From the Guest Editor

This issue is prepared primarily to enlightenment of the recent scientific achievements in the field of Thermal Energy Usage in the Agricultural Sector that was supported by Hong Kong Information Technology and Industrial Engineering Research Center.

In recent years, food production from farm to fork has gained significant attention due to concerns of feeding a growing global population and depletion of fossil energy sources and deforestation. Many on and off farm operations within the food chain are characterized by a significant thermal energy demand. Prominent examples are climate control operations in intensive animal farming, on-farm drying operations, milk cooling on dairy farms, thermal food processing operations, cleaning operations, *etc*. Simultaneously, in many countries anaerobic digestion systems are producing significant amounts of waste heat which is only rarely utilized.

While some effort has been put into the optimization of energy usage of these processes and replacement of traditional energy sources by renewable ones, more systemic approaches and reliable prediction of the (positive) impacts of changes to the system on the overall performance are still lacking.

This special issue of *Thermal Science* journal focuses on the diagnostics of thermal energy usage in agricultural operations on farm and in food processing, optimization of energy demands, integration of renewable energy sources, process-product interaction determination and innovation in the field of smart processing.

The 40 original scientific papers selected among large amount of manuscripts, after careful peer review process according to criteria of *Thermal Science* journal.

I thank all the authors of papers, as well as the reviewers working on the articles. I also wanted to thank the Serbian Society of Thermal Engineers, the *Thermal Sciences* journal, and personally the Editor-in-chief emeritus Simeon Oka for helping to publish this issue.

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