Organized Session 12

**Food and Agricultural Waste Valorization through the Global Food System**

Naoto Shimizu\*

 Research Faculty of Agriculture/ Field Science Center for Northern Biosphere, Hokkaido University

Sapporo 060-8589, Japan

\* Corresponding organizer. Email: shimizu@bpe.agr.hokudai.ac.jp

Concept of Organized Session

Sustainability is the basis of the Sustainable Development Goals (SDGs). One of the issues necessary to achieve these goals is to reduce food loss and agricultural waste, and the development of a food supply system that avoids "waste" and "overuse" is one possible solution. The food production is 4 billion ton, of which 14% is a loss (FAO, 2019). In this organized session, we plan to hear lectures on utilization of agricultural and food residues using the hydrothermal technology, application of organic and inorganic fertilizer for tomato growth, conversion of food waste to bioplastic, system identification of bioenergy management, moonshot issues of national projects food materials for 3D printing, and topics from researchers who are promoting the development of innovative food solutions. We will examine a key to the solution by system integrating these subjects. Government and academia researchers, and graduate students will gather to discuss the demands of industry, with the intention of developing a circular agricultural/food system that can achieve sustainability.

**Keywords:** society 5.0, digital foundation, agricultural engineering, industrial biotechnology