



Tofael Ahamed

Short Biography:

Tofael Ahamed is an Associate Professor, Faculty of Life and Environmental Sciences, University of Tsukuba, which is one of the leading universities in Japan. Dr. Ahamed performs research in the field of precision agriculture technology, agricultural robotics and decision support systems using GIS and satellite remote sensing. In the sensing system development, he focuses on enabling smart application of IoT in agriculture, where crop production varies spatially and temporally within the field boundaries depending on the soil and environmental conditions. Besides teaching and research activities, Dr. Ahamed supervises graduate students in the field of precision agriculture technology, agricultural robotics and decision support systems. Most of his research articles have published in the reputed journals like *Transactions of ASABE*, *Biosystems Engineering*, *Computer and Electronics in Agriculture*, *Journal of Mechanical Design*, *Sensors*, *Biomass and Bio-energy* and *Energy*. Dr. Ahamed is a lead author of three textbooks: *Bio-production Engineering: Automation and Precision Agronomics for Sustainable Agricultural Systems*; *Data to Knowledge: Interdisciplinary Research Methodology for Agricultural Sciences*; and *Sustainability: Integrating Environment, Agriculture and Renewable Energy for Food Security*. He has awarded University Gold Medal from Bangladesh Agricultural University for outstanding academic results and Best Faculty Member Award from University of Tsukuba for his contributions in teaching and research.

Scope of Speech:

Smart Automation and Deep Learning Information System to Adapt Precision Agricultural Technologies in Asian Countries

Agricultural sector in Asian countries is facing critical challenge of aging farmers without successors and lack of interest in farming by the younger generation. Smart agricultural machinery has the potential to resolve labor shortages and assist the aging farm workforce to increase agricultural productivity on a sustainable basis. In addition, the application of excessive fertilizers, pesticides and herbicides cause of soil degradation and environmental pollutions. To address these problems, this research note highlights on the development of automation system and deep learning using convolution neural network to develop weed infestation classifiers for minimizing herbicides application to adapt precision agriculture technology.