

## *ASEAN Journal of Process Control*

*Preface*

### **Special Issue Part 2: Process Control Nexus Bridging, Technology, Sustainability and Industry**

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The practice of engineering especially related to process control is undergoing various major changes in dealing with the needs and requirements of advancing the IR 4.0 concepts. These changes require a collaborate and multidisciplinary approach, which will definitely influence highly the direction of teaching and research in the academic institutions in the future in this region and globally at large. For this reason, the Malaysian Process Control Society (MyPCS) hosted the Process Control Virtual Symposium (PCVS 2023) on 2<sup>nd</sup> December 2023 with the theme “Process Control Nexus: Bridging, Technology, Sustainability and Industry”. The program included a Keynote Speech by an Industrial Expert, various technical presentations and finally a forum related to the theme involving well-known academics in this region. Out of the many technical papers presented, some papers were chosen to be included in the previous Part I of the special issue of the journal and few more in this Part 2 issue together with abstracts of technical presentations not published as full papers. These papers chosen covered a wide spectrum of topics in the field of Process Systems Engineering. Some of the papers were directly related to the I.R 4.0 concepts while others incorporate parts of the concepts or were fundamental studies revolving around these concepts.

In this issue, the first paper is titled “Simulation of Multi-Loop PI Control Strategies for Optimizing Microalgae Cultivation and CO<sub>2</sub> Capture in 3-Stage Bubble Column Photobioreactors” by Emmanuel Yahaya et. al. which explores various control strategies in directly maintaining the oxygen level, microalgae concentration and O<sub>2</sub> capture efficiency of the system.

The second paper is on “Production of Monoethylene glyde Via Reactive Distillation Column” by Mohamed Nabil and Norliza Abd. Rahman. This paper deals with the simulation of the process using ASPEN Plus™ which includes analysis involving selectivity, conversion and energy usage.

The third paper is on “Comparison of Neural Capabilities of Hammerstein Neural-Wiener, Hammestein Wiener models in modeling Limiting Current Lanthanum-Electro Deposition “by Sudibyo et. al. which relates to the use of different models to estimate the limiting current of the process control most accurately.

A few abstracts are also included at the end to complete this second special issue.

Finally, on behalf of the organizing committee we would like to thank all the participants, authors, reviewers and the editorial office bearers for their support and contributions in making this special issue possible.