentially neither abstract nor non-abstract.

This special issue on Awareness Science and Technology consists of a variety of original papers presented at *The First International Workshop on Aware Computing (IWAC2009)*, held in Aizu-Wakamatsu, Japan, September 17-18, 2009. The workshop has been renamed since then and continues as *The Third International Conference on Awareness Science and Technology*, that will be held in Dalian, China, September 27-30, 2011. The workshop provides a forum for researchers, engineers, and scientists for discussing awareness computing and exchanging ideas, approaches, and the state-of-the-art methods and results in this emerging field. We received total 24 submissions presented in the workshop, which went through peer review process, and we finally accepted 12 papers for this special issue.

The accepted papers cover a wide range of topics in awareness science and technology, including stock market investments, beamforming and direction of arrival (DoA) detection, evolutionary programming for optimization, recognition of map for visually impaired people using audio and touch panels, accelerated machine learning algorithm by transfer learning, semantic context awareness for region of interest (ROI) selection, modified self-organizing map (SOM) applied to the traveling salesman problem, awareness of comfortability, storage-centric sensor networks, interactive emotional communication between human and robot, neural network trees for machine learning, and compose context-aware services.

We believe that the works presented in this special issue are representative of recent progress in awareness science and technology. We hope that the readers will find these papers interesting, stimulating and valuable. We shall feel happy if any papers in this

special issue become stimulating for a further research in this exciting and perspective area. Finally, we would like to take this opportunity to thank all the contributors and reviewers for their great efforts. We are also very grateful to Professor Yan Shi, Executive Editor of IJICIC, who offered us the opportunity to work on this special issue.